

# **CHAPTER ONE**

## **INTRODUCTION**

### **Background to the Study**

Business organizations are set up with the principal objectives of creating wealth for the owners and ensure the continuous growth of the entity. Business organizations are increasingly becoming more complex in their operations, thereby requiring accounting knowledge so as to communicate complete, reliable and accurate financial information to interested groups (creditors, directors, employees, government and its agencies, and shareholders). Furthermore, for a business owner to effectively control, monitor, interpret financial transactions, manage finances and grow business entities, the business owner needs to understand the basics of accounting, because poor knowledge of accounting principles and processes may lead to wrong decision and invariably business failure.

Accounting is the art of recording, classifying and summarizing in terms of money, transactions and events which are in part at least, of financial character, and interpreting the result thereof (The American Institute of Certified Public Accountants in Baru & Osahon, 2012). According to Okoli (2013), accounting is the process of recording, classifying, measuring, interpreting, summarizing and reporting financial data of an organization to the users for objective assessment and decision making. Accounting is important to the development of Nigerian economy because it prepares future managers, accountants, entrepreneurs, and other financial controllers who evaluate the performance and profitability of business organizations, prevent financial fraud, monitor enterprise's progress and make economic comparisons.

In view of the importance of accounting to the development of Nigerian economy, Francis (2014) proposed that students should be taught accounting at the secondary and tertiary

institution levels to enable them acquire financial knowledge and skills with which to take important economic decisions as future leaders. In senior secondary schools, financial accounting is taught as part of the business subjects designed to equip secondary school students with relevant knowledge, skills and work habits for gainful employment or self-employment. The accounting curriculum is designed to give students a broad knowledge of business with adequate focus on financial accounting practices as applied in business

Financial accounting is the art of preparing financial statements that companies use to show their financial performance and position to investors, creditors, suppliers, and customers. Eze, Ezenwafor and Obidile (2016) defined financial accounting as the classification and recording of monetary transactions and presentation of the financial results of the activities of an entity for decision making. To Abbey and Okorogba (2017), financial accounting entails recording, classifying, selecting, measuring, interpreting, summarizing and reporting financial data to external users. It is an occupationally-oriented subject which provides trained manpower for the development of the nation. It differs from managerial accounting in that managerial accounting prepares detailed reports and forecasts for managers inside the company. The above definitions mean that the understanding of financial accounting can expose the students to a plethora of skills and competences required in the world of work. Bell (2014) stated that students' financial accounting skills have a significant positive effect on their employability, entrepreneurial career, wealth generation and poverty eradication prospects.

In recognition of this, the Federal Republic of Nigeria in her National Policy on Education (FRN) (2013) mandated that financial accounting should be one of the elective subjects in the senior secondary school geared towards preparing students for employment in a wide range of business careers such as payroll clerk, bookkeeper, storekeeper and cashier among

others. In the same vein, the Nigerian Educational Research and Development Council (NERDC) (2007) highlighted the goals of studying the subject as follows: equipping students with the necessary knowledge about the various reforms, changes and adjustments in the country's economic and financial system, enabling students to understand the rudiments and fundamentals of the Nigerian financial system and the public sector accounting, which will inculcate in them the spirit of transparency and accountability in public financial management, and inculcating the interest and the needed foundation in the students to encourage them to become professionally qualified accountants.

To meet these stated goals requires accounting students to understand the subject matter and achieve high grade in both internal and external examinations. Unfortunately, this is not the case as information from West African Examination Council Chief Examiner's Report (2016) and Ubulom and Ogwunte (2017) showed that the achievement of students in financial accounting in Nigeria has not been encouraging.

The situation is not different in Abia State as the WAEC analysis of results of students in financial accounting for 2015, 2016 and 2017 academic years showed a percentage failure rate of students in the subject to be 62.69%, 58.87% and 57.15% respectively (WAEC Chief Examiner's Report, 2015, 2016 & 2017). Similarly, the researcher's personal discussion with some financial accounting teachers and students in secondary schools in the area of the study revealed that financial accounting has not recorded the needed success. About 60 percent of the students who offered the subject in Senior Secondary Certificate Examination (SSCE) in 2015 and 2016 scored below 48 percent. This ugly situation could make it difficult to produce future competent accountants who are highly needed in business organizations. This suggests that students with poor academic achievement in financial accounting are less likely to be employed in business

organizations. As a result, academic achievement of students should not be taken for granted as it is one of the most important scholastic indicators of ability of students to gain employment in business organizations upon graduation.

Academic achievement is defined as knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in a grade or units based on pupils' performance (Ganail & Ashral, 2013). Awan and Noureen (2011) stated that academic achievement is examination marks, teachers' given grades and percentiles in academic subjects. Achievement is both indicative and predictive. It is indicative when it pin-points a students' level of success, thus a student who made A grade in a financial accounting examination is adjudged to have had a higher achievement than one who made B grade in the same subject. It is predictive when it is a criterion for determining the ability of a student to undertake another task such as the case of a student who is adjudged able to offer accountancy in tertiary institutions because of a high score in SSCE in financial accounting (Ekhasemomhe, 2010). Therefore, academic achievement in the context of this study is the test scores of students in financial accounting examinations after being taught the subject using different instructional strategy.

Poor academic achievement of students in financial accounting has been attributed to various factors such as lack of qualified teachers, lack of motivation of teachers, lack of teaching aids, poor remuneration of teachers and inadequate teachers' teaching methods (Ezeagba, 2014). Poor academic achievement of students in financial accounting is also due to teachers' insensitivity to the nature of financial accounting when planning instructional activities, inadequate workbooks and business teaching materials, and improper counseling (Nwagu, Nwaukwa & Nwagu, 2016). Financial accounting is not a subject that can be mastered by mere memorization of the basic rules. It requires sound theoretical knowledge and intensive practice in

its application. Based on this assertion, the effectiveness of accounting teachers in teaching financial accounting should have a positive link with the level of knowledge achieved by students. In other words, for financial accounting to be effectively taught, financial accounting teachers must employ appropriate instructional strategy that can help students to develop skills and knowledge with which to take important business decisions in future. Similarly, teachers' instructional strategy could have significant effects on students' academic achievement in internal and external examinations.

Indeed, there are numerous instructional strategies available for teachers to employ for effective teaching and promotion of life-long learning. However, the conventional teaching method has continued to dominate the instructional processes in the Nigerian education system. The conventional teaching method is a method that focuses on the intellectual aspect of learning while neglecting the experiential learning aspect (Umar & Abdulmutallib, 2017). The conventional teaching method may not be an effective teaching method for enhancing students' achievement in skill-based subjects because the students' participation in the learning process is less. In agreement, Sagor (2008) posited that an over-reliance on the conventional teaching method molds students into passive recipient of information transmitted by the teacher and make students highly dependent on the teachers for much of their learning needs.

The conventional teaching method is effective in dealing with large classes and in clarifying text materials; however, it is a one-way mode of communication in which learners are passive. This could make it inappropriate for practical-based subjects such as financial accounting. It therefore means that since acquisition of financial accounting skills requires the full participation of students in their learning process, the use of conventional teaching method may be deemed

inadequate. As a result of this, students need different kinds of learning experience such as think-pair share instructional strategy.

Think-pair-share instructional strategy developed by Layman (1981) is a questioning technique used to keep all students actively involved in the class discussion. It provides an opportunity for every student to share an idea and answer to every question posed by the teacher. It is thus a cooperative instructional strategy that includes four basic components: time for teacher to pose a question, time for students to think, time for sharing in pairs and time for each pair to share back to the whole class. Sunita (2014) stated that think-pair-share instructional strategy is recommended for its benefits of allowing students to express their reasoning, reflect on their thinking, and obtain immediate feedback on their understanding. Sunita further stated that think-pair-share instructional strategy has many advantages over the conventional teaching method in that it develops students' interest in learning and helps students to learn concepts more precisely and clearly. In agreement, Mutakinati, Mudzakir and Suriyanti (2015) revealed that the use of think-pair-share strategy leads to positive change in students' communication skills, give students opportunities to learning problem solving skills and ensures that no student is left out of the classroom discussion.

Additionally, the use of think-pair-share instructional strategy could help financial accounting students: to change their learning style from listening and taking notes given by a traditional "chalk and talk" teacher to an activity-based learning where students get more involved in their learning and to learn from other students. It could also enhance students' academic achievement and the acquisition of financial skills which are needed for effective record keeping, and so meets the goals of financial accounting at the secondary school level.

Academic achievement of students in financial accounting can be facilitated when the think-pair-share instructional strategy is used because it encourages students' active participation and acquisition of practical skills. Ahmad (2016) revealed that students taught using think-pair-share strategy perform significantly better in achievement and retention test in English language than those taught using conventional teaching method. Retention is the ability of the student to remember what was taught after a period of time and is measured through academic achievement. The think-pair-share instructional strategy can enhance students' retention ability in financial accounting. This is because the strategy is designed to differentiate instruction by providing students with time and structure for thinking on a given topic in order to formulate individual ideas and share these ideas with a peer. This strategy also engages learners in higher-order thinking, and acts as a feedback mechanism both for students and teachers. Additionally, it provides an opportunity for all students to share their thinking with at least one other student which in turn increases their retention ability. Kabalan (2012) stated that by taking the steps of thinking, discussing, and sharing conclusion with other classmates, the student is processing, organizing and discussing a topic which will help the student retain it.

Furthermore, students' self-efficacy in financial accounting could be influenced when think-pair-share instructional strategy is used. This is because the strategy ensures that no student is left out of the discussion as students who may usually be uncomfortable with large classes as audience, are offered a very small audience and can practise the necessary attributes in self-efficacy. Students' self-efficacy and intrinsic motivation could also be influenced by cooperative instructional strategy such as think-pair-share instructional strategy.

Self-efficacy refers to a student's confidence in his or her ability to achieve specific academic tasks (Gaumer-Erickson, Soukup, Noonan & McGurn, 2016). Self-efficacy is the

strength of one's belief in one's own ability to complete tasks and reach goals. It is concerned with perceived capability and is phrased in terms of "can do" rather than "will do". 'Can' is a judgment of capability while 'will' is a statement of intention. Self-efficacy could play a key role in students' learning because it stimulates their behaviour not only directly, but by its impact on other determinants such as goals and aspirations, and outcome expectations. Self-efficacy influences students to think erratically or strategically and could predict students' academic achievement levels in financial accounting. Its beliefs could contribute to accomplishments both motivationally and through support from think-pair-share.

Students' achievement could also be influenced by their genders. Gender is the range of physical, biological, mental and behavioral characteristics pertaining to and differentiating between the feminine and masculine (female and male) population (Adigun, Onihunwa, Irunokhai, Sada & Olubunmi, 2015). The importance of examining achievement in relation to gender is based primarily on the socio-cultural differences between girls and boys. Ogundola (2017) revealed that there was a differential academic achievement in Vocational Education subjects in secondary schools as a result of gender, while Owodunni and Ogundola (2013) earlier found no gender differences in Vocational Education subjects' achievement at the secondary school level. Wally-Dima and Mbekomize (2013) found that female students outperformed males in Financial Accounting examinations.

When a subject is delivered using appropriate instructional strategy, learning increases, however, with inappropriate instructional strategies, the academic achievement of students decreases. Based on this assumption, no instructional strategy is ineffective in itself but, every subject requires its own appropriate and effective instructional strategy. This premise shows that financial accounting teachers should be able to choose and apply appropriate instructional



strategy such as think-pair-share that will ensure that learners participate actively in their learning process to enhance high academic achievement. It is against this background that this study was carried out to determine the effect of think-pair-share instructional strategy on secondary school students' academic achievement, retention and self-efficacy in financial accounting in Abia State.

### **Statement of the Problem**

Conventional teaching method remains the method mostly used by teachers to transmit academic instructions to students about a particular subject. Though, the method is effective in dealing with large classes and in clarifying text materials, it may not be adequate for teaching skill-based subjects as it does not encourage students' active participation in their learning. This is evidenced by the WAEC Chief Examiner's Report of 2015, 2016 and 2017 which showed that students performed poorly in financial accounting in Abia State.

The WAEC result summary in financial accounting 2014/2015, 2015/2016 and 2016/2017 in Abia State, shows a wide gap in students' academic achievement in financial accounting as a subject (See Appendix I, Pg. 175). The poor academic performance in financial accounting makes it difficult for students to go further in the skills and other advanced accounting courses at the tertiary education levels. Majority of these students whose dream is to become professional accountants have lost interest in the course thereby seeking admission to other courses. Similarly, poor knowledge and skills of financial accounting might lead to inability of financial accounting students to start up small scale enterprises and manage them successfully upon graduation therefore, hinders the accomplishment of the objectives of business subjects and leads to increase in unemployment rate among financial accounting graduates.

The poor academic performance of students in financial accounting could be linked to inadequate number of qualified teachers, lack of motivation, and inadequate teaching aids. It could also be blamed on the financial accounting teachers' insensitivity to the nature of financial accounting when planning instructional delivery, inadequate workbooks and business teaching materials, incompetent teachers, and poor teaching methods. The study is therefore organized to find out if the employment of think-pair-instructional strategy in teaching financial accounting could enhance students' retention ability and/or improve on academic achievement and self-efficacy.

### **Purpose of the Study**

The main purpose of this study is to determine the effect of think-pair-share instructional strategy on secondary school students' academic achievement, retention and self-efficacy in financial accounting in Abia State. Specifically, the study determined the:

1. Academic achievement mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method.
2. Retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method.
3. Self-efficacy mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method.
4. Difference between the academic achievement mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional method
5. Difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.

6. Difference between the self-efficacy mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.
7. Difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
8. Difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
9. Difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

### **Significance of the Study**

Findings of the study would be of immense benefit to secondary school accounting teachers and students, curriculum planners and administrators of secondary schools, future researchers, government as well as society in general. The findings of the study when published in the academic journals would expose teachers to the impact of think-pair share in enhancing students' academic achievement, retention and self-efficacy in financial accounting. The knowledge could provide some guide for teaching financial accounting using think-pair-share instructional strategy. Financial accounting teachers could develop new attitude in the classroom by assuming the role of mentors, tutors and facilitators of knowledge in the think-pair-share teaching and learning process. Through the think-pair-share strategy, the accounting teachers would give students chance to learn key concepts, facts, and processes so as to enhance their understanding of financial accounting concepts.

Students when exposed to the think-pair-share would develop interest in independent learning as well as collaborative learning. This is because think-pair-share instructional strategy

is learner-centered, thus, it would enhance students' motivation to find out new ideas and information at their own pace. With feedback and corrective assessment, each student would have clear idea of areas of his strengths and weaknesses which will help them to adjust their learning strategy to achieve higher in subsequent topics. The findings of the study would also help to arouse and develop students' retention as each student will have opportunity to share ideas, solve academic tasks with others in the classroom.

The curriculum planners and secondary school administrators would be exposed to the effectiveness of think-pair-share from the findings of the study. Such exposure will then create the necessary awareness of the need to implement business subject curriculum by incorporating new instructional strategies like think-pair-share for enhancing learning effectiveness. The administrators could also find this study handy when making recommendations to government on the need to organize regular training for financial accounting teachers on the use of think-pair-share instructional strategy in the classroom. This will improve the standard of teaching and learning of financial accounting in senior secondary schools.

Future researchers would benefit from the findings of this study in that it will help to build their awareness of the importance of think-pair-share instructional strategy in the teaching and learning of financial accounting. As such, it will provide adequate research material for future researchers interested in carrying out more studies on the related areas.

The findings of this study would benefit the government as well as the wider society in that it could guide the government in their drive to providing adequate instructional aids in secondary schools to improve teaching and learning in Nigeria. This will help in achieving the objective of studying financial accounting in the senior secondary school education which will lead to increased students' academic performance in examinations. In the long run, qualified and

competent accountants would be produced for improved work activities and economic development of the nation.

### **Scope of the Study**

This study determined the effect of think-pair-share instructional strategy on students' academic achievement, retention and self-efficacy in financial accounting in Abia State. The study covered only three selected topics in financial accounting syllabus namely; Introduction to partnership account, capital contribution and partnership account I. The effect of gender on students' academic achievement, retention and self-efficacy were also determined. The study did not treat dissolution of partnership and goodwill accounts which are also specific topics in the syllabus. The reason for choosing these topics was that they constitute difficult aspects of Financial Accounting which students find difficult to attain good grades in.

### **Research Questions**

The following research questions guided the study:

- 1 What are the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method using?
- 2 What are the retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?
- 3 What are the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?

- 4 What is the difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?
- 5 What is the difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method?
- 6 What is the difference between the self-efficacy mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method?
- 7 What is the difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?
- 8 What is the difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?
- 9 What is the difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?

## **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught using conventional teaching method.
2. There is no significant difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.

3. There is no significant difference between the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.
4. There is no significant difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
5. There is no significant difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
6. There is no significant difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

The review of related literature to this study is presented under the following sub-headings:

#### **Conceptual Framework**

Instructional Strategy

Think-pair-share Instructional Strategy

Academic Achievement

Retention

Self-efficacy

Financial Accounting

#### **Theoretical Framework**

Experiential Learning Theory by David Kolb

Social Constructivist Learning Theory by Vygotsky

#### **Theoretical Studies**

Roles of Financial Accounting in the Development of Nigerian Economy

Instructional Strategies for Teaching Financial Accounting

Conventional Lecture Method and Academic Achievement of Students

Overview of Think-Pair-Share Instructional Strategy

Think-pair-share Instructional Strategy and Academic Achievement

Think-pair-share Instructional Strategy and Students' Retention

Think-pair-share Instructional Strategy and Students' Self-efficacy

Gender and Academic Achievement of Students



## **Empirical Studies**

Think-pair-share Instructional Strategy and Students' Academic Achievement

Think-pair-share Instructional Strategy and Students' Retention

Think-pair-share Instructional Strategy and Self-efficacy of Students

Gender and Students' Academic Achievement

## **Summary of Review of Related Literature**

### **Conceptual Framework**

Relevant concepts in this study are presented as follows:

#### **Instructional Strategy**

Strategy is a method or procedure set out by an individual to achieve a goal (Okwunaso & Nwazor in Uzodi, 2012). Okwunaso and Nwazor further posited that a strategy differs from a method in that while a method is a plan well known and utilized by everybody in achieving a goal, a strategy is an individual's own method and depends on the individual's skills and ability to map out his or her own way for meeting the objective. Freeman (2013) conceptualized strategy as a plan of action set out to achieve short-term, long-term or overall goals. Strategy can also be viewed as a chosen plan to bring about desired future.

A strategy, according to Bergman and Klefsjo (2010) is an idea of how to reach an objective by taking measurable steps. It is an overall direction or plan which describes activities to be carried out. In their view, Freedman (2015) and Simandan (2018) stated that a strategy generally entails teachers setting goals, determining actions to achieve the goals, and mobilizing resources to execute the plans. To Porter in Nickols (2012), a strategy simply means an outline of how a teacher intends to achieve instructional goals.

Instruction on the other hand is the whole process applied for learning to occur and for the development of the target behaviour that learners are expected to have (Simsek, 2011). Şimşek stated that instruction requires not only systematic guidance for learning, but also a purposeful organization of experiences to help students achieve the desired change in their performances. Instruction is also known as an action taken by teachers to create a stimulating learning environment for the purpose of providing guidance along with the necessary instructional tools and carrying out activities that will facilitate learning and help develop appropriate behaviours that students are supposed to have.

Instructional strategy is the structure, system, methods, techniques, procedures and processes a teacher uses during instructional delivery. Pei-Shi (2012) saw instructional strategy as a general plan which includes all the parts of the teaching situation; namely: the objectives, teaching methods, teaching aids and evaluation strategies. Armstrong (2013) viewed instructional strategies as methods used to help students learn the desired subject contents and be able to develop achievable goals in the future. Furthermore, instructional strategies is a generalized plan for a lesson which include structured desired learner behaviour in terms of goals of instructions, and an outline of planned tactics necessary to implement the strategy.

Instructional strategies are techniques teachers use to help students become independent and strategic learners. These strategies become learning strategies when students independently select the appropriate ones and use them effectively to accomplish tasks or meet goals. Instructional strategies can motivate students and help them focus attention, organize information for understanding and remembering, and monitor and assess learning. Instructional strategies depend on a number of factors such as the developmental level of students, goals, intent and objectives of the teacher, content, and environment including time, physical setting and

resources. Choosing instructional strategies to adopt is not an easy task. They need to be chosen carefully in order to contribute most effectively to students' learning.

In line with this, Marzano in Akdeniz (2016) stated that instructional strategies influence learners' achievement and let teachers diversify the instructional applications. Silver, Strong and Perini (2007) saw instructional strategies as instructional methods which include specialized instructional phases in line with the particular purposes of the subject and the features of the content area so that learners can gain the target behaviour. In other words, instructional strategies include activities that help create the classroom environment for good-quality learning to occur. These activities should consider instructional goals as well as the content of the curriculum.

Instructional strategies point out the components that will influence target learning. They are factors which have a significant impact on the quality of learning and determine which instructional activities will be carried out in the instructional process (Baker & Dwyer in Akdeniz, 2016). Instructional strategies point the ways and approaches followed by the teachers, to achieve the fundamental aims of instruction. Instructional strategies are mostly used to apply learning theories in a useful way and to obtain the target learning outcome. In the context of this study, instructional strategy is a plan chosen by a financial accounting teacher to effectively teach students to enable them achieve their academic goals.

### **Think-pair-share Instructional Strategy**

Think-pair-share was developed by Frank Lyman of the University of Maryland in 1981. Lyman defined think-pair-share as a questioning technique that is used to keep all students actively involved in class discussion and provides an opportunity for everyone to share an idea and answer to every question posed by the teacher. Nwaubani, Ogbueghu, Adeniyi and Eze (2016) defined think-pair-share (TPS) as a cooperative instructional strategy that includes four

components: time for teacher to pose a question, time for students to think, time for sharing in pairs and time for each pair to share back to the whole class. Jannah (2013) and Ariyani (2011) averred that think-pair-share is a cooperative technique that quickly becomes an entire class technique and a pedagogy designed to provide learners with food for thought on a given topic and concept thereby enabling them to bring out and share their individual ideas with each other.

According to Simon (2017), think-pair-share instructional strategy is designed to differentiate instruction by providing students with time and structure for thinking about a given topic, enabling students to formulate individual ideas and share these ideas with a peer. In this strategy, a problem is posed, students have time to think about it individually, write their thoughts, work in pairs to solve the problem, and then share their ideas with the class. Raba (2017) explained that think, pair and share is the activity that prompts pupils to reflect on the issue or problem and then to share that thinking with others. In doing so, pupils are encouraged to justify their stance using clear examples and clarity of thought and expression. Pupils also extend their conceptual understanding of a topic being discussed and then gain practice in using other people's opinions to develop their own.

Similarly, think-pair-share instructional strategy has three steps in the learning process according Mutakinati, Mudzakir and Supriyanti (2015). Students think through questions using three distinct steps: Think: students think independently about the question that has been posed forming ideas of their own. Pair: students are grouped in pairs to discuss their thoughts. This step allows students to articulate their ideas and to consider those of others. Share: student pairs share their ideas with a larger group such as the whole class (Mutakinati, Mudzakir & Supriyanti, 2015). Often, students are more comfortable presenting ideas to a group with the support of a partner which enhances their communication and problem solving skills. Bamiro (2015) posited

that the use of the think-pair-share instructional strategy unites the cognitive and social aspects of learning, promoting the development of thinking and the construction of knowledge.

The think-pair-share instructional strategy is designed to provide students to think a given topic by enabling them to formulate individual ideas and share these ideas with another student (Abdurrahman & Usman, 2015). Abdurrahman and Usman stated that this strategy helps students work in group. In applying this strategy, the teacher poses a question, preferable one demanding analysis, evaluation, or synthesis, and gives students about a minute to think through an appropriate response. The students can share their ideas that appear in their minds as the responses to the teachers' questions in the teaching and learning process. Students then turn to a partner and share their responses with others. During the third step, student's responses can be shared within a four-person learning team, within a larger group, or with an entire class during a follow-up discussion. The caliber of discussion is enhanced by this technique, and all students have an opportunity to learn by reflection and by verbalization (Jones in Abdurrahman & Usman, 2015).

In the view of Nasr in Ahmad-Hamdan (2017), think –pair-share instructional strategy is one of the active cooperative learning strategies used to activate the students' previous knowledge of the position of education or to work the reaction about mathematical problem. In the context of this study, think-pair-share is an instructional strategy used by financial accounting teachers that entails posing financial accounting questions to students, each student has time to think about the question independently, time for the student to share his or her answers to pairs and time for each pair to share back to the whole class.

## **Academic Achievement**

An achievement is something which someone has succeeded in doing, especially after a lot of effort. Achievement has become a widely discussed topic in education today, especially with increased accountability for classroom teachers. Achievement is the outcome of education to which a student, teacher or institution has been able to realize their educational goals. Achievement is something that somebody has done successfully especially using his or her own efforts and skills (Okeke, 2016). Achievement is the act of obtaining a result through efforts in the quality and quantity of students' work. On the other hand, Okoronka and Wada (2014) defined academic achievement as a measure of knowledge gained through education process usually indicated by test scores, grade point average and degree. This is why Nzeadibe stated that some schools define academic achievement as a certain grade point average (GPA), or ranking in class. It could be getting high grades and a high GPA level.

Academic achievement is the degree or level of success attained at the end of an academic endeavour. Awan and Noureen (2014) defined it in terms of examination marks, teachers' given grades and percentiles in academic subjects. It also refers to what students can actually do when they have finished a subject of study or the extent to which students make success in a particular academic work. According to Ugwanyi and Nwagbo (2013), academic achievement is defined as performance of students in schools. Adeyemo (2011) in his view stated that academic achievement means achievement a student makes in school namely; his marks in the examination, which is the criterion for the achievement of a student.

Academic achievement can also be seen as the outcome of education. That is, the extent to which a student, teacher or institution has achieved their educational goals (Oyetade, 2008). Oyetade stated that it is commonly measured by examinations or continuous assessment.

Correspondingly, academic achievement refers to the performance by the student in the objectives related to various types of knowledge and skills. Ahmed and Qazi (2011) saw academic achievement as the apparent demonstration of understanding concepts, skills, ideas and knowledge by a pupil. Ahmed and Qazi further stated that grades clearly depict the academic achievement of a student. Thus, students' academic achievement must be managed efficiently, keeping in view all the factors that can positively or negatively affect their educational achievement.

According to Soohyun (2011), academic achievement is the extent to which students' education and/or educational outcomes are accomplished successfully, as a result of learning at school. It is an adjective referring to studying in schools and universities. To achieve means to succeed in reaching a goal, status or standard, especially by making an effort over long time. Invariably, from the aforementioned definitions, academic is seen as an effort or skill applied to learning over time to successfully accomplishes a given course of learning.

In corroboration, von Stumm, Hell and Chamorro-Premuzic (2011) noted that individual differences in academic achievement have been linked to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and those who are higher in conscientiousness (linked to effort and achievement motivation) tend to achieve highly in academic settings. A recent meta-analysis suggested that mental curiosity (as measured by typical intellectual engagement) has an important influence on academic achievement in addition to intelligence and conscientiousness (Tomprowski, Phillip, Catherin, Miller & Jack, 2008).

In the same vein, Loo and Choy (2013) stated that academic achievement is a multi-dimensional construct consisting of three dimensions: student's characteristics, teacher competencies and academic dimension. This means that academic achievement concerns how

students cope with or accomplish different task given to them by their teachers thus the determinants of this dimensions are students' intelligence, personality and the socio-economic status within the academic context. In view of this, academic achievement is generally regarded as the display of knowledge attained or skills developed or performed in the school subject. It could be seen as the quality of the performance in terms of test and class exercise with academic content. In other words, it is the attainment of a given standard of excellence or qualified standard of academic performance, that is, the extent or the degree of success of a student in his or her studies.

According to Ganail and Ashral (2013), academic achievement is excellence in all academic disciplines, in class as well as co- curricular activities. It includes excellence in sporting behaviour, confidence, communication skills, punctuality, arts, culture and the like which can be achieved only when the student is well adjusted. Ganail and Ashral stated that in classrooms, students perform their potentials efficiently, as a result of it, learning takes place. The learning outcome changes the behaviour pattern of the student through different subjects. Hence academic achievement in the context of this study refers to a student's demonstration of understanding, concept, skills, ideas and knowledge of financial accounting and grades clearly depict the achievement of such student.

## **Retention**

Retention simply means the ability to remember or recall what has been taught at the time it is needed. Retention is also seen as the ability to keep or retain the knowledge of what is learnt and to be able to recall it when it is required. It is the ability to reproduce learnt concepts when the need arises (Demirel in Gimba, 2013). Safo, Ezenwa and Wushishi (2013) in their view, posited that, retention is the ability to keep or retain what is learnt and be able to recall it when it



is required. In the same vein, Eze, Ezenwafor and Obidile (2016) defined retention as the ability to recall or remember what has been taught after a given time as a measure of students' progress. Bichi in Tambaya (2018) defined retention as the ability to retain and recall information or knowledge gained after learning. Enohuan (2015) further saw retention as the ability to store what has been learnt and recall what has been stored in the memory.

Retention is the capability to hold information. It is also referred to as the condition of keeping or continuing to possess information. Retention is an important variable in learning especially financial learning where application of acquired ideas and construction of ideas are needed to solve financial problems. The ability to remember or forget depends on one's ability to interpret learning or observation. According to Samuel in Samuel and Chipunza (2013), researchers viewed retention as an important component in the learning process. The ability of the students to retain and remember what has been taught by the teacher depends heavily on the appropriateness of the instructional approach. Retention takes place more effectively when experiences are passed across to the learner through an appropriate approach.

According to Owoso (2010), retention is the repeat performance by a learner of the behaviour earlier acquired elicited after an interval of time. It is affected by the degree of original learning, the method of learning and the learners' memory capacity among other factors. To Chanhon in Enohuan (2015), retention is a detect correlate of positive transfer. The type of instructional strategies included used teaching and learning, structured in a carefully formed sequence is quite resistant to forgetting. This implies that any instructional strategy which is effective in enhancing retention can as well be effective in enhancing achievement. It also implies that for students to talk about retention, the students must have been exposed to certain

experiences or activities such as teaching. Thus retention can only take place when a concept has been taught.

Retention is usually measured in collaboration with academic achievement. It is often seen as the achievement on a subject after a certain period of time. For example, if a group of students is exposed to classroom instruction on a particular subject after which a test is given, such test only reveals the extent of the content of that subject learnt by the students. If another test is given (say two weeks or more) after the instruction, one can infer from the result of the test how much of the content of the instruction the students have retained.

Knowledge retention involves capturing knowledge and storing the knowledge so that it can be used later. Some students have the ability to retain information for a long time, while others do not have such ability. This is a function of the their memory. A person's memory is what stores or retains information that is seen, heard, learned or experienced. Retention is the ability to recall and use those information. Amin and Malik (2013) stated that the two types of memory are short term memory (STM) and long term memory (LTM). The short term memory is responsible for remembering information for a short period of time. It is also referred to as working memory. Information is momentarily stored in the STM before it is amalgamated into the LTM. Long term memory is the collection and storing of information over a long period of time. It is in charge of retention of conscious memories, such as specific events. Information that a person must recall for a test is courtesy of his or her long term memory. Without retention, there cannot be a successful transfer of knowledge, which is a desirable condition in education process. In the context of this study, retention is the ability of students to absorb, hold, or continuing to hold or have facts after being exposed to classroom instruction on a particular subject after which a test is given.

## **Self-efficacy**

Self-efficacy is a person's belief in his or her capacity to organize and implement measures to achieve set goals and assess the level and strength in all activities and contexts (Bandura in Rachmah, 2017). Bandura gave another definition of self-efficacy as a personal judgment of how well one can execute courses of action required to deal with prospective situations. Self-efficacy as a construct was first presented, researched, and expanded by Albert Bandura in 1977. Bandura averred that self-efficacy beliefs impact how people motivate themselves, think, feel, and act. It also plays a key role in human functioning because it affects behaviour not only directly, but by its impact on other determinants such as goals and aspirations, outcome expectations, affective proclivities, and perception of impediments and opportunities in the social environment.

Efficacy beliefs also influence whether learners think erratically or strategically, optimistically or pessimistically and the courses of action learners choose to pursue. It influences the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavours, and the outcomes they expect their efforts to produce. Similarly, self-efficacy determine how long learners persevere in the face of obstacles, their resilience to adversity, the quality of their emotional life and how much stress and depression they experience in coping with taxing environmental demands, and the life choices they make and the accomplishments they realize (Bandura, 2005).

In line with these, Friedman and Schustack in Rachmah (2017) saw self-efficacy as the expectation or belief (hope) about how much a person can perform behaviour in each situation. The authors stated that in the absence of self-efficacy which is a very situational belief, learners may have no desire to perform a behavior. In his view, Koehler (2007) defined self-efficacy as

individuals' belief in their capabilities to perform in ways that give them control over events that affect their lives, and regulate human function through cognitive, motivational, emotional, and choice processes. Furthermore, Pajares in Campbell (2012) explained that self-efficacy is not about students learning how to succeed, but rather, it is about how students keep trying when they do not succeed. In other words, expectations of self-efficacy determine whether a student will be able to exhibit coping behaviour and how long effort will be sustained in the face of obstacles. Students who have high self-efficacy will exert sufficient effort that, if well executed will lead to successful academic outcomes, whereas those with low self-efficacy are likely to cease effort early and fail.

In the same vein, Akhtar (2018) stated that self-efficacy reflects confidence in the ability to exert control over one's own motivation, behaviour, and social environment. Akhtar pointed out that self-efficacy influence all human experiences, including the goals for which people strive, the amount of energy expended toward goal achievement, and the likelihood of attaining particular levels of behavioural performance. Ackerman (2018) on his part posited that self-efficacy is not self-esteem or any other similar construct as often assigned by authors. Self-efficacy has a slightly different definition than any of these related constructs. For example, while self-esteem focus more on being (feeling that one is perfectly acceptable as one is), self-efficacy is more focused on doing (feeling that one is up to a challenge). In the context of this study, self-efficacy is the belief that students will have in their capacity to solve financial accounting task after being taught the subject using different instructional strategies.

### **Financial Accounting**

The term accounting has been defined by different authors based on their perspectives. According to the American Accounting Association (AAA), accounting is the process of

identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information. Anthony (2012) on the other hand saw accounting as a means of collecting, summarizing, analyzing and reporting in monetary terms, information about business. To the American Institute of Certified Public Accountants (AICPA) in Ranganadhan (2014), accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events which in part, at least is of a financial character, and interpreting the results thereof.

Accounting is a discipline which records, classifies, summarizes and interprets financial information about the activities of a concern so that intelligent decisions can be made about the concern (Akintelure & Oguobi, in Eze, 2014). It involves the preparation of financial statements available for public consumption. This means that in whatever way the term is looked at, its universally accepted objective is to record all the transactions in monetary units and to report them to its users in useful manner in the form of financial statements.

In view of this, the main purpose of accounting according to Panda (2016) is to ascertain profit or loss during a specified period, to reveal the financial position of the firm on a particular date and to have control over the firm's property. Therefore, accounting records are required to be kept to measure the income of the business and communicate the information so that it could be used by managers, owners and other interested parties.

Financial accounting is often called the language of business; it is the language that managers use to communicate the firm's financial and economic information to external parties such as suppliers, banks, government agencies, owners, and other stakeholders. Ukpai, Kiabel and Obara in Agboh (2015) defined financial accounting as the art of recording, interpreting, verifying and reporting financial transactions of a business in accordance with the laid down

accounting principles. In the opinion of Yusuf in Agboh (2015), financial accounting is a generic term covering both the book-keeping and accounts aspects of any economic entity. Osuala in Agboh on his part saw it as a term dealing with the process of capturing, processing and communicating financial information.

Financial accounting is a system that accumulates processes and reports information about an entity's performance (profit or loss), its financial position (assets, liabilities and shareholders' equity) and changes in financial position (Obaidullah, 2013). The goal of every organization be it for-profit or not-for-profit is to create optimum value for its stakeholders. The goal of optimum value addition is best achieved when there is a medium to monitor the management and the board of directors. Financial accounting helps in such monitoring by providing relevant, accurate, reliable and timely information to the stakeholders.

Financial accounting is not an end in itself; rather it is an information system that measures, processes and communicates financial information of an identifiable economic entity for use by management and other interested parties (Agboh, 2015). In addition to the above, financial accounting is governed by both local and international accounting standards such as GAAP and IFRS. Generally Accepted Accounting Principles (GAAP) is the standard framework of guidelines for financial accounting used in any given jurisdiction. It includes the standards, conventions and rules that accountants follow in recording, summarizing and preparing financial statements. Similarly, International Financial Reporting Standards (IFRS) is a set of international accounting standards stating how specific transactions and other events should be reported in financial statements (Ikpefan & Akande, 2012). In the context of this study, financial accounting is the process of recording, summarizing, and presenting transactions in a financial statement for external uses using standardized guidelines.

## **Theoretical Framework**

In this study, Experiential Learning Theory and Social Constructivist Learning Theory are adopted.

### **Experiential Learning Theory by David Kolb**

The experiential learning theory is a cycle learning theory introduced by American educational theorist David Kolb in 1971. The theory sees learning as a process of knowledge creation through the transformation of experience: Knowledge results from the combination of grasping and transforming experience. It is a theory in which educators purposefully engage students in direct experience and focus reflection in order to increase their knowledge, develop their skills and clarify their values. Experiential learning is also referred to as learning through discovery and exploration. The key element of this theory is the student, and that learning (knowledge gained) takes place as a result of being personally involved in the pedagogical approach. In experiential learning environment, students mainly learn by doing, experience, discovery and exploration.

The experiential learning theory is based on six propositions described with the following: learning is best described as a holistic process of creating knowledge and adapting to the world, learning is actually relearning, since it is greatly dependent on already learned material, and learning is driven by conflict, differences, and disagreement and results in assimilation and accommodation.

Similarly, Kolb posited that the experiential learning classroom differs from the traditional classroom situations where students compete with one another or remain uninvolved or unmotivated, and where the instruction is highly structured. Students in experiential learning classrooms cooperate and learn from one another in a more semi-structured approach. Instruction

is designed to engage students in direct experiences tied to real world problems and situations in which the teacher facilitates rather than directs students' progress. According to Kolb (1971), the focus of experiential learning is on the process of learning and not the product of learning. Kolb posited that the theory has the potential of motivating students to acquire, apply knowledge, skills and feelings in an immediate and relevant settings when they are personally involved.

Experiential learning theory has some relationship with the current study in that when teachers adopt think-pair-share instructional strategy in teaching financial accounting, think-pair-share will give students opportunity to learn by doing, through interaction with fellow students and teachers. Experiential environments motivate students to put in their best in classroom tasks and encourages independent learning which can lead to acquisition of practical skills needed to solve financial accounting tasks and to achieve highly in both internal and external examinations.

One of the major weaknesses of Kolb's experiential learning theory is that his learning cycle pays insufficient attention to goals, purposes, intentions, choice and decision-making which are also parts of learning. The theory pays insufficient attention to the process of reflection and also takes very little account of different cultural experiences and conditions while the empirical support for the theory is weak according to Tennant (1997) and Jarvis (1987), thus, the need for the second theory.

### **Social Constructivist Learning Theory by Vygotsky**

Social constructivist Learning Theory was propounded by post-revolutionary Soviet psychologist Lev Vygotsky in 1978. The main idea in the theory is that it lays emphasis on the collaborative nature of learning and the importance of cultural and social context. Vygotsky, although a cognitivist, rejected the assumption made by cognitivists such as Piaget and Perry that it was possible to separate learning from its social context. Vygotsky argued that all cognitive



functions originate in social interaction, and must therefore be explained as products of social interactions.

According to Vygotsky (1978), every function in the child's development appears twice: first, on the social level and, later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). Vygotsky accepted Piaget's claim that learners respond not to external stimuli but to their interpretation of those stimuli. However, he argued that cognitivists such as Piaget had overlooked the essentially social nature of language. As a result, he claimed they had failed to understand that learning is a collaborative process. According to Vygotsky, collaborative learning is a process of peer interaction that is mediated and structured by the teacher. Discussion can be promoted by the presentation of specific concepts, problems or scenarios, and is guided by means of effectively directed questions, the introduction and clarification of concepts and information, and references to previously learned material.

The Social Constructivist teachers do not take the role of the sage on the stage, instead, teachers act as a guide on the side providing students with opportunities to test the adequacy of their current understandings. Vygotsky enumerated the role of the teachers in a social constructivist classroom to include: consider the knowledge and experiences students bring to class, facilitates discovery by providing the necessary resources, ensures that knowledge is actively constructed and learning is presented as a process of active discovery. Others are provide assistance with assimilation of new and old knowledge, ensures that learning programme is sufficiently flexible to permit development along lines of student enquiry, create situations where the students feel safe questioning and reflecting on their own processes, and support collaboration in constructing knowledge, not competition.

Similarly, Vygotsky (1978) posited that the expectation within a constructivist learning environment is that the students play a more active role in, and accept more responsibility for their own learning. The theory also pointed out that students: have to accommodate and assimilate new information with their current understanding, begin their study with pre-conceived notions, need to use and test ideas, skills, and information through relevant activities, students need to know how to learn or change their thinking and learning style, for students to learn they need to receive different lenses to see things in new ways, and that in social constructivism tutors and peers play a vital role in learning.

The relevance of Social Constructivist Theory to this study cannot be over-emphasized because both the constructivist theory and think-pair-share instructional strategy share the same view which is, creation of reliable knowledge through independent learning and interaction with other learners to solve real world problems. Furthermore, think-pair-share instructional strategy requires students to develop communication skills, teamwork skills and to see individual learning as essentially related to the success of group learning. The optimal size for pair learning is four or five people. Think-pair-share instructional strategy often requires teachers to break students into smaller groups (pairs), although discussion sections are essentially collaborative learning environments. The following characteristics of Social Constructivist Theory supports the development of think-pair-share instructional strategy which shows that this theory is necessary for this study: the whole process is learner not teacher-centered, learners endeavour to identify and solve a problem with their existing knowledge, students identify deficits in their knowledge and generate learning issues, students research independently to meet these gaps and identified issues, and students engage in personal and collective learning. The above characteristics, means that both Social Constructivist Theory and think-pair-share instructional strategy lay more

emphasis on the role of teachers in supporting students' development and in providing support structures to enable students enhance their learning and academic achievement.

### **Theoretical Studies**

The theoretical studies are discussed in line with the specific purposes.

### **Financial Accounting and its Roles in the Development of Nigerian Economy**

Financial accounting is tremendously important to the economy of Nigeria, as it provides a solid foundation for the training of future accountants, managers and entrepreneurs (Francis, 2014). Every individual irrespective of class requires the knowledge of accounting to meet the day to day activities. Atetayo and Kiadese in Francis (2014) buttressed this point, when they said that accounting is the language of business and everyday activities. In view of this, most countries all over the world have placed unprecedented emphasis on the teaching of financial accounting in schools. This is in a bid to attain a significant level of development in financial reporting of business organizations.

According to Oluwaseyi (2017), financial accounting performs a critical function in the Nigerian economy as the information it generates serves the nation by allowing for increase in the efficiency of resource allocation among competing interests. This function is performed in market-oriented economies as well as the centrally planned economies. Oluwaseyi stated that financial accounting records also provides information that may be relied on by businessmen while making investment decisions. The author pointed out that the problem with most potential investors in Nigeria is that they are mostly financial illiterates and therefore require the services of financial accountants to help access possible areas of interest. Adejumo (2016) averred that financial accounting has been performing very important roles in the areas of involving preparation of accounting data that are required to be in place before government or individuals

source for loan from both national and multi-national agencies like the African Development Bank, World Bank among others. Financial accounting data help in implementing most of the terms and condition of these agencies.

Similarly, financial accountants provide advice on macro-economic problem through its institution or body (ICAN, ANAN and the Nigeria accounting standard board (NASB)). There is also provision of advice to micro-economic enterprise through practicing financial accounting firms and individuals member of the corporation (Adejumo, 2016). Adejumo stated that there has been increase in the level of interaction between government and accounting profession. This is because they realize that they must deliver on what has been promised to the people. In order to deliver, they need the help of expert and professional financial accountants who are expert in financial matter and economic affairs. The professional financial accountants have also been offering full services to the government in building together both the private and public sectors of the economy.

In the area of corruption which is known to be the enemy of socio-economic development of Nigeria due to its various vice. The financial accountants both at the national and international levels have shouldered the responsibility of waging war against corruption in its entire ramification. The action of financial accountants is natural in the sense that the general public assumes that financial accountants are trusted business advisers with particular expertise in organization. Financial accountants are often the ones who sense it and reporting it to the appropriate quarters within the organization is what they are known for. As noted by Burton in Adejumo (2016), financial accountants play crucial roles in the eradication of corruption in any nation. The kind of professional services they render have direct relationship with integrity, honesty, accuracy, transparency, probity and accountability. The society expects nothing less

than the above stated qualities in the performance of their professional duties as watchdog in financial issues.

Corruptions being an enemy of economic development, professional financial accountants have been organizing series of national and international anti-corruption crusade and making suggestions on how to assist law makers with anti corruption strategies and guidelines. There is also intending effort in making sure that their clients are well guided and directed on transaction that do not have any relationship with corruption. The government of any nation is expected to provide an enabling environment for the small functioning of every fact of the national economy. Sălișteanu and Oros (2015) noted that it is considered that in the economic development of countries, financial accounting plays an important role in that the success of the progress in an economy is influenced by the performance of the financial accounting systems used at micro and macroeconomic level. Sălișteanu and Oros stated that starting with the second half of the 20th century, a striking feature of the macro-economic theory is the use of accounting methodology for planning and control at the level of the state – a method of obtaining an over-all picture of economic activity in essential.

As stated by Sălișteanu and Oros (2015), researchers such as Enthoven, Perera and Mirghani pointed out that the financial accounting has a major role in achieving a higher level of the socio-economic development. Rahaman, in Sălișteanu and Oros opined that the financial accounting information provided from the individual economic entities are partially used in the national income accounting, and are important for assessing the effectiveness of particular national development policies and the performance of the economy as a whole. ACCA (2015) stated that high-quality corporate reporting which is one of the functions of financial accounting is key to improving transparency, facilitating the mobilization of domestic and international

investment, creating a sound investment environment and fostering investor confidence, thus promoting financial stability of a country. A strong and internationally comparable financial accounting reporting system facilitates international flows of financial resources while at the same time helping to reduce corruption and mismanagement of resources in a nation. It also strengthens international competitiveness of enterprises in attracting external financing and taking advantage of international market opportunities (ACCA, 2015).

In the wake of various financial crises continued efforts are being made towards improving the quality of corporate financial reporting as an important part of measures towards strengthening the international financial architecture. In this regard the implementation and application of internationally recognized standards, codes and good practices in the area of corporate reporting has been strongly encouraged as a reflection of the increasing pace of globalization and international economic integration. According to Colasse (2009), different opinions referring to the role of financial accounting at microeconomic level showed that financial accounting plays an important role in economic development of states and that the achievement of development depends on the performances of the financial accounting systems used.

### **Instructional Strategies for Teaching Financial Accounting**

There are many instructional strategies that a financial accounting teacher can use to deliver their teaching. These strategies includes scaffolding instructional strategy, project instructional strategy, questioning and answer instructional strategy, group instructional strategy, peer tutorial instructional strategy, assignment instructional strategy, field trips instructional strategy, Jig saw instructional strategy among others. Olowodun in Ezenwafor and Akpobome

(2017) posited that currently, instructional strategies adopted by accounting teachers in Nigeria include demonstration, questioning, group-discussion among others.

Scaffolding is an instructional strategy that emphasizes the teaching of new skills by engaging students collaboratively in tasks that would be too difficult for them to complete on their own (Azih & Nwosu, 2011). The strategy lays emphasis on the role of teachers and others in supporting the learner development and providing support structures to get to the next stage or level. Instructional scaffolding as a teaching strategy depends heavily on the idea that children come to any educational setting with a great deal of pre-existing knowledge, some of which may be incorrect. It is the process of building on what a student already knows that makes scaffolding an effective instructional strategy.

According to Alibali (2006), types of Scaffolding and the ways they could be used in an instructional setting are presented below:

<b>Types of Scaffolding</b>	<b>Ways Teachers can use them in Instructional Setting</b>
Advance organizers	The teacher uses tools to introduce a lesson or topic and illustrate the relationship between what the students are about to learn and the information they have already learned. The tools include: Venn diagrams, flow charts, organizational charts, mnemonics (memory devices), and rubrics.
Cue Cards	The teacher prepares cards and gives to individual or groups of students to assist them in their discussion about a particular topic or content area. The cards can contain: Vocabulary words, content-specific stem sentences, and formulae.
Concept and mind maps	The teacher introduces maps that show relationships. Partially completed maps are given to students to complete. Students may then be required to create their own maps based on their current knowledge of the task or concept.
Examples	The teacher uses samples, specimens, illustrations, real objects; illustrative problems to represent a concept.
Explanations	The teacher uses more detailed information to carry students along on a task or in their thinking of a concept. This can involve written instructions for a task, or verbal explanation of how a process works.
Handouts	The teacher prepares handouts that contain content-related information, but with less details and room for student note taking.
Hints	The teacher uses suggestions and clues to carry students along on a task. For example, the teacher may ask students to: Place their foot in front of the other,

	use the escape key, find the subject of the verb, add the water first and then the acid.
Prompts	The teacher uses physical or verbal cue to remind or aid students' recall of prior or assumed knowledge. Physical cue involves body movements such as pointing, nodding the head, eye blinking, and foot tapping. Verbal cue involves words, statements and questions such as Go, Stop, It's right there, Tell me now, What toolbar menu item would you press to insert an image?
Question Cards	The teacher prepares cards with content-specific questions which are then given to individuals or groups of students to ask each other pertinent questions about a particular topic or content area.
Question Stems	The teacher gives incomplete sentences to students to complete. This encourages deep thinking by using higher order —What if questions.
Stories	The teacher uses stories that relate to complex and abstract material to situations more familiar with students. That is reciting stories to inspire and motivate learners.
Visual Scaffolds	This involves the teacher using visual scaffoldings such as pointing (call attention to an object); representational gestures (holding curved hands apart to illustrate roundness; moving rigid hands diagonally upward to illustrate steps or process), diagrams such as charts and graphs to explain a concept.

Benefits of instructional scaffolding strategies includes engages students in meaningful and dynamic discussions in small and large classes, motivates learners to become better students (learning how to learn), increases the likelihood for students to meet instructional objectives, provides individualized instruction (especially in smaller classrooms), affords the opportunity for peer-teaching and learning, and provides a welcoming and caring learning environment.

Challenges of instructional scaffolding strategy is that planning for and implementing scaffolds is time consuming and demanding, difficulty in selecting appropriate scaffolds that match the diverse learning and communication styles of students, and difficulty in knowing when to remove the scaffold so the student does not rely on the support.

Project instructional strategy on the other hand is called “heuristic instructional strategy of teaching”. The word Heuristic is derived from the Greek word “Heurisco” which means to find out, to search out, to discover, to investigate. Thus in this strategy, the students find things for themselves. Malik and Pandith (2011) stated that in project instructional strategy, the students



are placed in the position of actual discoverers and are told as little as possible about the problem. It involves maximum usage of thinking and logical reasoning. The students search out the knowledge by keeping themselves physically as well as mentally active by solving definite problems. It develops the habit of hardworking in both teachers as well as students. It gives maximum opportunities to students to utilize all the faculties in order to search for more and more knowledge (Malik & Pandith, 2011).

Some steps in project instructional strategy as identified by Malik and Pandith (2011) are:

- a. Presenting the problem: The teacher present the problem in the first step, the problem is presented before the students.
- b. Provide guidelines or advance tips: That is, after the teacher presents the problem before students, the teacher now provides advance guidelines on how the problem will work.
- c. Students at work: Now the students start working on the problem. They are now free to move from their classroom to the laboratory or workshop which they have to perform the work.
- d. Evaluation: The students now evaluate their work and give comments to one another. The teacher's comments encourage the students that individual has been appreciated and at the same time each student gets guidance to overcome his weakness, they derive the conclusion or results.
- e. Application: The facts or results achieved by the students are then applied to different situations or sees its practical applicability. This helps the learners to develop self-confidence regarding their self-activities.

Questioning instructional strategy helps to reveal the minds of both the financial accounting teachers and students on a particular subject. When students ask questions, students

expose their ignorance or level of understanding and the teacher is then able to assist them. When a teacher asks questions, the teacher seeks for example the knowledge of students and then assess whether or not the set out objectives of the lesson are been achieved. The question can either be from the students to the teacher or vice versa. According to Gbamanja in Adolphus, Onwioduokit and Dike (2015), questioning is actually more of a technique than a strategy of teaching. It can be used within various strategies of teaching. Questions play an important role in teaching and learning, they are applicable in all teaching strategies. It is one of the basic and successful ways of stimulating student's thinking and learning.

Question and answer instructional strategy is a strategy used to sensitize an inquisitive mind and to ascertain if learning objectives can be attained. By so doing financial accounting teachers require listening and insightful questioning, in other words, they require the art of being a good conversationalist. A good inquiry-oriented teacher is an excellent conversationalist. The financial accounting teachers listen well and ask appropriate questions assisting students in organizing their thoughts and gaining insight into what is being taught.

Group instructional strategy is an instructional strategy where students are organized into groups. Each group is given a goal and the achievement of that goal often requires that group members support each other (Bello, 2011). In this instructional strategy, students help each other learn the subject matter, but they also learn how to be a contributing member of the group. This strategy is based on: group size and logistics, task specialization, inter-group competition, group rewards, method of student evaluation, and appropriateness to a given learning objective or situation. The benefit of group instructional strategy according to Mintah (2014) is that acquisition of skills, attitudes and values can best be done by practice, involving series of activities.

Peer tutoring is a flexible, peer-mediated instructional strategy that involves students serving as academic tutors and tutees. Typically, a higher performing student is paired with a lower performing student to review critical academic or behavioral concepts (Hott & Walker, 2012). Peer tutoring instructional strategy is an approach to organizing classroom activity so that pupils can interact with and learn from each other as well as the teacher and the world around them. Peer tutoring is a successful instructional strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement.

The benefit of choosing peer instructional strategy according to Vasquez and Slocum (2012) is because it is a widely-researched practice across ages, grade levels, and subject areas, it allows students to receive one-to-one assistance, students have increased opportunities to respond in smaller groups, it promotes academic and social development for both the tutor and tutee, student engagement and time on task increases, and peer tutoring increases self-confidence and self-efficacy of students. According to Hott and Walker (2012), the most frequently used peer tutoring models are:

Classwide peer tutoring (CWPT) which involves dividing the entire class into groups of two to five students with differing ability levels. Students then act as tutors, tutees, or both tutors and tutees.

Cross-age peer tutoring is where older students are paired with younger students to teach or review a skill. The positions of tutor and tutee do not change. The older student serves as the tutor and the younger student is the tutee.

Peer assisted learning strategies (PALS) is a version of the CWPT model which involves a teacher pairing students who need additional instruction or help with a peer who can assist (Hott & Walker, 2012). Groups are flexible and change often across a variety of subject areas or skills. Cue cards, small pieces of cardstock upon which are printed a list of tutoring steps, may be provided to help students remember PALS steps. All students have the opportunity to function as a tutor or tutee at differing times. Students are typically paired with other students who are at the same skill level, without a large discrepancy between abilities.

Reciprocal peer tutoring (RPT) is where two or more students alternate between acting as the tutor and tutee during each session, with equitable time in each role. Often, higher performing students are paired with lower performing students.

Same-age peer tutoring is a situation where peers who are within one or two years of age are paired to review key concepts. Students may have similar ability levels or a more advanced student can be paired with a less advanced student. Students who have similar abilities should have an equal understanding of the content material and concepts. When pairing students with differing levels, the roles of tutor and tutee may be alternated, allowing the lower performing student to quiz the higher performing student.

Jig saw instructional strategy is a strategy of organizing classroom activity that makes students dependent on each other to succeed (Lestik & Plous, 2012). Jig saw instructional strategy breaks classes into groups and breaks assignments into pieces that the group assembles to complete the (jigsaw) puzzle. It was designed by social psychologist Elliot Aronson to help weaken racial cliques in forcibly integrated schools (Aronson, 2012). The strategy splits classes into mixed groups to work on small problems that the group collates into a final outcome. Working individually, each student learns about his or her topic and presents it to their group.

Next, students gather into groups divided by topic. Each member presents again to the topic group. In same-topic groups, students reconcile points of view and synthesize information. They create a final report. Finally, the original groups reconvene and listen to presentations from each member. The final presentations provide all group members with an understanding of their own material, as well as the findings that have emerged from topic-specific group discussion (Perkins & Tagler, 2012).

### **Conventional Lecture Method and Academic Achievement of Students**

Conventional lecture method involves a teacher and a larger group of students at the same time. The teacher comes to the class with his facts and dishes them out. The students are largely passive listeners. This method is also referred to as teacher-centered-method. It is common in the senior secondary school learning such as. Brown (2005) stated that lecture method does not provide students with enough opportunity to practice their skills. The lecture (traditional) method of teaching still prevails in our present day classrooms, and it needs to be revisited as per requirements of the scientific concepts. The teacher is active throughout the whole teaching-learning situation and disseminates the information to the learners. The commonality of this method is due to the fact that it is cost effective, and needs less time and resources. The lecture once prepared can be used more than once. Hussain (2011) stated that in this method, the teacher gives a lot number of information in a very short time. As the goals of teaching have persistently undergone changes, therefore, this age long method along with its numerous benefits needs to be discontinued.

There has been stress on new goals of teaching, which are difficult to achieve by the lecture method. The goals of teaching demand maximum activeness of the learners in the teaching-learning situations, and the teacher should assume the role of the facilitator. The

classrooms need to be made student-centered, and students should be free in recognizing their problems. The financial accounting teachers should create new instructional material that can help the students to construct their knowledge. It has been observed that lecture method is a source of boredom, and needs to be revised (Hussain, 2011).

According to Aina, Olutade and Osuji (2009) stated that lecture method is a teacher-dominated approach to teaching; hence it is termed a didactic method. It involves verbal presentation of ideas, concepts, generalization and facts. The objective of this method is just to stuff the students with information. Teacher does most of the work by talking while students are just passive or slightly involved by taking down notes and asking few or no questions. Aina et al. stated that in the universities and other institutions of higher learning, the lecture method is the acceptable means of imparting information. At the secondary school level, the students have not been trained to follow chains of reasoning. Therefore lecture method should not be used in its pure forms.

According to Su and Woods (2012), there are some special purposes of lecture method. The lecture is helpful in introducing new topics of the study, or presenting background material to the students preparing for further study. The lecture method is useful for a large audience or large classes to receive information rapidly about aspects of materials that will increase their understanding of what lies ahead. Extensive use of lecture method tends to substitute the teacher for the students; the students should be involved in the learning situation and be allowed to frame good questions, and also ask good questions. The lecture method is cheap and it does not need special apparatus even for the large classes. More contents can be covered in a given time than any other method, and normally involves no or less preparation.

Furthermore, the Center for Instructional Development and Distance Education (2012) enumerated the disadvantages of lecture method as it does not afford the instructor with ways to provide students with individual feedback, it is difficult to adapt to individual learning differences, it may fail to promote active learning unless other teaching strategies such as questioning and problem-solving activities are incorporated into the lecture, and it does not promote independent learning.

### **Overview of Think-pair share Instructional Strategy**

The benefit of using the think-pair-share instructional strategy is that it brings positive changes in students' communication skills that occur when they listen to one another and respect others' ideas (Mutakinati et al., 2015) pointed out. Students have the opportunity to learn problem solving skills from their pairs, gain the extra time or prompting they may need, and gain confidence when reporting ideas to the whole class. Mutakinati et al. however, stated that the major defects of the strategy is that it could be time-consuming. Bamiro (2015) pointed out that Think-pair-share instructional strategy has many advantages over the conventional teaching method. The "think time" incorporates the important concept of "wait time." It allows all children to develop answers, longer and more elaborate answers can be given, and answers will have reasons and justifications because they have been thought about and discussed. Students are more willing to take risks and suggest ideas because they have already "tested" them with their partner.

Think-pair-share instructional strategy is a cooperative strategy that quickly becomes an entire class technique and a pedagogy designed to provide learners with food for thought on a given topic and concept thereby enabling them to bring out and share their individual ideas with each other (Ariyani, 2011). Jannah (2013) stated that Success for All Foundation (SAF) affirmed

that think-pair-share is a questioning technique that is used to keep all students actively involved in class discussion and provides an opportunity for everyone to share an idea and answer to every question posed by the teacher. Think-pair-share (TPS) is suitable for assessment of learning in business subjects classrooms. It includes four components: time for teacher to pose a question, time for students to think, time for sharing in pairs and time for each pair to share back to the whole class.

According to Lyman in Lasnami (2015), think-pair-share (TPS) instructional strategy has advantages for both students and teachers, they are summarized as follow: Lyman listed the advantages of TPS strategy for the students as follows: provides the students with time to think before answering any question posed. Hence, they are actively engaged and continuously building their self-confidence and self-efficacy. Furthermore, it reduces stress and creates positive classroom climate that encourages the students to be interactive and active, provides the learners with the opportunity to share their ideas and thoughts and creates high degree of interaction.

Advantages of TPS instructional strategy for teachers are that the strategy facilitates for the teacher many tasks. Teachers can concentrate on asking questions and students' reaction will be observed and listened better by teachers. Moreover, teachers have the opportunity to hear ideas from many students, so a rich conversation will be achieved. Cooper and Robinson in Lasnami (2015) added that this strategy is very useful for teachers because teachers can monitor learners' progress.

Think-pair-share instructional strategy allows teachers to check their students' level of understanding before moving deeper into the subject matter. It also gives students an opportunity to apply what they are learning, thus making your content more meaningful (Barragato, 2015). It



provides a safe opportunity for students to make mistakes or answer incorrectly without being penalized by losing points because they did not recognize knowledge gaps in their learning.

The Think-Pair-Share instructional strategy is also designed to differentiate instruction by providing students time and structure for thinking on a given topic, enabling them to formulate individual ideas and share these ideas with a peer. This teaching strategy promotes classroom participation by encouraging a high degree of pupil response, rather than using a basic recitation strategy in which a teacher poses a question and one student offers a response ( Simon, 2017). Additionally, this strategy provides an opportunity for all students to share their thinking with at least one other student which, in turn, increases their sense of involvement in classroom learning. Think-pair-share can also be used as an information assessment tool; as students discuss their ideas, the teacher can circulate and listen to the conversations taking place and respond accordingly.

According to Simon (2017), the benefit of think-pair-share instructional strategy is that it is easy to use within a planned lesson, and also an easy strategy to use for spur-of-the-moment discussions. Simon further stated that think-pair-share strategy can be used for a wide variety of daily classroom activities such as concept reviews, discussion questions, partner reading, brainstorming, quiz reviews, and topic development among others. The strategy helps students to develop conceptual understanding of a topic, to develop the ability to filter information and draw conclusions, and to develop the ability to consider other points of view.

According to Sunita (2014), the think-pair-share instructional strategy has been recommended for its benefits of allowing students to express their reasoning, reflect on their thinking, and obtain immediate feedback on their understanding. Sunita revealed that one group pre-test post-test experimental study carried out showed that this strategy is useful for teaching

skilled-based subjects. Also Sunita stated that students agreed that think-pair-share instructional strategy developed their interest in learning, to think about the problem and writing the solution during the think phase helped them learn concepts more precisely and discussing the solution with the partner during the pair phase helped students learn concepts more clearly. Also 100 percent students agreed that they found the think-pair-share strategy effective (Sunita, 2014).

In the same vein, Kitaoka (2013) revealed that the think-pair-share instructional strategy helps students to apply a theory to real economic problem and to think logically so that they become effective problem solvers. Kitaoka further found that the think-pair-share instructional strategy helps students: to change their learning style in the classroom from listening and taking notes given by a traditional “chalk and talk” to an activity-based where they pay more attention and get more involved, to learn that a problem solving is linked to a theory, to learn thinking logically and explaining their ideas, thoughts and solutions logically to enhance their ability, to learn applying an economic theory to an actual economic problem, to learn from other students and to enhance motivation to study, to learn to have fun in subjects, and to meet the aims of educational objectives.

Similarly, the classroom activities should have characteristics that allow students to reason through a problem, write open ended responses, work in groups and discuss solutions. Think-pair-share (TPS) is an active instructional strategy that satisfies these requirements (Lyman in Kothiyal, Majumdar, Murthy & Iyer, 2013). Cooper and Robinson in Kothiyal et al. recommended TPS as an instructional strategy to engage learners in higher-order thinking, and as a feedback mechanism both for students and teachers. However, Kothiyal et al. revealed that TPS has not been widely researched and evaluated for objective evidence of student engagement or learning.

Think-pair-share affords the benefits of small-group collaborative learning in a large lecture class, requires students to think about course content, can develop higher order thinking skills and allows students to formulate their reasoning individually before sharing with others (Bonwell & Eison in Kothiyal et al., 2013). Another important benefit of think-pair-share is that it offers a mechanism of formative assessment (Roehrig and Christesen, 2010) in a large classroom. It provides students prompt and descriptive feedback on their understanding, both from their peers and from the instructors. It also provides instructors an immediate feedback on the quality of student understanding. Students and instructors can use this feedback to modify their learning and teaching respectively.

However, the weaknesses of think-pair-share according to Lyman are that TPS needs maximal service of the teacher because there are many groups or pairs in one class. Thus, the teacher must give attention to all groups that have formed in discussion. Then, the successfulness of this instructional strategy depends on student variation in pairing with others; there is no mediator if there is dispute in discussion, and more the most important is time pressure and this can be noisy. There are other disadvantages, students may resort to the use of L1, in other words overwhelming majority of them to share the maternal language. In addition, teachers do not have control over what is said and divided between the pairs. Therefore, TPS can be good for learners, however disadvantageous in the classroom because of noise and time (Lyman in Lasname, 2015).

The characteristics of think-pair-share instructional strategy according to Khalifa (2016) include: think-pair-share instructional strategy gives the students the opportunity to ask, discuss and exchange ideas, it provides opportunities for learning, provides students opportunities to learn from their errors in an atmosphere qualified with understanding, interaction and

communication, and provides students with opportunities to record their ideas on paper or cards which can be collected and examined by the teacher. Thus, the teacher can see and discover their exploration of the topic.

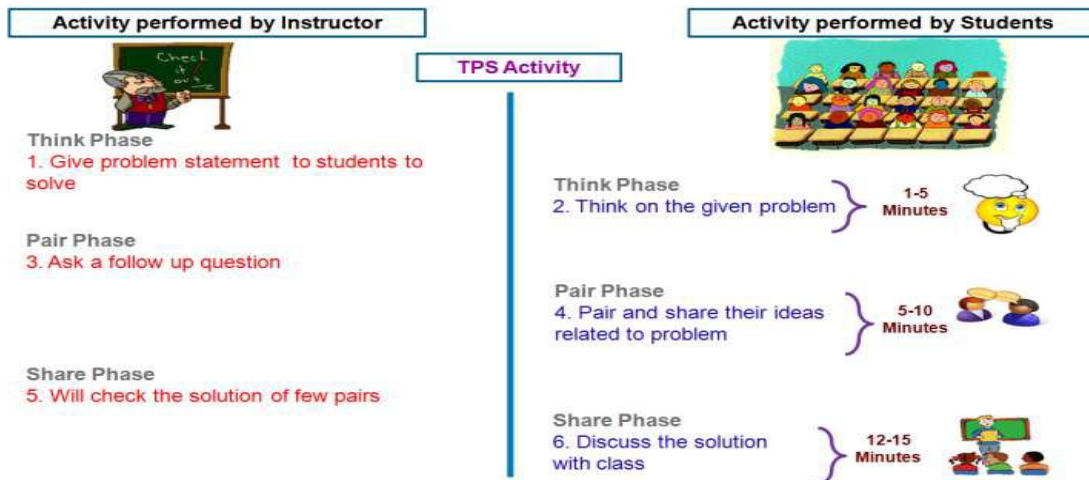
Similarly, Khalifa (2016) added other characteristics of think-pair-share instructional strategy as follows: enables the student generates an idea him or herself then is able to extend that idea by collaborating with a peer, the learning is enhanced via the dialogue between individuals, when students are sharing ideas with their partner, teacher reminds them to listen to their partner's ideas. When groups are asked to share, students share the ideas of their partner, not their own, this increases social skills, and respects each other, sharing the student's answer in a public venue forces the student to organize the new information gathered from the dialogue with peer in a comprehensible manner, it allows the teacher to check the students' level of understanding before moving deeper into the subject matter.

Think-pair-share (TPS) is a classroom-based active instructional strategy in which students work on a problem posed by the instructor, first individually, then in pairs, and finally as a class wide discussion. TPS has been recommended Kothiyal, Majumdar, Murthy and Iyer (2013) for its benefits of allowing students to express their reasoning, reflect on their thinking, and obtain immediate feedback on their understanding. The think-pair-share (TPS) instructional strategy is designed to encourage students to share and discuss ideas around a particular topic, issue or problem. The teacher can plan to use this strategy within a planned lecture, but it is also easy to implement it spontaneously. This strategy can be used to gauge conceptual understanding, filter information, draw conclusions and encourage peer learning among students. Results can also signal to the teacher that he or she may need to re-explain content or provide further support for students.

According to Hamdan (2017), the strategic steps of think – pair – share instructional strategy are:

- a. Thinking step: the strategy starts when the teacher is offering a question exciting to think or a problem related to the topic of the lesson to search for a solution Then the teacher asked the students to think alone to resolve the issue or problem at hand and give them a specific time to think. The time is determined for individual reflection on the basis of students' knowledge and the nature of the question and the degree of complexity.
- b. Pairing step: The teacher asks from students to splitting up into pairs and discusses what they think about it who shall each student to discuss and share ideas reached by thinking step with his colleague who sits next to him and each of them is trying to make his point to his colleague and convince him Also exchange views and ideas to reach a common answer.
- c. Sharing step: The teacher can participate each pair of students with another pair to consist square of students to think together and this will save time and effort on the teacher, Rather the teacher discuss (20) pairs of students, for example, will be discussed (10) groups at the same time (Saleh &Ibrahim, 2015).

The think-pair-share activity is represented in figure 1 below:



**Figure 1: Think-Pair-Share activity by Banerjee et.al (2013).**

According to Khalifa (2016), the teacher should present the stages of think-pairs-hare as follows:

- a. Forming groups: the teacher divides the students into heterogeneous group, each group includes four (4) students of different levels.
  - b. Preparation of the teaching aids for each lesson.
  - c. Preparation of the learning environment.
  - d. Distributing worksheets for each group.
- A. The roles of the teacher during the lesson are as follows:
- i. explaining the new lesson and giving students examples,
  - ii. monitoring the work of groups, and listening to the dialogue and the discussion between the members of the group,
  - iii. monitoring and providing feedback to encourage the students and to identify areas of weakness that the teacher need to review,
  - iv. following up the progress made by the members of each group, and
  - v. evaluating each activity, that the group implemented during the lesson.

B. The roles of the teacher after the lesson include:

- i. the teacher summarizes the main points of the lesson, and
- ii. declares the score of each group, determines the winner of the group and provides appropriate reinforcement for them.

C. The roles of student in the think-pair-share instructional strategy are as follows:

- i. the student thinks alone individually at a specific time, for the problem posed by the teacher, and it requires from the student to select the information and ideas which related to the problem, and activates the previous experiences, and linked to the new positions,
- ii. the student pairs with his or her colleague to discuss and exchange ideas and views, and tries to persuade the colleague with his or her idea, and listens for the pairs' opinion to solve the problem and they have an evidence and proof on the validity of their solution,
- iii. interaction with other colleagues and building positive relationships between him or her and the colleagues,
- iv. do the effort and help other colleagues, and contribute a different point of views, in order to get perfect solutions,
- v. keep quiet, and discipline in the classroom and with groups, so that he can hear the instructions and the questions posed.

The teacher is not a transmitter of information, and the student is not only a negative recipient, and this strategy is the biggest burden lien on the student for seeking the information, with the help of the teacher as a guide and advisor, and this strategy is the most strategies based on the student. The researcher of the current study adds other roles of the student in this strategy (Khalifa, 2016),

Similarly, Simon (2017) stated that before introducing the think-pair-share instructional strategy to the students, the teacher should set his target for the lesson. The teacher may choose to use a new text that the class will be reading, or might want to develop a set of questions or prompts that target key content concepts that students have been studying (Simon, 2017). The teacher should describe the strategy and its purpose with the students, and provide guidelines for discussions that will take place. The teacher should explain to students that they will think individually about a topic or answer to a question, pair with a partner and discuss the topic or question, and share ideas with the rest of the class.

Using a student or student(s) from his classroom, the teacher should model the procedure to ensure that students understand how to use the strategy. Allow time for students to ask questions that clarify their use of the technique.

Once students have firm understanding of the expectations surrounding the strategy, monitor and support students as they work through the steps below, teachers may ask students to write or diagram their responses while doing the think-pair-share activity.

**Think:** Teachers begin by asking a specific higher-level question about the text or topic students will be discussing. Students "think" about what they know or have learned about the topic for a given amount of time (usually 1-3 minutes).

**Pair:** Each student should be paired with another student. Teachers may choose whether to assign pairs or let students pick their own partner. Remember to be sensitive to learners' needs (reading skills, attention skills, language skills) when creating pairs. Students share their thinking with their partner, discuss ideas, and ask questions of their partner about their thoughts on the topic (2-5 minutes).



Share: Once partners have had ample time to share their thoughts and have a discussion, teachers expand the "share" into a whole-class discussion. Allow each group to choose who will present their thoughts, ideas, and questions they had to the rest of the class. After the class “share,” the teacher may choose to have pairs reconvene to talk about how their thinking perhaps changed as a result of the “share” element (Simon, 2017).

Assessment is the most important thing teachers can do to help students while learning (Brown in Pradana, Sujadi & Pramudya, 2017). Meaning that the assessment function is not only used to assess students with scores after students complete their learning process, but also used to repair learning. Therefore, teachers need to use assessments that emphasize feedback to improve their teaching quality. Such an assessment is nothing but a formative assessment. Formative assessment is a range of formal and informal assessment procedures conducted by teachers during the learning process in order to modify teaching and learning activities to improve student attainment (Huhta, 2010). Formative assessment (Assessment for learning) is the process of seeking and interpreting evidence for use by learners and their teachers to decide where to learn and how to get there. This assessment can improve learning more effective because the purpose of this assessment is to give feedback.

The aspect of formative assessment that the think-pair-share instructional strategy provides is valuable to the learning process. Using think-pair-share instructional strategy allows the teacher to gain insight into the quality of student understanding (Sampsel, 2013). When teachers are able to gauge their students’ understanding, they can use this information to alter their instruction in a way that would be more beneficial to learners. Informal formative assessment describes the process of teachers gaining new information about student

understanding and using that information to immediately shape the instruction in order to better facilitate student learning (Ruiz-Primo, 2011).

Similarly, think-pair-share (TPS) is an effective formative assessment technique that can highlight areas of confusion for students and allow instructors to address the confusion in a timely and helpful manner (Barragato, 2015). Informal formative assessment can occur during student-teacher or student-student interaction (Ruiz-Primo, 2011) that takes place during think-pair-share. These interactions allow teachers the opportunity to observe students' thinking through their explanations and dialog.

Steps of Think Pair Share using assessment formative are presented below:

<b>Stages</b>	<b>Activity</b>
Preliminary	This stage begins with the teacher performing apperception, explaining the purpose of the lesson,
Think	Students think about teachers' questions individually. Then, students who successfully solve the problem are entitled to get a sign of success from the teacher.
Pair	Unsuccessful students are paired with friends and discuss. Furthermore, each student who previously received a mark of success from the teacher is assigned to each group to guide the discussion and entitled to also give a sign of success for the group if successfully solved the problem.
Share	The representatives of the students presented their answer in front of the class. Furthermore, both other students and teachers give a classical feedback on the answer.
Closing	Teachers with learners do reflection. Teachers give feedback on learning processes and outcomes. The teacher gives home work and informs the learning materials for the next meeting.

*Source: Pradana et al. (2017).*

### **Think-Pair-Share Instructional Strategy and Academic Achievement**

Think-pair-share instructional strategy has been found to be an effective strategy for teaching chemistry (Sherman in Kitaoka, 2013). This is because, according to Shermson, it is easy to learn and easy to use, and it easily creates a more relaxed atmosphere than calling on individual. Kitaoka likewise stated that in think-pair-share, students have valuable time to think

through questions before any discussion begins. Think-pair-share instructional technique enable students to have a better understanding of class materials and be more motivated to study in addition to helping students to think critically.

A study by Ahmad (2016) revealed that think-pair-share instructional strategy had statistically significant effect on students' academic achievement. Salman (2015) in his study to ascertain the effectiveness of think-pair-share instructional strategy found the effectiveness of think-pair-share strategy in improving pupils' academic achievement. In a similar study by Salman (2015) which aimed to ascertain the effect of think – pair - share strategy on pupils' academic performance in fifth grade and the level of ambitions in science generally found the strategy to be effective. However, Saleh and Ibrahim's (2015) study on the effect of think-pair-share instructional strategy on students' Biology achievement in Algas and their attitude toward it disclosed that there were no statistical differences in the achievement level between the students who study using think-pair- share instructional strategy and those who study with conventional teaching method. Furthermore, Awid and Abood's (2014) study revealed that there was a significant difference between experimental group that studied using think-pair-share strategy and those who studied with conventional method.

In a related study by Althelab and omar (2013) to ascertain the impact of think–pair–share instructional strategy on the achievement of second grade intermediate female students in mathematics and their reasoning thinking. The results revealed the superiority of the experimental group who studied using think–pair–share instructional strategy to the control group in achievement and reasoning think. Gafoor (2012) earlier study which ascertained the effect of using think-pair-share strategy in the acquisition of mathematical concepts for third stage students of teachers training institute showed a statistical significant differences between

the two groups for the side of experimental group. Khaji (2010) investigated the effectiveness of (think-pair-share) strategy to acquire physics concepts and the development trend towards solving physics issues among students in first grade. The study revealed that no difference statistically significant existed among the experimental group in the acquisition of physical concepts in the light of this,

### **Think-pair-share Instructional Strategy and Students' Retention**

Retention is defined by Chianson, Kurumeh and Obida (2011) as a preservative factor of the mind. The mind acquires the materials of knowledge through sensation and perception. These acquired materials in the mind need to be preserved in form of images for knowledge to develop. Whenever a stimulating situation occurs, retained images are revived or reproduced to make memorization possible. Hence skill-based concepts need to be presented to the learners in a way or method that touches their sub-consciousness which can trigger quick recalling of the concept being taught or learnt (Chianson et al., 2011). Chianson et al. stated that by using instructional strategy such as think-pair-share, both high ability and low ability learners would be able to collaborate in terms of understanding, explaining and retaining the concept they have learnt in a financial accounting class. Sousa in Divoll (2010) defined retention as the process whereby long-term memory preserves learning in such a way that it can locate, identify, and retrieve it accurately in the future. Divoll stated that if a student cannot recall information presented after 24 hours, the information was not permanently stored and, thus, can never be recalled.

According to Sampsel (2013), think-pair-share instructional strategy encourages student participation in classroom discussion and promotes forming and critiquing arguments both in small and large groups which leads to students' ability to retention important concepts. Sampsel further stated that think-pair-share increases students' confidence in their abilities to solve

mathematical problems and their willingness to participate in mathematical whole class discussions which improves their retention capacity.

In agreement, Utama, Marhaeni and Putra (2013) reported that think-pair-share instructional strategy allows the development of self-confidence, speaking skills and retention ability among English language learners. They attribute this increase to the interaction and motivating effect this instructional model brings. In another study, Jebur, Jasim and Jaboori (2012) found that implementation of this think-pair-share instructional strategy resulted in higher learning and retention results. Similarly Fitzgerald (2013) wrote that using think-pair-share led to higher achievement and retention results. Roswati, Zaim and Radjab (2014) in agreement disclosed that implementing think-pair-share instructional pedagogy enabled r students to become better speakers of the target language in addition to fostering their motivation and retention capability.

Besides, Baleghizadeh (2010) in his study found that when students in the second year programme worked with think-pair-share pedagogy, their word-building abilities improved greatly. Likewise, the study by Sumarsih and Sanjaya (2013) revealed that applying think-pair-share instructional strategy improved the retention mean of students' scores in their writing class. In addition, Slone and Mitchell (2014) investigated the think-pair-share instructional strategy with Google Drive integration and concluded that discussions were useful for students and the flexibility of Google Drive provided meaningful guidance. They claimed still there is much more space to be discovered with emerging technologies and the think-pair-share instructional strategy.

### **Think-pair-share Instructional Strategy and Students' Self-efficacy**

Self-efficacy refers to a person's belief in his or her ability to do a particular task (Wongpinunwatana, Talungchit & Jantachoto, 2016). Wongpinunwatana et al. stated that creating self-efficacy is important for learning performance. Students that have strong self-efficacy tend to become involved in the study immediately. They learn fast, demonstrate high effort, and continue to learn when facing challenges. These students have the potential to succeed at higher levels than students with less self-efficacy (Dinther, Dochy & Segers, 2011; Baron & Morin, 2010).

Self-efficacy is the outcome expectancy of training and learning that an individual believes will happen from doing a certain action (Bandura in Wongpinunwatana Talungchit & Jantachoto, 2016). Bandura asserted that the use of cooperative instructional strategy such as think-pair-share in teaching students can improve their self-efficacy and academic achievement. Self-efficacy is considered as having great effect on students' academic achievement. Tenaw (2013) stated that students possessing a high degree of self-efficacy are more successful at accomplishing tasks and perform better academically. Accordingly, self-efficacy beliefs are crucial when applied to the cognitive demands of higher education.

According to Bandura in Rada (2017), the sources of self-efficacy are broken down into four major parts namely: mastery experiences, vicarious experience, verbal persuasion, and somatic and emotional states. Mastery experience occurs when students undertake a task and succeeds. The feeling of achievement allows the students to feel confident in further similar situations. This mastery experience is also known to be the most effective strategy to enhance self-efficacy according to Bandura. Vicarious experience is another component that affects the perception of self-efficacy. It takes place when students observe another student's successes or

failures in which that particular student resembles them in some ways. When the subject being observed is successful, the higher the self-efficacy of the observer gets. The same thing happens if the subject fails. It would affect the observers' self-efficacy negatively.

The third component is verbal persuasion which is also known as social persuasion. This occurs when a student receives verbal support of how he or she is capable of achieving goals. With verbal persuasion, the student is more likely to do the task confidently or with high self-efficacy because his/her self-belief is being supported and reassured positively (Rada, 2017). Somatic and emotional states are the last components which occur when the student ponders upon the task and forefeels negative or positive towards a situation or task causing him/her to have high or low self-efficacy. Bandura in Rada also described in social-cognitive theory on how self-efficacy acts as a motivational drive that pushes the grit when students face difficulties. When the grit is being triggered, it promotes long-term view, increases intended actions, advances self-regulation, and makes self-correction come in practice when needed.

There are four steps for developing self-efficacy as noted by Bandura in Rada (2017) (a) observing a proficient model, (b) practicing that model under close supervision, (c) receiving encouragement, and (d) reducing anxiety during practice. Self-efficacy plays a key role in human functioning because it affects behavior not only directly, but by its impact on other determinants such as goals and aspirations, outcome expectations, affective proclivities, and perception of impediments and opportunities in the social environment (Bandura in Bailey, Lombardi, Jacqueline & Gale, 2017).

Efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically. They also influence:

- a. The courses of action people choose to pursue,

- b. the challenges and goals they set for themselves and their commitment to them,
- c. how much effort they put forth in given endeavors,
- d. the outcomes they expect their efforts to produce,
- e. how long they persevere in the face of obstacles,
- f. their resilience to adversity,
- g. the quality of their emotional life and how much stress and depression they experience in coping with tasking environmental demands, and
- h. the life choices they make and the accomplishments they realize. Meta-analyses across different spheres of functioning confirm the influential role of perceived self-efficacy in human self-development, adaptation, and change.

Considerable amount of evidence have shown a positive direct effect of think-pair-share instructional strategy on students' self efficacy and academic achievement (Rada, 2017; Usher & Pajares, 2006). Lasname (2015) revealed that this strategy is designed to encourage students' interaction and by so doing, enhance their self-esteem and self-efficacy. Ledlow in Lasname also posited that think-pair-share instructional strategy provides students food for thoughts, enabling students to formulate ideas and share them with others thus, improving their self-efficacy.

Another work led by Utama (2013) reported that think-pair-share (TPS) instructional strategy enhances students' self-confidence and perceived self-efficacy in English Language speaking. Utama asserted that the strategy provides an opportunity for communication, planning, research, oral, and visual presentation in the classroom which improves students' self-esteem, positive interpersonal relations with other students, motivation, and positive attitudes in learning English language. The author advised educators to use TPS in instructional delivery to improve



the students' self-confidence and self-efficacy. Sampsel (2013) likewise revealed in his study that TPS had positive effects on students' self-efficacy.

### **Gender and Academic Achievement of Students**

There has been an increasing concern over the years globally about the right of women. This has been attributed to the observations and beliefs of many scholars that the female gender is greatly marginalized in Africa, Nigeria not being an exception (Popoola in Owodunni & Ogundola, 2013). Taylor (2012) stated that the term gender is socio-cultural and is built based on the biological expectations of the individual on the basis of being a male or female. Taylor averred that gender has sound psychological background and is used to refer to specific cultural patterns of behaviour that are attributed to human sexes. Gender, then, refers to a set of assumptions about the nature and character of biological differences between males and females, assumptions that manifest in a number of ideas and practices that have a determinant influence on identity, social opportunities and life experiences of human actors.

The assumptions tend to define the task and roles of a particular sex, thus enhancing role and behavioural identity for the individual (Owodunni & Ogundola, 2013). It could influence what a person is expected to do or not. It could also influence the person's belief in respect of being a male or female. Gender refers to the social attributes and opportunities associated with being male or female and the relationships between women and men, girls and boys as well as the relations between women and those between men.

In the educational system, gender is important as it tends to influence the pattern of school enrolment and academic performance of students (Owodunni & Ogundola, 2013). This is partly because, gender roles affect familiarity with academic content, career aspirations, attitude toward subjects, teacher expectations and preferred approaches which also affect academic

performance (Owodunn, 2009). In most societies, gender role has relegated females to the sidelines, preventing them from participating in and benefiting from educational and development efforts. In the recent times, the gender factor has assumed prominence in vocational and technical education discourse (Owodunni & Ogundola, 2013). It has been documented that disparity exists between male and female students performance in these disciplines.

In some cases boys had an edge over girls in academic achievement (Dyankov, 2012). On the other hand, it was reported by Azuka in Owodunni and Ogundola (2013) that such a difference does not exist. However, Dyanko observed that in some countries in conformity with certain traditions, technical and vocational education (business subjects inclusive) is regarded predominantly for boys only and that attempts are being made to facilitate girls' attendance in technical and vocational institutions. This sex biased tradition of vocational and technical education still exists in Nigeria. Owodunni and Ogundola (2013) pointed out that women have little or no access to some programmes.

Many scholars have researched into gender differences in academic achievement especially in business subjects. Many have found that the male students performed significantly better than their female counterparts (Amuda, Domiya & Durkwa, 2016 & Peterson, 2010). These difference in academic achievement between male and female were found in several different subjects examined at the secondary school level. Evans in Amuda et al. revealed that despite controlling other factors, the result showed that female students perform significantly worse in economics than male students. Duff in Amuda, Domiya and Durkwa also investigated the relationship between 60 first year undergraduate accounting and business economics students' approaches to learning, their age, gender, prior academic performance and regression. The result indicated that age, gender and their academic performance and progression in

accounting and economics was a determinant of students' performance in money and banking course.

Reynolds, Scheiber, Hajovsky, Schwartz and Kaufman (2015) concluded that boys and girls are more alike than different on most psychological variables, including academic skills such as reading and math. Reynolds et al. disclosed that girls have higher academic ability and higher scores on a test of math computation. Moreover, it has been noted that girls' performance tends to be better than boys' on tasks or problems with well defined procedures (Eniayeju, 2010).

Dutuma (2014) however, found gender to be an insignificant determinant of success in micro-economics. Jacklin and Maccoby as cited in Glawala (2013) in their studies of sex difference in academic performance revealed that there was no gender difference on quantitative ability, but differences are found in the age 13 (thirteen) they tend to favour boys. Jebson in Amuda, Domiya and Durkwa (2016) investigated on gender difference in relationship between students academic achievement. Six years were considered to determine difference to gender in relation to JSCE integrated science and SSCE in Biology, Chemistry and Physics. The results revealed that there was no significant difference in the relationship between grades in JSCE integrated Science and SSCE in Biology, Chemistry and Physics.

### **Empirical Studies**

The related empirical studies were reviewed under the following sub-headings:

#### **Think-pair-share Instructional Strategy and Academic Achievement**

Nwaubani, Ogbueghu, Adeniyi and Eze (2016) carried out a study on effects of think-pair share (TPS) and student teams-achievement divisions (STAD) instructional strategies on senior secondary school students' achievement in economics. Three research questions and two hypotheses guided the study. The study adopted the non-equivalent pretest-posttest quasi-

experimental design. The population of the study consisted three thousand, three hundred and ninety five (3,395) senior secondary school two (SSII) students in thirty (30) secondary schools in Nsukka Local Government Area. The sample for the study consisted of two hundred and twenty-four (224) economics students. The sample was drawn using purposive random sampling technique. Instrument used for data collection was Economics Achievement Test (EAT) which was developed by the researchers. The validation of the instrument was done by five experts in Social Science Education and Test and Measurement. The researchers carried out a trial testing of the EAT to estimate the internal consistency or reliability coefficient of the instrument. The reliability coefficient of the EAT was determined using Kuder-Richardson 20(K-R20) and was computed to be 0.96. Mean scores and standard deviations were used in answering three research questions while Analysis of Covariance (ANOVA) was used in testing the two hypotheses.

Findings revealed that both the Think-pair share (TPS) and Student Teams-Achievement Division (STAD) significantly improved students' achievement in economics. Similarly, female students achieved better than their male counterparts. It was concluded that both TPS and STAD could enhance student's achievement in economics with female students making more significant gains than their male counterparts. The researchers recommended among others that, the use of both TPS and STAD should be encouraged during teacher training and through teacher-in service training programmes. The relationship between Nwaubani, Ogbueghu, Adeniyi and Eze' s study and the present study was that both focused on determining the effect of think-pair-share instructional strategy on secondary school students' academic achievement. Both studies adopted quasi-experimental design and SS 2 students as population of the study. In addition, the two studies used mean, standard deviation and Analysis of Covariance (ANCOVA)

for data analysis. However, Nwaubani, Ogbueghu, Adeniyi and Eze's study differed from the current study in the area of the study and the subject studied.

Marwan (2015) investigated the effect of using think-pair-share, co op- co op and traditional learning strategies on undergraduate students' academic performance in educational psychology course. Five hypotheses were tested in the study. The convenience sample used consisted 70 undergraduate students' who study the educational psychology course, from faculty of education at King Saud University. The study employed a quasi-experimental - nonequivalent control-group design with pretest, posttest and delayed posttest. In the study, educational psychology performance test (EPPT) was used to measure the students' performance. The test consisted of 30 multiple choice questions to collect the relevant data. The instrument (EPPT) was validated by content and face-to-face validity methods by experts in the field of education at King Saud University. Reliability was calculated using Kuder –Richardson 21 for the sample of (40) students and correlation coefficient of 0.74 was obtained. The data collected was analyzed using descriptive, one way ANOVA, and independent samples t-test statistical methods.

Findings of the study revealed that there was no significant difference in the pretest academic performance mean scores between students. However, there was a significant difference in the posttest academic performance mean scores between the experimental groups (Co Op-Co Op), (Think-Pair-Share) and control group (traditional method). There was a significant difference in the posttest academic performance mean scores of second and fourth year students after the intervention with favour for the second year students, there was no significant difference in the posttest academic performance mean scores between students from different specialization (psychology, special education, and Islamic studies). The findings further showed that there was a significant difference between experimental group (Co Op-Co Op) and

control group (traditional method) on the delayed posttest mean difference and significant difference between experimental group (Think-Pair-Share) and control group (traditional method). There was no difference in academic performance between the experimental groups (Co-Op-Co Op) and (Think-Pair-Share) in the posttest and delayed posttest.

The relationship between Marwan's study and the current study was that both studied the effect of think-pair-share instructional strategy on students' academic performance. The two studies adopted quasi-experimental - nonequivalent control-group design. However, while the present study tested hypotheses using Analysis of Covariance (ANCOVA), Marwan's study tested hypothesis using one way ANOVA, and independent samples t-test statistical methods. Therefore, both studies differed in the method of data analysis. The two studies further differed in the area of the study and population of the study.

Chianson, O'kwu and Kurumeh (2015) investigated the effect of think-pair-share strategy on secondary school students' achievement and self-esteem in fractions in Benue State. Two research questions and two hypotheses guided the study. The population of 3,432 SS1 students in four local government areas in Benue State was involved in the study from where samples size of 322 SS 1 students were drawn using purposive random sampling technique. The study adopted quasi-non equivalent experimental design. The instruments for data collection were Fraction Achievement Test (FAT) and Fraction Self-Esteem Inventory (FSEI). Both instruments were validated based on face and content validity and reliability of the instrument established using Kuder –Richardson 20 and coefficient value of 0.86 obtained. Mean and standard deviation were used to answer research questions while hypotheses were tested using analysis of covariance.

Findings of the study revealed that there was a significant difference in the mean scores of students taught using the think-pair-share strategy compared to those taught using the conventional approach ( $P=0.001 < 0.05$ ), there was a significant difference in the academic self-esteem of students taught using the think-pair-share compared to those taught using the conventional approach ( $p= 0.003 < 0.05$ ). It was recommended that, mathematics teachers acquaint themselves with the processes involved in the think-pair-share strategy and implement it in class.

The relationship between Chianson, O'kwu and Kurumeh's study and the present study was that both focus on effect of think-pair-share instructional strategy on academic achievement of secondary school students using quasi-non equivalent experimental design. Both studies also used mean, standard deviation and ANCOVA to answer research questions and test hypotheses. Therefore, the two studies were related in the research design and method of data analysis. However, Chianson, et al.'s study differed from the present study in that while their study used SS1 students as the study population, the present study used SS 2 students. Therefore, both studies differed in the population of the study. Both studies also differed in the area of the study, sampling technique and variables studied.

Utama, Marhaeni, Putra and Nyoman (2013) investigated the effect of think-pair-share teaching strategy on students' self-confidence and students' speaking competency. One hypothesis guided the study and while the quasi-experimental design was adopted. The population of the study comprised 1430 students in second grade in SMPN 6 Singaraja in academic year 2012/2013. Sample size of 121(59 in experimental and 62 in control groups) were drawn using cluster random sampling technique. The instrument for data collection was questionnaire validated by experts in the field of education to determine the level of students'

self-confidence and speaking test to determine students' speaking competency. The reliability of the instrument was established using Kuder-Richardson 20 and reliability of 0.81 obtained. The analysis was carried out using MANOVA facilitated by SPSS version 16.0.

Findings indicated that there was a significance effect of think-pair-share on students' self-confidence, there was also a significance effect of think-pair-share on students' speaking competency. Simultaneously, there was a significance effect of think-pair-share on students' self-confidence and students' speaking competency. The relationship between Utama et al.'s study and the current study was that both focused on think-pair-share instructional strategy using quasi-experimental design. The two studies used secondary school students as population of the study. However, both studies differed in the variables covered in that while Utama et al.'s study covered students' self-confidence and speaking competency, the current study focused on retention and self-efficacy. The former study used MANOVA for testing hypothesis while the present study used analysis of covariance (ANCOVA) to test the hypotheses. Furthermore, the two studies differed in the location of the study.

Bamiro (2015) investigated the effects of three strategies (guided discovery, think-pair-share, and lecture) on senior secondary school students' achievement in chemistry. Three research questions and three hypotheses guided the study. Quasi-experimental design with a  $3 \times 3 \times 2$  factorial matrix was adopted for the study. Treatment was at three levels (guided discovery, think-pair-share, and lecture strategies). Intervening variables were cognitive entry behavior at three levels (high, middle, and low) and gender at two levels (male and female). Two hundred forty-two Senior Secondary 1 students in intact classes from six secondary schools in Ijebu Ode and Odogbolu Local Government Areas of Ogun State were randomly assigned to the treatment and control groups. Three instruments were developed, validated and used to collect data from



students during the 8 week treatment programme. The reliability of the instrument was established using test-retest method and data analysis with Pearson product moment correlation yielded reliability coefficient of 0.73.

Data collected were subjected to analysis of covariance and multiple classification analysis. Scheffé test was further used as post-hoc measures. Where significant interactions were observed, they were represented with graphical illustrations. It was found that students taught with guided discovery and think-pair-share strategies obtained significantly higher posttest mean scores than those in the lecture strategy,  $F(4, 223) = 51.66, p < .05$ . The use of guided discovery and think-pair-share strategies had great potential for improving achievement in chemistry and science learning generally.

The relationship between Bamiro's study and the present study was that both study effect of think-pair-share strategy on secondary school students' academic achievement using quasi-experimental design. Both studies were also analyzed using mean, standard deviation and ANCOVA. However, Bamiro's study differed from the current study in the research topic, area of the study and the population of the study.

Umar and Abdulmutallib (2017) examined the effects of cooperative learning and guided discovery approaches on financial accounting achievement among secondary school students in Gombe state, Nigeria. Two null hypotheses guided the study and a quasi-experimental design was adopted. One hundred and eighty (180) students from nine (9) secondary schools in Gombe state, Nigeria were selected to participate in the study using a cluster sampling technique. A Financial Accounting Achievement Test (FAAT) was used as an instrument for data collection. The face validity of the instrument was established using Heads of Departments (HODs) of financial accounting in senior secondary schools in Gombe state. The Cronbach alpha was used

to determine the reliability of the research instrument and reliability coefficient of 0.73 was obtained. Data collected from the study were analyzed using analysis of variance (ANOVA) and analysis of covariance (ANCOVA).

Findings showed that the financial accounting achievement of students who were exposed to the cooperative approach was significantly better than the financial accounting achievement of students who were exposed to the guided discovery and conventional teaching approach. It was, therefore, recommended that government should encourage both curriculum planners and secondary schools' teachers to adopt cooperative approach as an instructional approach for teaching financial accounting in secondary schools to improve students' achievement in the subject.

The study of Umar and Abdulmutallib and the present study are related in the research design, the use of ANCOVA to test hypotheses and the fact that both focused on students' academic achievement in financial accounting in secondary schools. However, while Umar and Abdulmutallib's study covered cooperative learning strategy and guided discovery strategy, the present study focused on think-pair-share instructional strategy. Therefore, both studies differed in the research topic, variables covered, area of the study and the fact that the present study used only ANCOVA for hypotheses testing while the former used both ANOVA and ANCOVA in this regard.

### **Think-pair-share Instructional Strategy and Students' Retention**

Setiawati and Corebima (2017) explored the correlation between concept gaining and retention of the students who learned by using PQ4R, TPS, and PQ4R-TPS learning strategies. Two hypotheses guided the study and correlational design was adopted. The population of the study comprised 920 senior high school students in Pare Pare, Indonesia in the odd semester of

2013/2014 academic year. The simple random sampling technique was used to draw 240 students. The instrument for data collected was a cognitive test. It was validated by experts and empirically validated. The results of the expert validation and empirical validation showed that the instruments were valid and reliable. Data collected were analyzed using simple linear regression and analysis of variance (ANOVA).

The results of the study showed that there was a significant correlation between concept gaining and retention in all the three learning strategies. The results further revealed that the biggest slope or the rate of students' retention in relation with the concept gaining is found at the TPS learning strategy. This fact indicates that the biggest potential of the increase of students' retention due to concept gaining is found at the TPS learning strategy. In other words, TPS learning is the most effective learning strategy in empowering students' concept gaining and retention compared to the two other learning strategy.

The relationship between Setiawati and Corebima's study and the present study was that both focused on think-pair-share instructional strategy and students' retention in senior secondary schools. However, Setiawati and Corebima's study differed from the current study in that while their used correlational design; the current study adopted quasi-experimental design. Both studies further differed in the location of the study, and method of data analysis.

Udo (2016) determined the effect of peer tutoring on students' academic performance and retention in junior secondary school basic science. Two research questions and two null hypotheses were formulated to guide the study. A nonrandomized pre-test-post-test control group design was adopted for the study. A total of eighty eight (88) Junior Secondary two (JS2) Basic Science Students from two (2) secondary schools in the study area (Ibesikpo Asutan L.G.A in Akwa Ibom State of Nigeria) formed the sample of the study. The instruments used in gathering

data for the study were Basic Science Performance Test (BSPT) and Basic Science Retention Test (BSRT). The instruments were validated and their reliability coefficients were found to be 0.85 and 0.95 respectively using the Kuder-Richardson formula – 21. Independent t-test statistics was used in the analysis of data.

Findings of the study revealed that peer tutoring was the most effective in promoting students' academic performance and retention in Basic Science. It was recommended among others that basic science teachers should adopt the use of peer tutoring approach in teaching various concepts in basic science in order to arouse students' performance and enhance retention in Basic Science lessons. The relationship between Udo's study and the present study was that both focused on cooperative instructional strategies and students' academic achievement and retention. Both studies adopted quasi-experimental design. However, Udo's study used JSS 2 students as population of the study, the present study used SS 2 students as the study population. Similarly, the two studies differed in the area of the study, and method of data analysis.

Owodunni and Ogundola (2013) determine the gender differences in the achievement and retention of Nigerian students exposed to concepts in electronic works trade through reflective inquiry. The pre-test, post-test, non-equivalent control group, quasi-experimental research design was adopted. The study was carried out in Lagos State. 43 students constituted the subjects in the experimental group and 62 students constituted the subjects in the control group for the study. Two research questions and two null hypotheses guided the study. The instrument for data collection was Electronic Work Trade Achievement Test (EWTAT). The instrument was subjected to face validation by five experts in Vocational teacher education and Electronic technology. The EWTAT was tested in trial to determine its psychometric indices and reliability coefficients. The EWTAT reliability coefficient was 0.83 using Kuder-Richardson's estimate

formula. Mean was used to answer the research questions; while ANCOVA was employed to test the hypotheses.

Findings revealed that the mean score of boys was higher than the mean score of girls taught electronic works trade using reflective inquiry instructional technique, but the mean score of girls was higher than that of the boys in the test for retention of learning. Consequently, the researchers recommended that technical college teachers should adopt the use of the reflective inquiry instructional technique to the teaching of electronic works trade.

Owodunni and Ogundola's study and the current study are related in that both focused on gender on students' academic achievement and retention using quasi-experimental design. Both studies also used mean and ANCOVA to analyze data for the study. However, the former study differed from the present study in the location of the study and the content scope of both studies.

Lasnami (2015) investigated the use of think-pair-share and its impact on developing students' interaction and retention among second year LMD students of English enrolled at the University of Bejaia. Three research questions guided the study. The population of the study comprised 283 students consisting of eight (8) groups for the academic year of 2014/2015 of the Department of English at the University of Bejaia. Case study research design was adopted. To collect data, an observation was implemented in oral expression sessions with thirty-six first students of English in the classroom, using an observation checklist in order to collect more data about students' interaction in the classroom. Within the observation, structured questionnaires were used for quantitative data collection. These instruments were the questionnaire and teachers' interview which were validated by experts in the field of education. The reliability of the instruments was established using Cronbach alpha method which yielded coefficients of 0.79 and 0.73. Data collected were analyzed using frequency and percentage, and descriptive mean.

The findings revealed that the students are engaged when using TPS significantly better than those who worked alone. In addition, the student found that TPS, as a teaching technique, provided them with more chances to talk and interact which improve their retention ability. The relationship between Lasnami's study and the current study is that both focused on think-pair-share instructional strategy and students' retention. The two studies also used descriptive mean to answer the research questions. However, the two studies differed in that the current study was a quasi-experimental study while Lasnami's adopted case study design. Therefore, the two studies differed in the research design. Both studies further differed in the area of the study, population of the study and the fact that this study tested hypotheses while Lasnami did not.

### **Gender and Academic Achievement of Students**

Hamdan (2017) carried out a study on the effect of think – pair – share strategy on the achievement of third grade student in sciences in the educational District of Irbid. One hypothesis guided that study. The study adopted quasi-experimental research design. The study population consisted of all 2435 third grade students in the educational district of Irbid and registered for the academic year 2016/2017. The sample size of 120 students in third grade in the educational district of Irbid was drawn using simple random sampling technique. The instrument for data collection was Science Achievement Test which was validated by eight experts in the field of education. The reliability of Achievement Test was established using Cooder Richardson equation (20) and correlation coefficient of 0.841 was obtained. Data collected were analyzed using two- Way ANOVA and 2- Way ANCOVA.

Findings of the study showed that there were statistically differences in grades of students due to group variable at the significance level (0.05), and the differences were in favour of the experimental group and there were statistically differences due to gender at the significance level

(0.05) in favour of females. Based on the findings of the study, it was recommended entry of think – pair– share strategy within the teaching strategies used by teachers during the teaching and the involvement of teachers in training courses.

The relationship between Hamdan’s study and the present study is that both focused on think-pair-share instructional strategy and gender differences in students’ performance using quasi-experimental design. The two studies also used ANCOVA to test hypotheses. However, while Hamdan’s study used sciences as the study subject, the present used financial accounting. Furthermore, both studies differed in the area of the study, population of the study and the fact that Hamdan’s study used two- Way ANOVA and 2- Way ANCOVA to test hypothesis while the current study used only ANCOVA.

Nnamani and Oyibe (2016) carried out a study on gender and academic achievement of secondary school students in Social Studies. Two research questions and two null hypotheses were tested. The population of the study comprised 3,479 Junior Secondary School II (JSS II) students selected from all the secondary schools in Abakaliki urban of Ebonyi State. The simple random sampling technique was used to select three secondary schools with the sample size of 205 JSS II in Abakaliki urban. The instrument for data collection was Social Studies Achievement Test (SOSAT) validated by experts in the field of education. Data collected were analyzed using mean and standard deviation for all research questions, and analysis of covariance (ANCOVA) to test the null hypotheses at 0.05 level of significance.

Findings of the study revealed that the mean achievement score of female secondary school students was higher than the mean achievement scores of male students. The findings further revealed that male and female secondary school students taught social studies by male teachers obtained higher mean scores than male and female students taught social studies by

female teachers and female students taught social studies by male teachers performed better than masculine students taught social studies by male teachers and vice versa. Based on these findings, the researcher recommended that social studies teachers should re-assess their classroom instructional practice to shift from instructional practice that will give the students equal opportunities to excel in instructional activities.

Nnamani and Oyibe's study and the current study are related in that both focused on gender difference and academic achievement of secondary school students using quasi-experimental design. Both studies adopted the same method in analyzing data collected. However, the two studies differed in the research topic, area of the study and population of the study.

Mwiigi (2014) carried out a study on the impact of gender difference on the students' academic performance in Ndumberi Division, Kiambu County. Three research questions guided the study. The study was a survey research design. The study involved (40) students, (30) teachers (5) directors and (5) head teachers making a total sample size of 80 respondents. The teachers and students were simple randomly selected while the head teachers and directors were purposively selected. Data was collected using validated questionnaires for students, teachers and head teachers and interview guides for directors of studies. Data collected were analyzed with frequencies, percentages and descriptive statistics of mean and standard deviation.

Finding revealed that by overall performance, male students performed much better as compared to their female counterparts. At subject level, girls outperformed boys in the languages, while boys led the girls in the sciences. The majority views of students (56%), male teachers (65%), head teachers (76%), and directors (82%) agreed and strongly so that, boys perform better than girls, only a total of 51% of female teachers disagreed and strongly so with



this view. Based on the findings of the study, it was recommended that training in gender sensitive techniques through workshops for the teachers to change their attitudes and behaviours.

The relationship between Mwiigi's study and the present study is that both focused on gender differences and academic achievement of students. The two studies also used mean and standard deviation to answer the research questions. However, Mwiigi's study differed from the current study in the research topic, design of the study, area of the study, population of the study and instrument for data collection.

Amuda, Domiya, Ali and Durkwa (2016) carried out a study to determine the gender difference in academic performance in SSCE economics subject among senior secondary school students from 2006 to 2010 sessions in Maiduguri Metropolis, Borno State, Nigeria. Two research questions were answered and two hypotheses were tested. Ex-post factor research design was used. The population of the study consisted of all senior secondary school students who offered economics SSS 111 in Maiduguri metropolis from 2006 to 2010 sessions and all available students who took economics subject in SSCE, WAEC and NECO from 2006 to 2010 academic sessions. A purposive sampling technique was used to select sample from twenty-eight co-education secondary schools. The total number used for the study was 50715. A total of 8699 students' results were used for academic performance, 5679 male students and 3020 female students, results in WASSCE. While in SCCE, NECO the total results used was 9074 males results was 5491 and females was 3583 in economics for 2006 to 2010 sessions.

Descriptive statistics of percentages was used to answer the research questions while t-test statistics was used to test the hypotheses. The results of the analysis revealed that male students in senior secondary schools in Maiduguri metropolis have better grades than their female counterpart in economics for 2006-2010 sessions. Findings showed that there was no

significant gender difference in the academic performance of students in SSCE, WAEC and NECO in economics, while SSCE, WAEC and NECO for 2006/2007 session in economics for 2008 to 2010 sessions showed consistent significant gender difference in the academic performance of students in favour of male students.

Based on the findings it was recommended that there should be public enlightenment by the government and non- governmental organizations (NGOS) to address the issue on the need for gender equality in public schools in terms of enrolment to have equal chance for female students to do well as their male counterpart in economics. The relationship between Amuda et al.'s study and the current study is that they both focused on gender difference and students academic achievement. However, the two studies differed in the research topic, design of the study, area of the study, population of the study, method of data collection and analysis.

Eziyi, Mumuni and Nwanekezi (2016) investigated the effects of guided inquiry instructional and Cooperative instructional strategies on SS1 students' academic achievement in conceptual understanding of Photosynthesis in Port Harcourt Education Zone of Rivers State, Nigeria. Two research questions and two null hypotheses guided the study. The study adopted quasi-experimental design and 186 students used for the study were obtained by purposive sampling based on the availability of science laboratory and biology teacher with not less than five years teaching experience. One class of Senior Secondary One (SS1) students from three Co-educational Senior Secondary Schools was randomly assigned to experiment and control groups. The instrument titled Biology Achievement Test on Photosynthesis (BATOP) was developed, validated and used for data collection. The reliability of the BATOP was done by test retest method. Pearson's product-moment correlation coefficient statistic was used to obtain a

reliability of 0.83. The research questions were answered with Mean and Standard Deviation; while the hypotheses were tested with ANOVA and ANCOVA.

The findings revealed that guided inquiry instructional strategy proved to be more effective in the teaching and understanding of concepts of Photosynthesis than cooperative instructional strategy and the conventional lecture method. There was a significant difference among female and male SS1 students taught Biology (Photosynthesis) using GIIS, CIS, and Lecture in favour of those taught with GIIS. It was recommended that guided instructional strategy should be used to teach the concepts of Photosynthesis so as to improve male and female academic achievement in both internal and external examinations.

The relationship between Eziyi, Mumuni and Nwanekezi's study and the present is that both focused on gender difference on secondary school students' academic achievement using quasi-experimental study. The two studies also used mean, standard deviation and ANCOVA for data analysis. However, the both studies differed in the research topic, area of the study, variables covered and the fact that while the former study used ANOVA in hypotheses testing, the current study used ANCOVA.

### **Think-pair-share Instructional Strategy and Students' Self-efficacy**

Lee, Hui-Chuan and Masitah (2018) investigated the effects of collaborative learning on students' understanding of probability and their attitudes towards mathematics. Two research questions and two hypotheses guided the study. The designs of the study were quasi-experimental and survey research design. The participants were 10 students who are 15 years old and selected using convenience sampling at a secondary school in Brunei Darussalam. Data collection methods included achievement tests, questionnaire and students' interviews and lesson observations. The services of an experienced mathematics teacher was sought to ensure the

content validity of all the three test papers. Furthermore, a Cronbach's alpha test was conducted using Statistical Package for the Social Sciences (SPSS). The internal consistency of the pre-test, post-test and delayed post-test was 0.681, 0.558 and 0.528 respectively. Data collected were analyzed using mean and standard deviation and t-test.

Findings of the study revealed improvements in the students' test scores and they were able to retain their knowledge after a period of time. From the triangulated data, it was found that the students demonstrated an increase in their self-efficacy, participation, understanding and enjoyment levels after the intervention. Their enjoyment towards learning probability was derived from being able to communicate with their peers. The students showed more enthusiasm and participation in class as the lessons progressed.

The relationship between Lee, Hui-Chuan and Masitah's study and the present study is that both focused on think-pair-share instructional strategy and students' retention and self-efficacy using quasi-experimental and survey research design. Both studies also used mean and standard deviation for data analysis. However, Lee et al.'s study differed from the current in the research topic, area of the study, population of the study and method of testing hypotheses.

Rifa'I and Lestari (2018) determined the effect of think pair share (TPS) using scientific approach on students' self-confidence, efficacy and mathematical problem-solving. Quasi-experimental with pre-test post-test non-equivalent group method was used as a basis for design this study. The population of the study was 101 first grade students in religious high school student (MAN) in Indonesia. All the participants were between of 16 and 18 years old. Sixty eight students were drawn using simple random sampling technique. Self-confidence and self-efficacy questionnaire and problem-solving test were used for measurement of the two variables. Two classes of the first grade in religious senior high school (MAN) in Indonesia were randomly

selected for this study. Content validity was established by three-expert judgment, who ensured that the items were properly constructed and relevant to the aspects we developed. By measuring Cronbach's Alpha coefficient on 101 students in the initial phase study, the mathematics problem-solving pre-test ( $p=.621$ ), post-test ( $p=.625$ ), and self-confidence questionnaire ( $p=.835$ ) were reliable. For data analysis regarding students' problem-solving skill and self-confidence, One-sample t-test, independent sample t-test, and multivariate of variance (MANOVA) were used. The results showed that: TPS using a scientific approach and traditional learning had positive effects; TPS using scientific approach learning in comparative with traditional learning had a more significant effect on students' self-confidence, efficacy and problem-solving skill.

The relationship between the current study and Rifa'i and Lestari's study is that both are concerned with effect of think-pair-share instructional strategy on students' self-efficacy using quasi-experimental design. However, the former study and the present study differed in the research topic, area of the study, population of the study and method of used in testing hypotheses.

Araban, Zainalipour, Rais-Saadi, RJavdan, Khalil Sezide and Sajjadi (2012) investigated the effects of cooperative learning strategy on self-efficacy and academic achievement in English lesson of high school students. Two research questions and two hypotheses guided the study. A quasi-experimental design was adopted. Using random sampling technique, 60 middle school students selected and were divided into two control and experimental groups. To measure self – efficacy, the motivational strategies learning questionnaire (MSLQ) of Pintrich and Smith (1993) is used. The validity of the instrument was established by Coutinho and Newman (2008) and Cronbach's alpha method to obtain the questionnaire reliability and the reliability coefficient was estimated equivalent to 0.90.

For measuring the academic achievement in English of students, average of scores in achievement test made by researchers was used. In the section of descriptive statistics, the data's average and standard deviation were calculated and in the inferential statistics section, multivariate analysis of covariance (MANCOVA) was used for testing the difference existing between the two groups. Both self-efficacy inventory and achievement test was conducted.

Results of study indicate in both variables (self-efficacy and academic achievement in English lesson), differences were in favour of experimental group. The relationship between the current study and Araban et al.'s study is that both focused on self-efficacy of students using cooperative instructional strategy. The two studies adopted questionnaire to collect data for self-efficacy. However, the two studies differed in the area of the study, population of the study and method of data analysis. Furthermore, the present study adapted questionnaire to collect data for the study while the former adopted self-efficacy questionnaire.

Gok (2012) carried out an experimental study on the effects of peer instruction on students' conceptual learning and motivation. The aim of the study was to investigate the effects of peer instruction on college students' conceptual learning, motivation, and self-efficacy in an algebra-based introductory physics course for non-majors. Variables were studied via a quasi-experiment, Solomon four-group design on 123 students. Two research questions and two hypotheses guided the study. Treatment groups were taught by peer instruction. Control groups were taught by traditional lecture method. To assess the effects of peer instruction, students were administered Force Concept Inventory and Motivated Strategies for Learning Questionnaire with validation and internal reliabilities (Kuder-Richardson 21) of 0.69 and 0.71 respectively. Factorial analyses were used for data analysis.

The findings of the study indicated that the treatment groups acquired significantly more than the control group. The relationship between Gok's study and the present study is that both studies were quasi-experimental which dealt on effect of cooperative instructional strategy on students' learning. However, Gok's study differed from the current study in the area of the study, method of data analysis. Furthermore, the current study used ANCOVA as method of data analysis while the former used Factor Analysis.

Utama, Marhaeni, Putra and Nyoman (2013) investigated the effect of think-pair-share teaching strategy on students' self-confidence and students' speaking competency. One hypothesis guided the study and while the quasi-experimental design was adopted. The population of the study comprised 1430 students in second grade in SMPN 6 Singaraja in academic year 2012/2013. Sample size of 121(59 in experimental and 62 in control groups) were drawn using cluster random sampling technique. The instrument for data collection was questionnaire to determine the level of students' self-confidence and speaking test to determine students' speaking competency. The reliability of the instrument was established using Kuder-Richardson 20 and reliability of 0.81 obtained. The analysis was carried out using MANOVA facilitated by SPSS version 16.0.

Findings indicated that there was a significance effect of think-pair-share on students' self-confidence, there was also a significance effect of think-pair-share on students' speaking competency. Simultaneously, there was a significance effect of think-pair-share on students' self-confidence and students' speaking competency. The relationship between Utama et al.'s study and the current study is that both focused on think-pair-share instructional strategy using quasi-experimental design. The two studies used secondary school students as population of the study. However, both studies differed in the variables covered in that while Utama, Marhaeni,

Putra and Nyoman's study covered students' self-confidence and speaking competency, the current study focused on retention and self-efficacy. Additionally, the former study used MANOVA for testing hypothesis, the present study used analysis of covariance (ANCOVA) to test the hypotheses. Furthermore, the two studies differ in the area of the study.

### **Summary of Review of Related Literature**

The study reviewed some works done by many scholars and theorist in order to give the research work good meaning. The literature reviewed was done under conceptual framework, theoretical framework, theoretical studies and empirical review. Conceptual framework dealt with the concepts of instructional strategy, think-pair-share instructional strategy, academic achievement, retention, self-efficacy and financial accounting. The theoretical framework touched on experiential learning theory and social constructivist learning theory. The various theories reviewed reflected that instructional strategies works effectively mainly if they suit learners' needs, since every learner interprets and responds to learning in a unique way.

The theoretical studies covered relevant literature related to instructional strategies for teaching financial accounting, overview of think-pair-share instructional strategy including the benefits, teachers and students' roles in the think-pair-share classroom, assessment of think-pair-share instructional strategy. From the literature reviewed, it was disclosed that the effective teaching of financial accounting requires accounting teachers to use student-centered instructional strategies such as peer tutorial strategies, scaffolding, project and think-pair-share instructional strategy.

Finally, 15 empirical studies reviewed were in relation to think-pair-share instructional strategy and academic achievement, retention and self-efficacy while the other four empirical studies were linked to gender influence on academic achievement. Based on the literature



reviewed and to the best of the researcher's knowledge, existing researched works on the effect of think-pair-share instructional strategy on students' academic achievement, retention and self-efficacy were conducted in most school subjects except financial accounting. Additionally, no existing researched works were conducted on geographical areas as the one that was used in the present study. This has created a gap in the body of knowledge which the study addressed.

## CHAPTER THREE

### METHOD

This chapter describes the procedure used in conducting the study. It covered the research design, area of the study, population of the study, sample and sampling technique, instrument for data collection, experimental procedures, control of extraneous variables, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

#### Research Design

The design for this study was a quasi experimental design. Specifically, non-equivalent control group, pretest-posttest design. Quasi experimental design involves the use of intact class (as a group) with pre-test and post-test, and there is no random assignment of subject to experimental and control groups (Nworgu, 2015). Therefore, students in the control and experimental group participated in the study in their normal classroom conditions. This was to avoid disruption of normal class lesson according to school activities. The intact groups were pre-tested; treatment administered to the respective groups after which the groups were post-tested. The experimental group was taught financial accounting using think-pair-share instructional strategy while the control group was taught the same subject using conventional teaching method.

The quasi-experiment design is symbolized as follows:

Group	Pre-test	Treatment	Post-test
EG	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>
CG	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>

— Non-randomized two group pre-test and post-test control group design

EG --- Experimental Group

CG --- Control Group

$X_1$  --- Treatment (Think-pair-share)

$X_2$  --- Treatment (Conventional method)

$O_1$  --- Pre-test (First observation/ measurement)

$O_2$  --- Post-test (Second observation/ measurement).

### **Area of the Study**

This research was carried out in co-educational state owned secondary schools in Abia State. Abia State is one of the oil producing states located in the South Eastern part of Nigeria. The state has 17 Local Government Areas and three Education Zones (Aba, Ohafia and Umuahia). The state is bordered on the north by Anambra, Enugu and Ebonyi, with Imo State to the west, while to the east is Akwa Ibom State and Rivers State to the south. The rationale for the choice of Abia State was based on the fact that schools in the state do not have adequate financial account teachers and the academic performance of students in financial accounting in the state was unsatisfactory.

### **Population of the Study**

The population of the study consisted of all senior secondary school (SS 2) financial accounting students of 2018/2019 session in state owned secondary schools in Abia State. Records from the Statistic Unit, Secondary Education Management Board (SEMB), Umuahia, Abia State as at October 15<sup>th</sup>, 2018 indicate that there are 846 (302 male and 544 female) SS 2 students offering financial accounting in the 86 state owned secondary schools in Abia State. The choice of the population was based on the assumption that SS 2 students have been exposed to the basics of financial accounting and as a result, were better disposed to the demands of this study. Also, SS 3 students were not used since they were preparing for WAEC examinations.

The population distribution of the SS 2 financial accounting students according to Local Government Areas is presented in Appendix G, pg 173.

### **Sample and Sampling Technique**

The sample for this study consisted of 78 SS 2 financial accounting students from two state owned co-educational secondary schools in Abia State. The two secondary schools were purposively drawn from 45 secondary schools offering financial accounting in the three education zones in the state (see Appendix H, pg 174). The control and experimental schools comprised 38 (15 male and 23 female) students and 40 (13 male and 27 female) students respectively.

In selecting schools to participate in the study, purposive sampling and simple random sampling techniques were used. Purposive sampling relies on the judgment of the researcher when it comes to selecting the schools using certain criteria. The criteria that were used in selecting the schools to participate in the study were: Co-educational (mixed) schools, schools that have qualified graduate financial accounting teachers teaching in the school for at least two years to ensure some level of teaching experience, schools with principals and financial accounting teachers willing to cooperate and participate in the study, and schools with minimum number of ten students offering financial accounting. Simple random sampling technique by balloting was used to assign the schools to experimental group (E) and control group (C). According to Nworgu (2015), simple random sampling technique allows each element in the population to have equal and independent chance of being selected.

### **Instrument for Data Collection**

Data needed for this study were gathered using two research instruments which are Financial Accounting Achievement Test (FAAT) and Academic Self-efficacy Scale (ASS). The

FAAT was developed by the researcher using WAEC standardized tests of 2007 to 2017. FAAT items were developed by the researcher based on the contents of the topics taught. The topics were selected from Financial Accounting curriculum for senior secondary schools. FAAT has 40 objective questions as specified in the table of specifications (see Appendix C, pg 163).

FAAT consists of pre-test, post- test and retention test questions. The pre-test, post-test and retention test questions are made up of the same items. The items are 4- option multiple, choice objective questions arranged in different forms. The pre-test, post-test and retention test instrument differed among each other by reshuffling of the items, font type, size of the letters and colour of the papers. FAAT consisted of two sections; section A required the students to supply the name of their school and gender whereas section B contained the items. The students were required to encircle the correct option out of the four options given.

Academic Self-efficacy Scale (ASS) was also used to measure the self-efficacy of the students in financial accounting (Appendix F, Pg 171). The ASS was an adapted questionnaire developed by Gafoor and Ashraf (2006). The researcher made modifications on the items of the instrument adapted to suit the present study. This was done by removing items that are not relevant to the study and using simpler terms or words for easy understanding of some items. However, while the original ASS developed by Gafoor and Ashraf had 40 items responded on five point rating scale, the modified ASS by the researcher contained 20 items responded on five point rating scale of Always (A) - 5, most times (MT) - 4, sometimes (S) - 3, Rarely (R) 2, and Never (N) - 1. The ASS consisted of two sections A and B. Section A elicited personal data of the respondents such as gender, and section B contained 20 items designed to elicit students' self-efficacy in financial accounting as stated above.

### **Validation of the Instrument**

The instruments for data collection were face validated by three experts. One expert in Measurement and Evaluation and two experts in Business Education from the Department of Technology and Vocational Education, all in Nnamdi Azikiwe University, Awka. The experts were given the research topic, purposes, research questions, hypotheses, lesson plans, together with the two draft instruments and they were requested to validate the instruments in terms of relevance, general test format, suitability and clarity of language and make suggestions as they deem fit. Based on the suggestions of the experts, the topic was restructured, the activities of the students in the lesson plan were adjusted, and some questions in the FAAT were modified while sentences in items 4 and 15 of ASS were restructured.

### **Reliability of the Instrument**

Copies of the FAAT and ASS were administered on 15 SS 2 Financial Accounting students from urban secondary school in Oji River, Enugu State who are not part of the study population. The instruments were given to the financial accounting class teacher who administered it. After two hours, the instruments were collected and handed over to the researcher. The reliability of FAAT was determined using Kuder-Richardson Formula 20 (KR-20) because the test items were dichotomously scored. The reliability coefficient of 0.92 was obtained (see Appendix J, pg 176). The internal consistency of ASS was determined using Cronbach alpha and reliability coefficient yielded value of 0.79 (see Appendix K, pg 179). The co-efficients are considered high and positive which is an indication that the instruments are reliable enough for measuring what it purports to measure in a consistent manner. This is in line with the recommendation of Nworgu (2015) that a reliability co-efficient of 0.70 or above is an acceptable reliability value.

## **Method of Data Collection**

Prior to the commencement of teaching in the experimental and control schools, students were pre-tested on financial accounting topics using FAAT and also on self-efficacy in financial accounting using ASS. After the treatment, the items of the instrument (FAAT) were shuffled and re-administered as post-test. Similarly, same test items were shuffled again and printed with a different paper colour from that used for both pre-test and post test and then re-administered to both groups after two weeks of post test administration as retention test. ASS was administered to experimental group after the treatment as post-test for their on the spot completion. The research assistants distributed and retrieved the instruments after which they were handed over to the researcher for data analysis.

## **Experimental Procedure**

In order to ensure effective coordination and proper supervision of the entire experiment, the researcher visited the schools to ascertain that they were suitable for research and also obtained permission from the principals of the schools to allow him use the financial accounting SS 2 students and teachers for the study.

The following procedure was used for the conduct of this study:

- A. Briefing of teacher: the subject teachers in each of the schools that were used for the study to assist the researcher in order to facilitate the success of the study. The teachers were briefed on the following:
- Think-pair-share instructional process, assessment and evaluation procedures.
  - Interaction patterns; such as cooperation, collaboration and teachers' attitude as a facilitator were made clear to the teachers.

Duration of the experiment: The experiment took a period of 7 weeks. The researcher first visited the experimental and control group schools for familiarization of the schools after which pretest was given in the first week before the start of the experiment. The teaching of the topics to control and experimental groups started in the second week of the experiment through to the fifth week following normal school time table schedule covering five working days. The students were taught definition of partnership, types of partners, deed of partnership and duties and rights of partners in the second week, in the third week, students were taught definition of capital contribution, floating and fixed capital and calculation of interest and drawings. Similarly, in the fourth week, students were taught preparation of trading, profit and loss appropriation account and balance sheet. The post test was administered in the fifth week whereas the retention test was administered two weeks afterwards.

B. Teaching of the subject: The subject teachers in the selected schools were used to guide the students in think-pair-share class to prevent bias that may be introduced by teacher effect.

C. Administration of test instrument: Pre-test was administered at the first week which included a questionnaire (ASS) on students' self-efficacy in Financial Accounting and Financial Accounting Achievement Test (FAAT). The pre-test lasted for one hour. The scores were recorded and treatment began in the week following. The items were shuffled before the administration of post-test to the control and experimental groups. The items were again be reshuffled and colour of paper changed before the administration of retention test to both groups after two weeks of post-test administration. The scores were recorded. The reshuffling of the items was to control pre-test sensitization (that is likelihood of improvement in post-test scores due to having taken a pre-test by the participants).

Teaching Model of Think-Pair-Share Instructional Strategy:



- a. Teacher poses a question,
- b. Each student think and solve the problem,
- c. Students share in pairs, and
- d. Each pair share back to the whole class

### **Control of Extraneous Variables**

The researcher adopted the following measures to ensure that some of the extraneous variables were controlled.

- A. Initial group differences: this study employed randomization as one of the procedures for controlling group differences. Purposive sampling was used to assign participants to treatment (experimental) and control groups. Analysis of Covariance (ANCOVA) was used in analyzing the data collected; this was because, it statistically reduced the effect of initial group differences by making compensating adjustments which in itself corrects for non-equivalence of groups for any experimental research.
- B. Pre-test sensitization: this refers to the potential or actuality of a pre-treatment assessment effect on participants in an experiment, that is, improvement of post-test scores due to having taken a pre-test by the participants. This may likely occur if post-test is administered shortly after the pre-test and this has the potential to happen where the test is on factual information that can be given through recall. Pre-test sensitization was controlled in this study through a longer time interval of five (5) weeks between the pre-test and post-tests. These tests demanded much more than recall of information in that it emphasized comprehension and application. Tests of this nature are not threatened by pre-test sensitization (Ary, Jacobs & Rasavien, 2002).

- C. Minimizing test Wiseness: test Wiseness refers to the ability to manifest test taking skills which utilize the characteristics and formats of a test and/or test taking situation in order to receive a score commensurate with the abilities being measured. To control this internal validity threat, the items in the instrument were renumbered and reshuffled to minimize the ability of the students realizing that they were being re-tested.
- D. Experimental mortality: This refers to a participant dropping out of a group for any personal reasons before the completion of this study, whose absence may have a significant effect on the result of the study. This could occur as a result of the duration of this study, that is, if this study stretches for too long. Experimental mortality which is a threat to internal validity was controlled using various reinforcement procedures to encourage and attract the students. Some of these reinforcement procedures included: Ensuring that the lesson period is enriching and interesting, praise those who make good contributions, rewarding the students with gifts like exercise books, pen, and pencil.
- E. Experimenter's bias: This is a serious threat to an experimental study. It is an observed reaction in experimental testing in which the behaviour of participants changes as a result of being observed. When students (subjects) see a visiting subject teacher frequent their class, there is the tendency that they will know that they are being used for a study. Consequently, they will tend to behave mechanically and fake some of their actions. This will bring about experimenter's bias. This threat was controlled by the use of regular financial accounting teachers in that school to whom the students are familiar with. Through this therefore, the experimental group did not know that they were involved in an experimental study. The researcher occasionally monitored these teachers so as to ensure that they effectively adhered to instructions.

F. Teacher variable: The problem of teacher variable arises when different teachers are involved in an experiment since different teachers possess different qualities in terms of knowledge of the content, methodology, qualification and so on. In order to control this variable in the present study, the researcher prepared lesson plans covering the topics of the study. The lesson notes and procedures for assessing each group were extensively discussed with the teachers. Using the lesson notes, each teacher taught an equivalent group of students, adopting required assessment technique for a trial run, which was supervised by the researcher. The teachers were strictly advised to adopt similar teaching methods for each lesson as stipulated in the lesson plans.

### **Method of Data Analysis**

The research questions were answered using mean while hypotheses were tested using the analysis of covariance (ANCOVA). Mean score difference was applied. This was because the research involved the administration of pre-test and post test before and after the treatment procedures. Also delayed test was administered two weeks after post test administration to determine the retention ability of the students. The mean score difference in respect of the post-test and post post-test was employed to achieve this objective. ANCOVA was used to control initial group difference.

With regards to the research questions, 100% was applied in the analysis. Therefore, the benchmark for achievement scores was 60% while the benchmark for self-efficacy scores was 50%. Achievement scores of 60% and above means that the instructional strategy is effective in enhancing students' academic achievement in financial accounting and self-efficacy scores of 50% and above means that the instructional strategy is effective in enhancing students' self-efficacy in financial accounting. The decision on hypotheses was that where the p-value is less

than or equal to the level of significance (0.05), the null hypothesis was rejected, otherwise the null hypothesis was accepted. The calculation of the mean and ANCOVA was carried out using SPSS version 23.

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

This chapter focuses on the presentation, interpretation and analysis of data based on the nine research questions and six null hypotheses that guided the study. The results of the analysis are presented in table form to answer the research questions and test the hypotheses.

#### Research Question 1

What are the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?

The answer to research question one is presented in Table 1.

**Table 1**

**Academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught using conventional method**

Source of Variance	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Experimental Group	38	30.84	68.68	7.88	3.94	37.84
Control Group	40	19.93	36.83	2.86	4.86	16.09

Data in Table 1 show that the post-test mean score for the treatment group is 68.68 with post-test SD of 3.94 while the pre-test mean score is 30.84 with pre-test SD of 7.88. The post-test mean score for the control group is 36.83 with pre-test SD of 4.86 while the pre-test mean score is 19.93 with pre-test SD of 2.86. Similarly, the group taught financial accounting using think-pair-share instructional strategy has a higher mean gain score of 37.84 than those taught using conventional teaching method which has mean gain score of 16.09.

#### Research Question 2

What are the retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?

The answer to research question two is presented in Table 2.

**Table 2**

**Retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source of Variance	N	Post-test Mean	Retention Mean	Post-test SD	Retention SD	Loss in Mean
Experimental group	38	68.68	64.82	3.94	5.62	3.86
Control group	40	36.83	35.10	4.86	5.44	1.73

Data in Table 2 reveal that the treatment group has a post-test mean score of 68.68 with post-test SD score of 3.94 while the retention mean score is 64.82 with retention SD of 5.62. The control group has a post-test mean score of 36.83 with post-test SD of 4.86 with the retention mean score is 35.10 with retention SD of 5.44. The treatment group has a higher retention mean score of 64.82 as against the control group which has retention mean score of 35.10.

### **Research Question 3**

What are the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?

The answer to research question three is presented in Table 3.

**Table 3**

**Self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source of Variance	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Experimental Group	38	24.79	60.47	3.84	6.25	35.68
Control Group	40	23.45	30.78	3.15	4.57	7.33

Data in Table 3 show that the post-test self-efficacy mean and SD scores for the treatment group are 60.47 and 6.25 with pre-test mean and SD scores of 24.79 and 3.84. The post-test mean and SD scores for the control group are 30.78 and 4.57 with pre-test mean and SD scores of 23.45 and 3.15. The group taught financial accounting using think-pair-share instructional

strategy has a higher self-efficacy mean gain score of 35.68 than those taught using conventional teaching method which has self-efficacy mean gain score of 7.33.

#### **Research Question 4**

What is the difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method?

The answer to research question four is presented in Table 4.

**Table 4**

**Academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

<b>Source of Variance</b>	<b>N</b>	<b>Pre-test Mean</b>	<b>Post-test Mean</b>	<b>Pre-test SD</b>	<b>Post-test SD</b>	<b>Mean Gain</b>
Experimental Group	38	30.84	68.68	7.88	3.94	37.84
Control Group	40	19.93	36.83	2.86	4.86	16.09
<b>Mean Gain Difference</b>						<b>21.75</b>

Data in Table 4 indicate that the post-test mean score of 68.68 for the experimental group is greater than the pre-test mean score of 30.84 while for the control group; the post-test mean score of 36.83 is greater than the pre-test mean score of 19.93. Mean gain of the experimental group of 37.84 is higher than that of the control group of 16.09 with 21.57 mean difference in favour of the experimental group. With post-test achievement mean score of 68.68 above the 60% benchmark, think-pair-share instructional strategy is effective in enhancing students' academic achievement in financial accounting than the conventional teaching method.

#### **Research Question 5**

What is the difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method using their post-test mean scores?

The answer to research question five is presented in Table 5.

**Table 5**

**Retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source of Variance	N	Post-test Mean	Retention Mean	Post-test SD	Retention SD	Loss in Mean
Experimental Group	38	68.68	64.82	3.94	5.62	3.79
Control Group	40	36.83	35.10	4.86	5.44	1.73
<b>Loss in Mean Difference</b>						<b>2.06</b>

Data in Table 5 show that the experimental with retention mean score of 64.82 retained financial accounting concepts taught than the control group with 35.10 retention mean score. Hence, the experimental group had higher loss in mean score of 3.79 as against the control group with loss in mean score of 1.73 with loss in mean difference of 2.06 in favour of the experimental group. This means that think-pair-share instructional strategy is more effective in enhancing retention ability of financial accounting students than conventional teaching method.

### **Research Question 6**

What is the difference between the self-efficacy mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught with conventional teaching method?

The answer to research question six is presented in Table 6.

**Table 6**

**Self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source of Variance	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Experimental Group	38	24.79	60.47	3.84	6.25	35.68
Control Group	40	23.45	30.78	3.15	4.57	7.33
<b>Mean Gain Difference</b>						<b>28.35</b>



Data in Table 6 show that the post-test self-efficacy mean scores of 60.47 for the experimental group is greater than that of pre-test self-efficacy mean score of 24.79. While for the control group, the post-test self-efficacy mean score of 30.78 is greater than the pre-test self-efficacy mean score of 23.45. Mean gain difference of 28.35 (35.68-7.33) was in favour of the experimental group. This indicates that the think-pair-share instructional strategy is more effective in enhancing students' self-efficacy in financial accounting compared to conventional teaching method.

### Research Question 7

What is the difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?

The answer to research question seven is presented in Table 7.

**Table 7**

**Academic achievement mean scores of students taught financial accounting with think-pair-share instructional strategy with respect to gender**

Source of Variance	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
Male	15	21.00	62.40	8.03	3.62	41.04
Female	23	15.78	65.87	5.66	4.20	50.09
<b>Mean Gain Difference</b>						<b>9.05</b>

Data in Table 7 reveal that the male students had a mean score of 62.40 while their female counterparts had a mean score of 65.87 with a mean gain difference of 9.05 in favour of the female students. This implies that the think-pair-share instructional strategy enhanced the academic achievement of female students more than that of the males.

### Research Question 8

What is the difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?

The answer to research question eight is presented in Table 8.

**Table 8**

**Retention mean scores of students taught financial accounting using think-pair-share instructional strategy with respect to gender**

Source of Variance		N	Post-test Mean	Retention Mean	Post-test SD	Retention SD	Loss in Mean
Gender	Male	15	62.40	60.10	3.62	3.82	2.30
	Female	23	65.87	64.90	4.20	6.30	0.97
<b>Loss in Mean Difference</b>							<b>1.33</b>

Data in Table 8 indicates that male students taught using think-pair-share instructional strategy had higher loss in mean of 2.30 while the females had loss in mean of 0.97. This means that the males had 1.33 loss in mean above that of the females. Hence, think-pair-share instructional strategy enhanced the retention ability of male students more than that of the females.

### **Research Question 9**

What is the difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?

The answer to research question nine is presented in Table 9.

**Table 9**

**Self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy with respect to gender**

Source of Variance	Gender	N	Pre-test Mean	Post-test Mean	Pre-test SD	Post-test SD	Mean Gain
<b>Gender</b>	Male	15	23.07	57.40	2.60	6.91	34.37
	Female	23	25.91	62.48	4.14	4.97	36.57
<b>Mean Gain Difference</b>							<b>2.20</b>

Data in Table 9 show male students taught using think-pair-share instructional strategy had mean gain of 34.37 while the females had mean gain of 36.57. This means that the female

students had 2.20 mean gain above that of the males. Hence, think-pair-share instructional strategy enhanced the self-efficacy of female students in financial accounting more than that of the males.

### **Hypothesis 1**

There is no significant difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.

The test of the null hypothesis one is presented in Table 10.

**Table 10**

**ANCOVA for testing significant difference between the achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	14829.998 <sup>a</sup>	2	7414.999	53.762	.000	
Intercept	11315.550	1	11315.550	82.043	.000	
Pretest	2132.932	1	2132.932	15.465	.000	
Method	4930.073	1	4930.073	35.745	.000	S
Error	10344.117	75	137.922			
Total	181777.000	78				
Corrected Total	25174.115	77				

a. R Squared = .589 (Adjusted R Squared = .578) S = Significant, NS = Not Significant

Data in Table 10 show that there was a significant main effect of the treatment which accounted for 58 percent of the variance in the achievement scores of the students,  $F(1, 77) = 35.745$ ,  $P(0.000) < 0.05$ . Since the p-value is less than the level of significance, the null hypothesis was therefore rejected. Thus, there is significant difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.

## Hypothesis 2

There is no significant difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.

the null hypothesis two is presented in Table 11.

**Table 11**

**ANCOVA for testing significant difference between the retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	12908.778 <sup>a</sup>	2	3227.194	18.836	.000	
Intercept	11743.912	1	11743.912	68.544	.000	
Post-test	223.090	1	223.090	1.302	.256	
Method	3968.390	1	3968.390	23.162	.000	S
Error	20046.116	75	171.334			
Total	318573.000	78				
Corrected Total	32954.893	77				

a. R Squared = .392 (Adjusted R Squared = .371) S= Significant, NS = Not Significant

Data in Table 11 show that there was a significant main effect of the treatment which accounted for 37 percent of the variance in the retention scores of the students,  $F(1, 77) = 23.162$ ,  $P(0.000) < 0.05$ . Since the p-value is less than the level of significance, the null hypothesis was thus rejected. Therefore, there is significant difference between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.

## Hypothesis 3

There is no significant difference between the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.

The of the null hypothesis three is presented in Table 12

**Table 12**

**ANCOVA for testing significant difference in the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	13056.497 <sup>a</sup>	2	3264.124	34.655	.000	
Intercept	526.487	1	526.487	5.590	.021	
Pre-test	3463.840	1	3463.840	36.775	.000	
Method	1816.868	1	1816.868	19.289	.000	S
Error	6875.875	75	94.190			
Total	133097.000	78				
Corrected Total	19932.372	77				

a. R Squared = .655 (Adjusted R Squared = .636) S= Significant, NS = Not Significant

Data in Table 12 show that there was a significant main effect of the treatment which accounted for 64 percent of the variance in the self-efficacy scores of the students,  $F(1, 77) = 19.289$ ,  $P(0.00) < 0.05$ . Since the p-value is less than the level of significance, the null hypothesis was thus rejected. Therefore, there is a significant difference between the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.

#### **Hypothesis 4**

There is no significant difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

the null hypothesis four is presented in Table 13.

**Table 13**

**ANCOVA for testing significant difference between the achievement mean scores of students taught financial accounting using think-pair-share instructional strategy in respect to gender**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	34.147 <sup>a</sup>	2	17.074	1.106	.342	
Intercept	15150.015	1	15150.015	981.830	.000	
Achievement	32.145	1	32.145	2.083	.158	
Gender	11.470	1	11.470	.743	.394	NS
Error	540.063	35	15.430			
Total	149888.000	38				
Corrected Total	574.211	37				

a. R Squared = .059 (Adjusted R Squared = .006) S= Significant, NS = Not Significant

Data in Table 13 also show that there was no significant main effect due to gender on the achievement scores of the students,  $F(1, 37) = 0.743$ ,  $P(0.394) > 0.05$ . Since the p-value is greater than the level of significance, the null hypothesis was therefore accepted. Thus, there is no significant difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

### **Hypothesis 5**

There is no significant difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

The of the null hypothesis five is presented in Table 14.

**Table 14**

**ANCOVA for testing significant difference between the retention mean scores of students taught financial accounting using think-pair-share instructional strategy in respect to gender**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	114.360 <sup>a</sup>	2	57.180	1.900	.165	
Intercept	397.248	1	397.248	13.201	.001	
Post-test	24.398	1	24.398	.811	.374	
Gender	95.256	1	95.256	3.165	.084	NS
Error	1053.219	35	30.092			
Total	161198.000	38				
Corrected Total	1167.579	37				

a. R Squared = .098 (Adjusted R Squared = .046) S= Significant, NS = Not Significant

Data in Table 14 show that there was no significant main effect due to gender on the retention mean scores of the students,  $F(1, 37) = 3.165$ ,  $P(0.084) > 0.05$ . Since the p-value is greater than the level of significance, the null hypothesis was therefore accepted. Thus, there is no significant difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

### **Hypothesis 6**

There is no significant difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

The of the null hypothesis six is presented in Table 15.

**Table 15**

**ANCOVA for testing significant difference between the self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy in respect to gender**

Source	SS	df	Mean Square	Cal. F	Sig.	Decision
Corrected Model	234.252 <sup>a</sup>	2	117.126	3.385	.045	
Intercept	2807.583	1	2807.583	81.129	.000	
Self-efficacy	.117	1	.117	.003	.954	
Gender	206.202	1	206.202	5.959	.020	S
Error	1211.222	35	34.606			
Total	140414.000	38				
Corrected Total	1445.474	37				

a. R Squared = .162 (Adjusted R Squared = .114) S= Significant, NS = Not Significant

Data in Table 15 show that there was a significant main effect due to gender on the self-efficacy mean scores of the students,  $F(1, 37) = 5.959$ ,  $P(0.020) < 0.05$ . Since p-value is less than the level of significance, the null hypothesis was thus rejected. Therefore, there is significant difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

### **Summary of Findings**

The findings of the study based on the data collected and analyzed are summarized as follows:

1. Students taught financial accounting using think-pair-instructional strategy had higher academic achievement mean scores than their counterparts taught using conventional teaching method.
2. Think-pair-share instructional strategy is more effective in enhancing students' academic achievement in financial accounting more than the conventional teaching method.
3. Think-pair-share instructional strategy enhanced students' retention in financial accounting more than the conventional teaching method.



4. Think-pair-share instructional strategy enhanced students' self-efficacy in financial accounting compared to the conventional teaching method.
5. Female students perform better than their male counterparts when taught financial accounting using think-pair-share instructional strategy.
6. Think-pair-share instructional strategy enhanced the retention ability of male students more than that of the females.
7. Think-pair-share instructional strategy enhanced the self-efficacy of female students more than that of the males.
8. There is a significant difference between the academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method.
9. A significant difference exists between the retention mean scores of students taught financial accounting with think-pair-share instructional strategy and those taught using conventional teaching method.
10. Self-efficacy mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method differ significantly.
11. There is no significant difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
12. The retention mean scores of male students taught financial accounting using think-pair-share instructional strategy do not differ significantly with that of the females.
13. There is a significant difference between the self-efficacy mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

This chapter focuses on discussion of findings, conclusion, implication of the study, recommendations and suggestions for further study.

#### **Discussion of Findings**

Findings of this study were discussed under the following headings:

1. Effect of think-pair-share instructional strategy on academic achievement of students in financial accounting.
2. Effect of think-pair-share instructional strategy on the learning retention of students in financial accounting.
3. Effect of think-pair-share instructional strategy on the self-efficacy of students in financial accounting.
4. Effect of think-pair-share instructional strategy on academic achievement of male and female students in financial accounting.
5. Effect of think-pair-share instructional strategy on retention of male and female students in financial accounting.
6. Effect of think-pair-share instructional strategy on self-efficacy of male and female students in financial accounting.

#### **Effect of Think-pair-share Instructional Strategy on Academic Achievement of Students in Financial Accounting**

Findings of the study revealed that students taught financial accounting using think-pair-share instructional strategy achieved higher post-test scores than those taught with conventional teaching method. Also, the academic achievement of students taught financial accounting using think-pair-share instructional strategy differed significantly from that of students taught using

conventional teaching method in favour of the treatment group. These findings agree with the finding of Nwaubani, Ogbueghu, Adeniyi and Eze (2016) that think-pair share (TPS) strategy significantly improved students' achievement in economics. Similarly, the finding lends support to the study of Marwan (2015) who reported a significant difference in the post-test academic performance mean scores of students taught Psychology using think-pair-share strategy and those taught with traditional method. Chianson, O'kwu and Kurumeh (2015) in their studies also revealed that a significant difference existed in the academic achievement mean scores of students taught using the think-pair-share strategy compared to those taught using the conventional approach.

The researcher is of the opinion that the significant difference in the academic achievements between the think-pair-share group and conventional group could be due to the benefits of using think-pair-share strategy. Think-pair-share instructional strategy reduces the abstract nature of the financial accounting as a skill-based subject and elucidates the concepts and facilitates proper understanding of financial accounting concepts. It improves communication skills as students listen to one another and respect others' ideas. Students also have opportunities to learn from their pairs, therefore, gaining confidence in solving financial accounting tasks, hence, the increase in achievement. Naturally, when such student-centered instructional strategy is used to enrich learning experiences, students are expected to achieve high.

### **Effect of Think-pair-share Instructional Strategy on the Learning Retention of Students in Financial Accounting**

The findings of the study disclosed that there was a significant difference in the retention test scores between the experimental and control group in favour of the experimental group. This

indicates that students in experimental group retained financial accounting concepts taught more than those of the control group. These findings are not far off from the finding of Marwan (2015) which showed that students taught Educational Psychology course using think-pair-share strategy significantly retention more than those taught same using conventional teaching method. In support, Setiawati and Corebima (2017) revealed the mean retention scores of the students taught concept gaining using think-pair-share instructional strategy significantly differed from that of the students taught using traditional teaching method in favour of think-pair-share instructional group.

The significant improvement in retention ability of students exposed to think-pair-share as revealed in this study could be linked to the fact that think-pair-share instructional strategy recognizes the unique nature of financial accounting and the learner's individuality thus, encourage active participation, creative thinking and students' problem-solving ability, leading to improved students retention ability. Lasnami (2015) affirmed that the difference in retention ability of experimental group and control group arise from the fact that think-pair-share instructional strategy encourages students to collaborate and share ideas among peers more frequently about a particular subject.

### **Effect of Think-pair-share Instructional Strategy on the Self-efficacy of Students in Financial Accounting**

Findings of the study showed that students taught financial accounting using think-pair-share instructional strategy had higher self-efficacy scores than those taught with conventional teaching method. Also, there is significant difference in the self-efficacy mean scores of students in the experimental group and those in the control group in favour of the experimental group. The findings of this study lend credence to that of Araban, Zainalipour, Rais-Saadi, RJavdan, Khalil Sezide and Sajjadi (2012) which revealed that think-pair-share strategy significantly

enhanced students' self-efficacy in English lesson in favour of experimental group. In support, Lee, Hui-Chuan and Masitah (2018) reported that think-pair-share instructional strategy increased students' self-efficacy in Mathematics. Agreeing, Rifa'I and Lestari (2018) found that think-pair-share strategy had a more significant effect on students' self-efficacy in Mathematics when compared to conventional teaching method.

The findings of the study are not surprising to the researcher in view of the benefits accruing to the adoption of think-pair-share instructional strategy in teaching skill-based subjects. The use of think-pare-share strategy may have increased students' active participation, understanding and may have enabled students to formulate their thoughts before talking, building experience in listening and learning from others. The strategy may have also enhanced the learning experience and enriched the learning environment. The use of think-pair-share instructional strategy can be said to have facilitated greater interaction between students and learning materials. This interaction may have aroused and sustained the students' self-efficacy in the subject matter.

### **Effect of Think-pair-share Instructional Strategy on Academic Achievement of Male and Female Students in Financial Accounting**

The findings of this study indicated that female students performed better than their male counterparts when taught financial accounting using think-pair-share instructional strategy. However, this difference in academic achievement of male and female students is not significant. The findings of the study supports the findings of Hamdan (2017) who reported that female students performed better than males when taught sciences using think-pair-share instructional strategy. Nnamani and Oyibe (2016)'s study also found that female secondary school students scored higher in mean achievement scores more than the male students. In contrast, Amuda, Domiya, Ali and Durkwa (2016) and Mwiigi (2014) both revealed that overall performance,

male students performed much better as compared to their female counterparts. Similarly, the finding of the study that revealed that the difference in academic achievement due to gender was not significant contradicts that of Hamdan (2017) and Eziyi, Mumuni and Nwanekezi (2016) who both reported gender disparity in the use of cooperative instructional strategies on students' achievement.

### **Effect of Think-pair-share Instructional Strategy on Retention of Male and Female Students in Financial Accounting**

Findings of the study showed that think-pair-share instructional strategy enhanced the retention ability of male students more than that of the females. The findings further revealed that this difference in retention ability of male and female students is not significant. Hence, think-pair-share strategy had even effect on retention ability of students in respect to gender thereby attributing to chance any difference that may be found. This implies that how much of financial accounting knowledge secondary school students retain when think-pair-share strategy is adopted for instructional delivery is not a function of gender. The finding of the study concurs with that of Ogunyebi (2018) which revealed no significant difference between the post-test means scores of male and female students exposed to think-pair-share instructional strategy. This supports the earlier finding by Goodings and Merz's study (2011) that gender has no significant contribution because male and female students exposed to the same think-pair-share strategy have nearly same scores in the test.

### **Effect of Think-pair-share Instructional Strategy on Self-efficacy of Male and Female Students in financial Accounting**

Findings of the study disclosed that think-pair-share instructional strategy enhanced the self-efficacy of female students more than that of the males. It also revealed that the difference in the self-efficacy scores of male and female students was significant. This finding corroborates

with the findings of Hamdan (2017) that statistical significant differences existed in the self-efficacy scores of male and female students taught using think-pair-share strategy in favour of the experimental group. Hamdan further reported that the statistically differences due to gender were in favour of females. Nwaubani, Ogbueghu, Adeniyi and Eze (2016) also revealed that female students achieved better scores than their male counterparts when taught Economics using think-pair-share instructional strategy. The fact that female students' self-efficacy scores were higher than the males when taught financial accounting using think-pair-share instructional strategy could be as a result of the fact that females are more social than males. Females interact very well in social group, which might have significantly contributed to their higher achievement and self-efficacy in financial accounting. Similarly, the power of language could have as well played a key role in the higher academic achievement and self-efficacy of female students than males. Another factor that might have made the female students to achieve more than their male counterparts is that the females are more than the males in the groups. In supported, Kumar and Roshna (2010) earlier reported that the females scored higher than their male counterparts in self-efficacy test and that there were significant gender differences.

## **Conclusion**

Think-pair-share instructional strategy is an innovative teaching strategy that gives students opportunity to think and solve academic problems independently, with pairs and with whole class. This study have provided empirical evidence on the effectiveness of Think--Pair Share (TPS) instructional strategy in improving academic achievement, retention and self-efficacy of students in financial accounting. It was concluded that: think-pair-share instructional strategy positively affected students' academic achievement, retention and self-efficacy in financial accounting, the academic achievement, retention ability and self-efficacy were not

mostly influenced by gender when think-pair-share instructional strategy is used, and that the use of conventional teaching method in teaching financial accounting results to students' passiveness during learning which facilitates low self-efficacy, forgetfulness and poor academic achievement in financial accounting. However, the use of think-pair-share instructional strategy is capable of revising this trend by significantly improving the academic achievement, retention and self-efficacy of students in financial accounting.

### **Implications of the Study**

The findings of this study have clear implications for teaching financial accounting, training and re-training of financial accounting teachers, and provision of instructional resources for teaching and learning in secondary schools. Since think-pair share groups had better achievement, retention and self-efficacy after treatment, it follows that the instructional strategy is effective. The implication is that active participation of students in think--pair share (TPS) classes gave rise to meaningful learning and academic achievement. Therefore, financial accounting teachers should jettison their age long ineffective conventional teaching methods and use more innovating and student-centered instructional strategy such as think-pair-share strategy in teaching financial accounting to allow students to participate actively in every aspect of financial accounting classroom instruction to improve their academic achievement.

Similarly, the fact that learning through think--pair share facilitated students' achievement and self-efficacy in financial accounting suggests that financial accounting teachers if trained on how to deliver instruction using think--pair share instructional strategy would achieve effectively their set instructional target. In the light of this fact, Faculties of Education, Colleges of Education and Teachers' Training Institutes should not merely emphasize innovative instructional strategies in their methodology courses, but, should ensure their practical



application in teaching and learning process. If classroom teachers become aware of the effectiveness of both think--pair share strategy in facilitating and enhancing learning, the problem of low self-efficacy and poor academic achievement in senior secondary school financial accounting could be addressed.

The findings of this study also have implication for secondary school curriculum planners. The efficacy of learning through think--pair share instructional strategy implies that government should sensitize the teachers on how to appropriately apply this innovative instructional strategy recommended in the senior secondary school financial accounting curriculum, by providing guide for teachers in the curriculum.

Furthermore, the results of this study indicated that gender was not a significant factor in students' achievement, retention in financial accounting. The findings also showed that gender combined with the think-pair-share instructional strategy affect students' self-efficacy in financial accounting. This could be as a result of the fact that females are more social than males. Females interact very well in social group, which might have significantly contributed to their self-efficacy in financial accounting, since think--pair share instructional strategy employs active learning, social interaction and study groups. The implication of the findings of this study is that think-pair-share strategy could be used as a teaching strategy to enhance gender equality in academic achievement and retention in the teaching and learning of financial accounting and other business subjects in secondary schools.

### **Recommendations**

In the light of the findings of the study, the following recommendations are made:

1. Financial accounting teachers should use think-pair-share instructional strategy in their instructional delivery in order to enable students actively participate in classroom

teaching and learning process. The teacher should also create effective classroom management in such a way that students can work individually, and in pairs for improved learning academic achievement.

2. Financial accounting teachers should be given easy access to capacity building programmes through workshop, conference, seminar, symposium and exhibition on think-pair share instructional strategy to enable them to learn how to effectively apply the strategy when teaching financial accounting.
3. Financial accounting teachers should enlighten their students on the benefits of think-pair-share instructional strategy and how to effectively carry think-pair-share to enhance their learning, academic achievement, retention and self-efficacy.
4. Curriculum planners should incorporate think-pair-share instructional strategy into education curriculum in tertiary institutions of learning to equip teacher-trainees with competencies to appropriately apply it in teaching financial accounting and other school subjects when employed. They should also reflect it in the schemes of work and other curriculum materials in Financial Accounting at the secondary school level.
5. Adequate provision of resource room, classrooms, textbooks, furniture and other relevant resources should be made available by the government for use in think-pair share classroom. This will facilitate its effectiveness.
6. Gender differences should not be introduced in financial accounting classrooms. Financial accounting teachers should not bring into the instructional process, learning experiences and resources that could encourage gender bias.

### **Suggestions for Further Studies**

The following suggestions are made for further research:

1. Effect of think-pair-share instructional strategy on students' academic achievement, retention and self-efficacy in Auditing/Taxation in Colleges of Education in South East, Nigeria.
2. Effect of Think-Pair Share (TPS) and Student Teams-Achievement Divisions (STAD) instructional strategies on students' academic achievement, retention and self-efficacy in commerce in secondary schools in Enugu State.
3. Effect of think-pair share and peer tutoring instructional strategies on students' academic achievement, retention and interest in financial accounting in colleges of education in Abia State.

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**Appendix A**  
**Lesson Plan for Experimental Group**  
**Use of Think-Pair-Share**

**Week 2:**

**Class:** SS 2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** Introduction to Partnership Account

**Duration:** 40 Minutes

Reference Material:

1. A text book of “Essential Financial Accounting for the Senior Secondary School by Longe and Kazeem (2006).

Average Age: 16 years

**Instructional Objectives:**

By the end of the lesson, the students should be able to:

1. Define partnership
2. Mention types of partners
3. Explain deed of partnership
4. Explain duties and rights of partners

**Entry Behaviour:** Students have been taught forms of business ownership.

**Instructional Materials:** Text book, note book, chalk board and ruler

**Instructional Strategy:** Explanation, illustration, examples, critical thinking, problem solving, discussion, question and answers, and group work.

**Mode of Presentation:**

- a. The teacher prepares the students to sit in groups of four (4), each to allow for better interaction.
- b. In order to ensure heterogeneity in the groups, the teacher assigns the intelligent, average and below average students in a particular group using the second term result of the students in financial accounting. Intelligent students will be those that score above 60 marks, average students are those that score 50- 59 marks while below average are those scoring below the pass mark (50 marks) in the examination.
- c. The teacher allows each group to appoint the member that will present the group's ideas to the whole class.
- d. The teacher introduces the lesson, moderate and renders assistance to various groups, and reminds the students of the need to work independently and co-operatively.
- e. The thinking stage lasts between 1- 5 minutes.
- f. The pair stage lasts between 5- 10 minutes.
- g. The share stage (whole class discussions) lasts between 10-30 minutes.
- h. Teacher summarizes the lesson lasts 30-35 minutes

<b>Content development</b>	<b>Teacher activities</b>	<b>Students' activities</b>	<b>Strategies and skills</b>
<b>Set Induction</b>	The teacher walks into the class and ask the students to mention the forms of business ownership they know	Students answer the question posed by the teacher	Questioning
<b>Topic: Partnership</b>			
Stage 1: Definition Partnership	<p>I. The teacher explains that partnership is a relationship that exists between persons carrying on a business in common with the aim of making profit. The teacher further explains that partnership can be formed by two to twenty persons.</p> <p>II. The teacher asks the students to explain what they understand by the term “partnership”.</p> <p>III. The teacher moves around to check that each student is participating in the task.</p> <p>IV. The teacher calls for a student from each group to present their answers/ideas to the whole class</p> <p>V. The teacher summarizes the lesson taught.</p>	<p>i. Each student listens attentively and writes down points mentioned by the teacher.</p> <p>ii. Each student thinks and writes down their ideas and possible answer individually.</p> <p>iii. Each student turns to face his/her partners and share ideas related to the question.</p> <p>iv. One student from each group presents the answers/ideas agreed upon to the whole class</p>	<p>Explanation,</p> <p>Critical thinking, problem solving,</p> <p>Questioning</p>
Stage 2: Types of partners	<p>I. The teacher explains to the students that there are three types of partners namely; active partner, sleeping or dominant partner and nominal partner.</p> <p>II. The teacher explains each of the types of partners as follows:</p> <p>a. Active Partner: a partner who takes active part in the formation and management of the business.</p> <p>b. Sleeping or Dormant Partner: Partner that does not partake in the day-to-day running of the business, but only contributes capital.</p> <p>c. Nominal Partner: the partner that only contributes his name to the formation of the</p>	<p>i. Each student listens and copies notes</p> <p>ii. Each student listens and copies notes</p>	<p>Explanation</p> <p>Critical thinking,</p>

	<p>business and nothing more.</p> <p>III. The teacher asks the students to identify and explain the types of partners that exist.</p> <p>IV. After their attempt, the teacher corrects their weak point, encourages the right answers and summarizes the lesson by mentioning types of partners.</p>	<p>iii. Each student thinks of the answers and writes them down on the work sheet individually.</p> <p>iv. Each student turns to face his/her pairs and shares his ideas or answers to the pairs and they compare to arrive at the best answers.</p> <p>v. One student from each group presents the agreed answers to the whole class.</p> <p>vi. Each of the student listens and copies notes</p>	<p>brainstorming</p> <p>Questioning and explanation</p>
Stage 3: Partnership deed	<p>I. The teacher explains to the students that partnership deed is a written agreement among the partners specifying rules and regulations and is signed by all the partners and stamped as per the Stamp Act with an aim to prevent possible disputes and disagreements among the partners at a future date.</p> <p>II. The teacher listed information to be contained in partnership Act as:</p> <ol style="list-style-type: none"> <li>Name of the firm,</li> <li>nature of the business,</li> <li>names of partners,</li> <li>place of the business, and</li> <li>amount of capital contributed by each partner.</li> </ol> <p>III. The teacher asks the students to explain partnership deeds, and list and explain items found in the deed.</p> <p>IV. The teacher moves around and encourages each student to attempt the question on his or her own first.</p> <p>V. The teacher calls for one student from each group to present their answers/ideas to the whole class</p> <p>VI. The teacher summarizes the lesson taught.</p>	<p>i. Each student listens and copies notes.</p> <p>ii. Each student listens and copies notes.</p> <p>iii. Each student thinks of the answers and writes them down his or her answer on the work sheet individually.</p> <p>iv. Each student turns to face his/her pairs, share and compares answers to arrive at the best answers.</p> <p>v. One student from each group presents the agreed answers to the whole class.</p> <p>vi. Each student listens and copies notes.</p>	<p>Questioning</p> <p>Explanation</p> <p>Critical thinking and problem solving</p> <p>Questioning</p> <p>Presentation</p>



	<p>III. The teacher asks the students to list and explain the duties and rights of partners.</p>	<p>iii. Each student thinks of the answers and writes them down individually.</p> <p>iv. Each student turns to his/her pairs and shares his answers to the pair and they compare to arrive at the best answers.</p> <p>v. One student from each group presents the agreed answers to the whole class.</p>	<p>Questioning</p> <p>Questioning and discussion</p> <p>Presentation</p>
Evaluation	<p>Students are given the following assignment to test their knowledge on the topic:</p> <ol style="list-style-type: none"> <li>1. What is partnership account?</li> <li>2. List and explain any three types of partners?</li> <li>3. Mention items contain in the Partnership Act 1890.</li> <li>4. State two duties and two rights of partners</li> </ol>	<p>The students copy the assignment in their notebooks</p>	

## **Lesson Plan for Experimental Group**

### **Use of Think-Pair-Share**

**Week 3:**

**Class:** SS 2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** Capital Contribution

**Duration:** 40 Minutes

Reference Materials:

1. A text book of “Essential Financial Accounting for the Senior Secondary School by Longe and Kazeem (2006).

Average Age: 16 years

#### **Instructional Objectives:**

By the end of the lesson, the students should be able to

1. Define capital contribution
2. Describe floating and fixed capital
3. Calculate interest on capital and drawings

**Entry Behaviour:** Students have been taught partnership account.

**Instructional Strategies:** Explanation, illustration, examples, critical thinking, problem solving, discussion, question and answers, and group work.

**Instructional Materials:** Text book, note book, calculator, chalk board and ruler.

Content development	Teacher activities	Students' activities	Strategies and skills
Set Induction	<p>The teacher walks into the class and asks students to:</p> <ol style="list-style-type: none"> <li>1. Explain partnership account.</li> <li>2. List three type of partners</li> </ol>	Students answered the question correctly as expected by the teacher.	Questioning
Stage 1: Definition of capital contribution	<ol style="list-style-type: none"> <li>I. The teacher explains that capital contribution it is an amount of money or assets given to a business or partnership by one of the owners or partners.</li> <li>II. The teacher asks students to define capital contribution.</li> <li>III. The teacher moves around to check that each student is attempting the question.</li> <li>IV. The teacher calls for a student from each group to present their answers to the whole class.</li> <li>V. The teacher points out students/groups that got their answers correctly.</li> <li>VI. The teacher summarizes the lesson taught.</li> </ol>	<ol style="list-style-type: none"> <li>i. Each student listens and copies notes</li> <li>ii. Each student thinks and writes down their answers on the work sheet.</li> <li>iii. Each student turns to face his/her pairs and share ideas related to the question.</li> <li>iii. A student from each group presents the answers agreed upon to the whole class</li> </ol>	<p>Critical thinking and problem solving</p> <p>Questioning collaboration</p> <p>Presentation</p>
Stage 2: Floating and Fixed Capital	<ol style="list-style-type: none"> <li>I. The teacher explains to the students that there are two main types of capital contribution namely; floating and fixed capital.</li> <li>II. The teacher explains each of floating and fixed capital thus:  <b>Floating capital:</b> The amount of money needed by a business to pay for its immediate operational needs. It is the net amount of funding needed to pay for a firm's investments in receivables, prepaid expenses, and inventory.  <b>Fixed capital:</b> It refers to any kind of real or physical capital (fixed asset) that is not used up in the production of a product.</li> </ol>	<ol style="list-style-type: none"> <li>i. Each student listens and copies notes.</li> <li>ii. Each student listens and copies notes.</li> </ol>	Critical thinking, problem



	<p>III. The teacher asks the students to explain floating and fixed capital contribution.</p> <p>VII. The teacher moves around and encourages each student to attempt the question on his or her own first.</p> <p>IV. The teacher points out students/groups that got their answers correctly.</p> <p>V. The teacher summarizes the lesson taught.</p>	<p>iii. Each student thinks of the answers and writes them down on the work sheet individually.</p> <p>iv. Each student turns to face his/her pairs and shares his ideas or answers to the pair and they compare to arrive at the best answers.</p> <p>v. One student from each group presents the agreed answers to the whole class.</p>	<p>solving,</p> <p>Questioning</p> <p>Questioning</p>																		
Stage 3: Interest on capital and drawings	<p>The teacher explains to the students that partners can withdraw money from the sum they have contributed. Therefore, to discourage or reduce the amount of cash withdrawn, a fixed sum will be charged as interest. The teacher also explains that to encourage more contribution by partners, interest is given to capital contributed to the business. The teacher gives an illustration on how to calculate interest on capital and drawings on the chalk board</p>	<p>Students listen attentively and copy down the steps on their notes.</p>	<p>Explanation and questioning</p>																		
Stage 4: Interest on capital and drawings	<p>I. The teacher writes down the following questions and solves them accordingly</p> <p>(a). Faith and Obi are in partnership with the following partnership agreement.</p> <table><tr><td></td><td>Faith</td><td>Obi</td></tr><tr><td></td><td>₦</td><td>₦</td></tr><tr><td>Fixed capital</td><td>19,000</td><td>20,000</td></tr><tr><td>Salary per annum</td><td>7,000</td><td>9,000</td></tr><tr><td>Interest on capital per annum</td><td>8%</td><td>8%</td></tr><tr><td>Interest on drawings</td><td>5%</td><td>5%</td></tr></table> <p>The net profit for the year ended 31<sup>st</sup> December, 2018 is ₦21,000 while</p>		Faith	Obi		₦	₦	Fixed capital	19,000	20,000	Salary per annum	7,000	9,000	Interest on capital per annum	8%	8%	Interest on drawings	5%	5%	<p>i. Students listen attentively, ask questions and copy down the steps on their notes.</p>	<p>Questioning</p>
	Faith	Obi																			
	₦	₦																			
Fixed capital	19,000	20,000																			
Salary per annum	7,000	9,000																			
Interest on capital per annum	8%	8%																			
Interest on drawings	5%	5%																			

	<p>drawings are <del>₦</del>4,000 and <del>₦</del>5,000 for Faith and Obi respectively.</p> <p>(Q) Calculate the interest on capital and drawings for Faith and Obi?</p> <p>II. The teacher writes down an exercise on the chalk board and asks the students to solve the question.</p> <p>I. The teacher moves around and encourages each student to solve the question on his or her own first.</p> <p>The teacher calls for a student from each group to present their answers/ideas to the whole class.</p> <p>The teacher solves the question on the chalk board and mentions the students/ groups that got the answers correctly.</p> <p>The teacher asks other groups to clap for the student (s)/group (s) that got the question correctly.</p>	<p>ii. Each student try to solve the question individually and put down on the work sheet answers arrived at.</p> <p>iii.Each student then turns to pairs and shares the answers gotten and compares answers. The pairs agreed on the most correct answers to the questions.</p> <p>iv. One student from each group presents the agreed answers to the whole class.</p> <p>v.Students in turn clap for themselves for the day's work.</p>	<p>Critical thinking and problem solving,</p> <p>Presentation</p> <p>Questioning</p>
Evaluation	<p>The teacher assigns the following questions to the students to solve at home to maximize their time:</p> <ol style="list-style-type: none"> <li>1. What is capital contribution?</li> <li>2. Describe floating and fixed capital?</li> <li>3. Using the information provided below, calculate the interest on drawings using 5%</li> </ol> <p>The following balances were extracted from the books of Ayo and Ojo for the year ended 31<sup>st</sup> December 2018. The partners drawings of Ayo <del>₦</del> 2000; Ojo <del>₦</del> 1200 were taken in two equal installments on 1<sup>st</sup> April 2009 and 1<sup>st</sup> October 2018.</p>	The students copy the assignment in their notebooks	

## **Lesson Plan for Experimental Group**

### **Use of Think-Pair-Share**

**Week 4:**

**Class:** SS 2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** Preparation of partnership Account I

**Duration:** 40 Minutes

**Reference Materials:** A text book of “Essential Financial Accounting for the Senior Secondary School By Longe and Kazeem (2006).

Average Age: 16 years

#### **Instructional Objectives:**

By the end of the lesson, the students should be able to:

1. Write the formats for trading, profit and loss appropriation account and balance sheet.
2. Prepare partnership account (Trading, profit and loss appropriation account).
3. Prepare balance sheet account.

**Entry Behaviour:** Students have been taught final account of a sole trader

**Instructional Strategies:** Explanation, illustration, examples, critical thinking, problem solving, discussion, question and answers, and group work.

**Instructional Materials:** Text book, note book, calculator, chalk board and ruler.

Content development	Teacher activities	Students' activities	Strategies and skills									
Set induction	The teacher walks into the class and asks students to explain capital contribution.	Students answer the question correctly as expected by the teacher.	Questioning									
Stage 1: Trading Account	<p>I. The teacher explains trading account and presents the format for calculating trading account of partnership. The teacher uses the format to solve the problem writing on the chalk board.</p> <p>II. The teachers writes down an exercise on the chalk board and asks students to attempt the questions</p> <p>II. The teacher moves around to check that each student is solving the question. The teacher calls for a student from each group to present the groups' answers to the whole class</p> <p>The teacher solves the question on the chalk board and calls the groups that got solve the question correctly for praise. The teacher then summarizes the lesson for the day.</p>	<p>i. Each student listens attentively and copy notes</p> <p>ii. Each student thinks and solves the question.</p> <p>iii.Each student turns and shares his or her answers with a pair and compares answers to arrive at the most correct answer.</p> <p>v. One student from each group presents the groups' answers agreed to the whole class.</p> <p>Students listen and copy notes</p>	<p>Critical thinking and problem solving</p> <p>Questioning</p> <p>Presentation</p> <p>Questioning</p>									
Stage 2: profit and Loss Appropriation Account	<p>I. The teacher writes down on the chalk board format for preparing partnership profit and loss appropriation account.</p> <p>The teacher writes down the following questions on the board and solve them:</p> <p>1. Uju and Ngozi are in partnership as perfume manufacturers, sharing profits and losses in the ration of 3:1 respectively. As of December their capital and current account balance were:</p> <table><tr><td></td><td>Current A/c</td><td>Capital A/c</td></tr><tr><td>Uju</td><td>1, 800 (Cr)</td><td>18,000</td></tr><tr><td>Ngozi</td><td>3,000 (Dr)</td><td>20,000</td></tr></table>		Current A/c	Capital A/c	Uju	1, 800 (Cr)	18,000	Ngozi	3,000 (Dr)	20,000	<p>i. Each student listens attentively and copies the format and the corresponding questions in their note books.</p> <p>ii. Each student solves the question on the work sheet individually.</p> <p>iii. Each student turns to face his/her pairs and they share their answers together. The pairs study the questions and their solutions together and make their various contributions on the questions.</p>	<p>Questioning</p> <p>Critical thinking and brain storming</p> <p>Questioning</p> <p>critical thinking</p>
	Current A/c	Capital A/c										
Uju	1, 800 (Cr)	18,000										
Ngozi	3,000 (Dr)	20,000										

	<p>Under the terms of agreement, Uju is to be credited with a salary of ₦ 5000 per annum. The interest on drawings is 10% and interest to be charged on capital at 5% per annum. The net profit for the year December 31<sup>st</sup> 2017 was ₦18,500 before charging interest on capital, drawings and salaries. The account shows that each partner made drawings of ₦1,500.</p> <p>You are required to prepare:</p> <ol style="list-style-type: none"> <li>The appropriation account</li> <li>Current account as at 31<sup>st</sup> December 2017</li> </ol> <ol style="list-style-type: none"> <li>The teacher copy an exercise on the chalkboard and asks students to attempt them</li> <li>The teacher moves around to ensure that each student is solving the question on his own before turning to his or her pairs.</li> </ol> <ol style="list-style-type: none"> <li>The teacher calls for a student from each group to come and present their solutions and answers to the whole class.</li> </ol> <ol style="list-style-type: none"> <li>The teacher solves the question correctly and points out students/groups that got their solutions and answers correctly.</li> </ol> <ol style="list-style-type: none"> <li>The teacher summarizes the lesson and asks the students to clap for themselves for attempting the question.</li> </ol>	<p>iv. One student from each group presents the answers to the whole class.</p>	Presentation
Stage 3: Balance Sheet Account	<p>The teacher explains to the students that a balance sheet is a statement of the assets, liabilities, and capital of a business or other organization at a particular point in time, detailing the balance of income and expenditure over the preceding period.</p> <p>The teacher gives an illustration format for preparing a balance sheet of partnership at a period of time.</p> <p>The teacher writes down the following questions the chalk board and asks students to copy and solves them. (See illustration 1)</p> <p>Illustration 1: Ogundele and Dapo are in</p>	<ol style="list-style-type: none"> <li>Students listen attentively and copy down the formats and question in their notes.</li> <li>Each student solves the question alone and writes on the work sheet the answer.</li> </ol>	<p>questioning</p> <p>Critical thinking and , problem solving</p>

partnership sharing profit and loss in the ratio of 3:2.

The following is a trial balance as at 31<sup>st</sup> December 2017

	Dr ₦	Cr ₦
Capital		100,000
Ogundele		50,000
	Dapo	
Drawings:	6,000	
Ogundele	5,000	
	Dapo	
Purchases	120,000	
Sales		200,000
Sales returns	4,000	
Purchase returns		2,000
Stock at 1 <sup>st</sup> Jan. 1995	10,000	
Carriage inwards	1,200	
Salaries and wages	15,000	
Bad debts	1,000	
Office expenses	2,400	
Loan-Okafor		14,000
Provision of doubtful debts		300
Discounts allowed	1,150	
Discounts received		1,100
Building at cost	30,000	
Machinery at cost	109,100	
Cash at bank	8,000	
Motor van at cost	50,000	
Electricity	50	
Provision for depreciation on motor van		10,000
Debtors	20,000	
Creditors		10,000
Bills Payable		9,000
Bills receivable	17,500	
Carriage outwards	500	
Current account:		
Ogundele		1,500
	Dapo	
		3,000
	400,900	400,900

**Additional information:**

- Stock at close ~~₦~~15,000
- Salaries and wages accrued ~~₦~~1,000
- Electricity Prepaid ~~₦~~20
- Interest on capital at 10%
- Interest on drawings 5%
- Depreciation motor van 10% on

iii. Each student turns to face his/her pairs and shares the answer and compares it with that of other pairs. The pairs study the question together and solve it collectively.

iv. One of the students from each group comes out and presents the solution arrived at to the whole class.

Questioning

	<p>cost</p> <p>g. Partnership salary: Ogundele <del>₦</del>2000</p> <p>h. Provision for doubtful debts to be reduced to <del>₦</del>200</p> <p>i. Ogundele withdrew <del>₦</del>7,000 good from own use.</p> <p>You are required to</p> <p>a. Prepare the trading, profit and loss account for the year ended 31<sup>st</sup> December 2017?</p> <p>b. Partners capital account</p> <p>c. Balance sheet as at 31<sup>st</sup> December 2017.</p> <p>The teacher moves around to check that each student is solving the question.</p> <p>The teacher calls for a student from each group to present the groups' answers to the whole class</p> <p>The teacher solves the questions on the chalk board and calls out the groups that solve the question correctly for praise.</p> <p>The teacher then summarizes the lesson for the day</p>		
Evaluation	Students are given assignments on the topic	The students copy the assignment in their notebooks	

**Appendix B**  
**Lesson Plan for Control Group**  
**Use of Conventional Teaching Method**

**Week 2:**

**Class:** SS 2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** Introduction to Partnership Account

Content: Meaning of partnership and types of partnership

**Duration:** 40 Minutes

**Reference Material:** Essential Financial Accounting for the Senior Secondary School by Longe and Kazeem (2006).

Average Age: 16 years

**Instructional Objectives:**

By the end of the lesson, the students should be able to

1. Define partnership
2. Mention types of partners
3. Explain deed of partnership
4. Explain duties and rights of partners

**Entry Behaviour:** Students have been taught forms of business ownership.

**Instructional Materials:** Text book, note book, chalk board and ruler.

**Instructional Strategy:**

Conventional method such as explanation, demonstration, illustrations/examples, question and answers will be used.



**Set Induction:** The teacher set induces the students by asking them the following question: If twenty students agree to contribute N 50 each to buy one packet of pencil to share among themselves. What is this type of agreement called?

Content development	Teacher activities	Students' activities	Strategies and skills
<b>Set Induction</b>	The teacher walks into the class and ask the students to mention the forms of business ownership that exists	Students answer the questions posed by the teacher	Question and answer
Revision	The teacher revises the previous lesson with the students by asking them questions based on the last topic taught.	Students answers the questions asked by the teacher correctly	question and answer
Stage 1: Definition Partnership	The teacher give an overview of what a partnership is by defining it as the relationship which subsists between persons carrying on a business in common with a view of profit making. The teacher also stated that partnership can be formed by two to twenty persons	The students listen attentively and write into their exercise books.	explanation
Stage 2: Types of partners	The teacher explains that there are three types of partners; active partner, sleeping/dormant partner and nominal partner. Active Partner: The teacher explains that active partner is a partner who takes active part in the formation and management of the business. Sleeping/dormant partner is a partner that does not partake in the day-to-day running of the business, but only contributes capital. Nominal partner is the partner that only contributes his name to the formation of the business and nothing more. The nominal partner are normally people of substance in the society	a. The students listen to the teacher. b. They also ask questions where they are confused.	Explanation, listening question and answer use of examples
Stage 3:	The teacher explain that partnership	Students listen to the teacher's	Explanation

Partnership deed	<p>deed is a written agreement among the partners specifying rules and regulations and is signed by all the partners and stamped as per the Stamp Act with an aim to prevent possible disputes and disagreements among the partners at a future date. The teacher further explains that a partnership deed (agreement) must be signed by the partners in the presence of a lawyer.</p> <p>The teacher listed information/details to be contained in partnership Act as:</p> <ol style="list-style-type: none"> <li>Name of the firm,</li> <li>nature of the business,</li> <li>names of partners,</li> <li>place of the business, and</li> <li>amount of capital contributed by each partner.</li> </ol>	<p>explanation and write down the points mentioned by the teacher on their note books</p>	listening
Stage 4: Duties and Rights of Partners	<p>The teacher explains to the students that there are duties expected of every partner to perform in the business and corresponding rights accrued to each partner.</p> <p>The teacher enumerated the duties of partners as follows</p> <ol style="list-style-type: none"> <li>Partners are bound to carry on the business of the firm to the greatest common advantage.</li> <li>To be just and faithful to each other and to render accounts and full information of all things affecting the firm to any partner or his legal representative.</li> <li>Every partner is bound to indemnify the firm for any loss caused to it by fraud in the conduct of the business of the firm.</li> </ol> <p>The teacher listed the rights of partners as follows:</p> <ol style="list-style-type: none"> <li>Every partner has a right to take part in the conduct of the</li> </ol>	<p>Students listen to the teacher's explanation attentively.</p> <p>Students write down and write into their exercise books</p>	<p>Listening</p> <p>Note copying</p>

	<p>business.</p> <p>b. Every partner is bound to attend diligently to his duties in the conduct of business.</p> <p>c. Any difference arising as to ordinary matters connected with the business may be decided by a majority of partners and no change in the nature of the business shall be made without the consent of all the partners.</p> <p>d. Every partner has a right to have access to and to inspect and copy any books of the firm.</p> <p>e. A partner is not entitled to receive remuneration for taking part in the conduct of the business.</p> <p>f. The partners are entitled to share equally in the profits earned and shall contribute equally to the losses sustained by the firm.</p>		
Evaluation	<p>Students are given the following questions to test their knowledge on the learned material:</p> <ol style="list-style-type: none"> <li>1. What is partnership account?</li> <li>2. List and explain any three types of partners?</li> <li>3. Mention details contain in the Partnership Act 1890?</li> <li>4. State two duties and two rights of partners?</li> </ol>	The students copy the assignment in their notebooks	Note copying

**Week 3:**

**Class:** SS 2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** Capital Contribution

**Duration:** 40 Minutes

Reference Materials:

2. A text book of “Essential Financial Accounting for the Senior Secondary School by Longe and Kazeem (2006).

Average Age: 16 years

**Instructional Objectives:**

By the end of the lesson, the students should be able to:

1. Define capital contribution
2. Describe floating and fixed capital
3. Calculate interest on capital and drawings

**Entry Behaviour:** Students have been taught partnership account.

**Instructional Strategy:** Conventional method such as explanation, demonstration, illustrations/examples, question and answers will be used.

**Instructional Materials:** Text book, note book, calculator, chalk board and ruler.

<b>Content development</b>	<b>Teacher activities</b>	<b>Students' activities</b>	<b>Strategies and skills</b>
Set induction	The teacher walks into the class and asks the students to explain partnership account, and list types of partners based on the previous lesson taught	Students answer the question correctly as expected by the teacher.	Question and answer
Stage 1: Definition of capital contribution	The teacher explains that capital contribution is an amount of money or assets given to a business or partnership by one of the owners or partners. The teacher asks students to explain in their own understanding what capital contribution is	Students listen attentively to the teacher and answer teacher's question. Students copy down notes given by the teachers.	Explanation and questioning
Stage 2: Floating and Fixed Capital	The teacher explains that floating capital is the amount of money needed by a business to pay for its immediate operational needs. It is the net amount of funding needed to pay for a firm's investments in receivables, prepaid expenses, and inventory. The teacher explains that fixed capital refers to any kind of real or physical capital (fixed asset) that is not used up in the production of a product.	Students listen to the teacher and ask the teacher questions where they are confused	Explanation, discussion, questioning
Stage 3: Interest on capital and drawings	The teacher explains to the students that partners can withdraw money from the sum they have contributed. Therefore, to discourage or reduce the amount of cash withdrawn, a fixed sum will be charged as interest at 5%. The teacher also explains that to encourage more contribution by partners, interest paid to capital contributed by the partners. The teacher explains that while interest on drawings are fixed at 5% <sup>157</sup> by the Partnership Act 1890, interest on capital may be agreed upon by the partners in business gives an illustration on how to calculate	Students listen attentively and copy down the steps in their notes.	Explanation, listening question and answer

	interest on capital and drawings on the chalk board.																	
Stage 4: Preparation of Interest on capital and drawings	<p>The teacher copy the following questions on the chalk board and solve them accordingly</p> <p>The teacher writes the following questions and allows students to copy them:</p> <p>(a). Faith and Obi are in partnership with the following partnership agreement.</p> <table><thead><tr><th></th><th>Faith ₦</th><th>Obi ₦</th></tr></thead><tbody><tr><td>Fixed capital</td><td>19,000</td><td>20,000</td></tr><tr><td>Salary per annum</td><td>7,000</td><td>9,000</td></tr><tr><td>Interest on capital per annum</td><td>8%</td><td>8%</td></tr><tr><td>Interest on drawings</td><td>5%</td><td>5%</td></tr></tbody></table> <p>The net profit for the year ended 31<sup>st</sup> December, 2017 is ₦21,000 while drawings are ₦4,000 and ₦5,000 for Faith and Obi respectively.</p> <p>(Q) Calculate the interest on capital and drawings for Faith and Obi?</p> <p>.</p>		Faith ₦	Obi ₦	Fixed capital	19,000	20,000	Salary per annum	7,000	9,000	Interest on capital per annum	8%	8%	Interest on drawings	5%	5%	<p>Students copy the question and watch the teacher solve the problem.</p> <p>Students ask the students questions where they are confused.</p> <p>Students copy the solutions on the chalk board</p>	Explanation, illustration/ example demonstration, questioning
	Faith ₦	Obi ₦																
Fixed capital	19,000	20,000																
Salary per annum	7,000	9,000																
Interest on capital per annum	8%	8%																
Interest on drawings	5%	5%																
Evaluation	<p>The teacher assigns the following questions to students to solve at home to maximize their time:</p> <p>1.What is capital contribution?</p> <p>2.Describe floating and fixed capital?</p> <p>3.Using the information provided below, calculate the interest on drawings using 5%</p> <p>The following balances were extracted from the books of Ayo and Ojo for the year ended 31<sup>st</sup> December 2018. The partners drawings of Ayo ₦ 2000; Ojo ₦ 1200 were taken in two equal installments on 1<sup>st</sup> April 2018 and 1<sup>st</sup> October 2018.</p>	The students copy the assignment in their notebooks	Note copying															

**Week 4:**

**Class:** SS2

**Gender:** Mixed

**Subject:** Financial Accounting

**Topic:** partnership Account I

**Duration:** 40 Minutes

**Reference Materials:** Essential Financial Accounting for the Senior Secondary Schools By Longe and Kazeem (2006).

Average Age: 16 years

**Instructional Objectives:**

By the end of the lesson, the students should be able to:

1. Write the formats for trading, profit and loss t appropriation account and balance sheet.
2. Prepare partnership Account (profit and loss account appropriation account and balance sheet.

**Entry Behaviour:** Students have been taught final account of a sole trader.

**Instructional Strategy:** Conventional method such as explanation, demonstration, illustrations/examples, question and answers will be used

**Instructional Materials:** Text book, note book, calculator, chalk board and ruler.

Content development	Teacher activities	Students' activities	Strategies and skills									
Set Induction	The teacher walks into the class and asks the students to explain capital contribution	Students answer the questions correctly as expected by the teacher.	Question and answer									
Stage 1: Trading Account	The teacher explains that a trading account is prepared to show the gross profit or loss for the period. It is prepared to conform to the rules of double entry. The teacher presents the format for preparing trading account of partners on the chalk board	Students listen attentively to teacher's explanation and ask questions where they are confused. Students copy the format on the chalk board in their note books	Explanation, illustration, demonstration, questioning									
Stage 2: profit and Loss Appropriation Account	<p>The teacher explains that profit and loss appropriation account is prepared to show the net profit or net loss of the partnership business.</p> <p>The teacher stated that income or gains are credited, while expenses are debited.</p> <p>The teacher writes down on the chalk board format for preparing profit and loss appropriation account.</p> <p>The teacher writes down the following questions on the board and solve them using the format</p> <p>2. Uju and Ngozi are in partnership as perfume manufacturers, sharing profits and losses in the ratio of 3:1 respectively. As of December their capital and current account balance were:</p> <table><tr><td></td><td>Current A/c</td><td>Capital A/c</td></tr><tr><td>Uju</td><td>1, 800 (Cr)</td><td>18,000</td></tr><tr><td>Ngozi</td><td>3,000 (Dr)</td><td>20,000</td></tr></table> <p>Under the terms of agreement, Uju is to be credited with a salary of ₦ 5000 per annum. The interest on drawings is 10% and interest to be charged on capital at 5% per annum. The net profit for the year December 31<sup>st</sup> 2017 was ₦ 18,500 before charging interest on capital, drawings and salaries. The account shows that each partner made drawings of ₦ 1,500.</p> <p>You are required to prepare:</p>		Current A/c	Capital A/c	Uju	1, 800 (Cr)	18,000	Ngozi	3,000 (Dr)	20,000	<p>Students listen attentively and copy the format in their note books</p> <p>The students pay rapt attention and follow the teacher as he solves the questions.</p> <p>The students ask the teacher questions where they are confused.</p> <p>The students copy the solutions to their note books</p>	Illustration, demonstration, questioning
	Current A/c	Capital A/c										
Uju	1, 800 (Cr)	18,000										
Ngozi	3,000 (Dr)	20,000										



	II. The appropriation account II. Current account as at 31 <sup>st</sup> December 2017																																																																																						
Stage 3: Balance Sheet Account	<p>The teacher asks the students to settle down for the class to proceed further.</p> <p>The teacher explains to the students that a balance sheet is a statement of the assets, liabilities, and capital of a business or other organization at a particular point in time, detailing the balance of income and expenditure over the preceding period.</p> <p>The teacher gives an illustration format for preparing a balance sheet of partnership account at the end of a period.</p> <p>The teacher writes down the following questions on the chalk board and solves them accordingly as a way of illustration</p>	<p>Students listen attentively and copy the format in their note books</p> <p>The students pay rapt attention and follow the teacher as he solves the questions.</p> <p>The students ask the teacher questions where they are confused.</p> <p>The students copy the solutions to their note books.</p>	Explanation, listening question and answer																																																																																				
Evaluation	<p>The teacher summarizes the lesson and gives students assignment to test their knowledge on the learned materials</p> <p><b>Illustration 1:</b> Ogundele and Dapo are in partnership sharing profit and loss in the ratio of 3:2. The following is a trial balance as at 31<sup>st</sup> December 2018.</p> <table><tr><td></td><td>Dr</td><td>Cr</td></tr><tr><td></td><td>₦</td><td>₦</td></tr><tr><td>Capital</td><td></td><td></td></tr><tr><td>    Ogundele</td><td></td><td>100,000</td></tr><tr><td>    Dapo</td><td></td><td>50,000</td></tr><tr><td>Drawings:</td><td></td><td></td></tr><tr><td>    Ogundele</td><td>6,000</td><td></td></tr><tr><td>    Dapo</td><td>5,000</td><td></td></tr><tr><td>Purchases</td><td>120,000</td><td></td></tr><tr><td>Sales</td><td></td><td>200,000</td></tr><tr><td>Sales returns</td><td>4,000</td><td></td></tr><tr><td>Purchase returns</td><td></td><td>2,000</td></tr><tr><td>Stock at 1<sup>st</sup> Jan. 2018</td><td>10,000</td><td></td></tr><tr><td>Carriage inwards</td><td>1,200</td><td></td></tr><tr><td>Salaries and wages</td><td>15,000</td><td></td></tr><tr><td>Bad debts</td><td>1,000</td><td></td></tr><tr><td>Office expenses</td><td>2,400</td><td></td></tr><tr><td>Loan-Okafor</td><td></td><td>14,000</td></tr><tr><td>Provision of doubtful debts</td><td></td><td>300</td></tr><tr><td>Discounts allowed</td><td>1,150</td><td></td></tr><tr><td>Discounts received</td><td></td><td>1,100</td></tr><tr><td>Building at cost</td><td>30,000</td><td></td></tr><tr><td>Machinery at cost</td><td>109,100</td><td></td></tr><tr><td>Cash at bank</td><td>8,000</td><td></td></tr><tr><td>Motor van at cost</td><td></td><td></td></tr><tr><td></td><td>50,000</td><td></td></tr><tr><td>Electricity</td><td></td><td></td></tr><tr><td></td><td>50</td><td></td></tr></table>		Dr	Cr		₦	₦	Capital			Ogundele		100,000	Dapo		50,000	Drawings:			Ogundele	6,000		Dapo	5,000		Purchases	120,000		Sales		200,000	Sales returns	4,000		Purchase returns		2,000	Stock at 1 <sup>st</sup> Jan. 2018	10,000		Carriage inwards	1,200		Salaries and wages	15,000		Bad debts	1,000		Office expenses	2,400		Loan-Okafor		14,000	Provision of doubtful debts		300	Discounts allowed	1,150		Discounts received		1,100	Building at cost	30,000		Machinery at cost	109,100		Cash at bank	8,000		Motor van at cost				50,000		Electricity				50		The students copy the assignment in their notebooks	
	Dr	Cr																																																																																					
	₦	₦																																																																																					
Capital																																																																																							
Ogundele		100,000																																																																																					
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Drawings:																																																																																							
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Cash at bank	8,000																																																																																						
Motor van at cost																																																																																							
	50,000																																																																																						
Electricity																																																																																							
	50																																																																																						

	Provision for depreciation on motor van	10,000		
	Debtors			
		20,000		
	Creditors	10,000		
	Bills Payable	9,000		
	Bills receivable			
		17,500		
	Carriage outwards			
		500		
	Current account: Ogundele	1,500		
	Dapo	3,000		
		400,900	400,900	
	<b>Additional information:</b>			
	j. Stock at close ₦ 15,000			
	k. Salaries and wages accrued ₦ 1,000			
	l. Electricity Prepaid ₦20			
	m. Interest on capital at 10%			
	n. Interest on drawings 5%			
	o. Depreciation motor van 10% on cost			
	p. Partnership salary: Ogundele ₦2000			
	q. Provision for doubtful debts to be reduced to ₦200			
	r. Ogundele withdrew ₦7,000 good from own use.			
	You are required to			
	d. Prepare the trading, profit and loss account for the year ended 31 <sup>st</sup> December 2018?			
	e. Partners capital account			
	f. Balance sheet as at 31 <sup>st</sup> December 2018.			

## Appendix C

### Financial Accounting Achievement Test (FAAT)

#### Section A: Students' Bio data

Instruction: Please supply information required below the spaces provided:

School:

Sex: Male ( ) Female ( )

#### Section B:

Time allowed: 2 hours

Instructions: Choose and circle the correct answers to the following questions from the option A-D

#### i) Use the following information to answer question 1-4

Abid and Onik are in partnership sharing profit in the ratio 3:2. Their respective capitals are ₦4,000 and ₦2,000 and their drawing ₦1,800 and ₦1,200. Profit during the year is ₦5,400 before 5% interest on capital. No interest is charged on drawings.

1. What is Abid's share of the profit? (A) ₦1,200 (B) ₦1,800 (C) ₦2,040  
(D) ₦3,060
2. What is Onik's share of the profit? (A) ₦3,240 (B) ₦3,060 (C) ₦2,040 (D) ₦1,800
3. What is the balance carried down on Abid's current account? (A) ₦940 (B)  
₦1,460 (C) ₦2,040 (D) ₦3,060
4. What is the balance carried down on Onik's current account? (A) ₦940 (B)  
₦1,460 (C) ₦2,040 (D) ₦3,060

#### ii) Use the following information to answer question 5-8

Ade and Okon are in partnership with the following partnership agreement.

Ade

Okon

	₦	₦
Fixed capital	15,000	25,000
Salary per annum	6,000	8,000
Interest on capital per annum	8%	8%
Profit or losses sharing ration	40%	60%

The net profit for the year ended 31<sup>st</sup> December, 2016 was ₦28,000 while drawings were ₦3,000 and ₦4,000 for Ade and Okon respectively.

5. What is the interest on capital (A) ₦6,400 (B) ₦4,000 (C) ₦3,200 (D) ₦2,000
6. What is the profit available for distribution? (A) ₦17,800 (B) ₦14,000 (C) ₦10,800 (D) ₦7,000.
7. What is Ade's share of the profit? (A) ₦11,200 (B) ₦7,120 (C) ₦6,480 (D) ₦4,320.
8. A balance sheet shows only (A) fixed assets and current assets (B) assets and long term liabilities (C) assets and liabilities (D) assets and capital.

**iii) Use the following information to answer question 9 - 14**

John and Johnson are in partnership sharing profit and losses in the ratio 3:2. Other information is as follows:

Capital	-	John	₦20,000
	-	Johnson	₦10,000
Drawings	-	John	₦2,000
	-	Johnson	₦3,000
Interest on Capital			5%
Interest on drawings			10%
Profit			₦6,000

9. The interest on Johnson's capital is (A) ₦3, 000 (B) ₦500 (C) ₦1,500 (D) ₦1,000
10. Interest on John's drawings is (A) ₦500 (B) ₦300 (C) ₦200 (D) ₦150
11. What is John's share of the profit? (A) ₦5,000 (B) ₦3,600 (C) ₦3,000 (D) ₦2,400

12. What is Johnson share of the Profit? (A) ~~₦~~5,000 (B) ~~₦~~3,600 (C) ~~₦~~2,000 (D) ~~₦~~2,400
13. The balance on John's current account is (A) ~~₦~~4,000 DR (B) ~~₦~~3,800 Cr (C) ~~₦~~3,300 DR (D) ~~₦~~2,000 Cr
14. The balance on Johnson's current account is (A) ~~₦~~1,800 CR. (B) ~~₦~~2,200 CR (C) ~~₦~~1,300 CR (D) ~~₦~~800.

**iv) Circle the correct answer to questions 15-20**

15. A partner who only makes capital contribution but does not take part in the management of the partnership business is a/an (A) ordinary partner (B) limited partner (C) dormant partner (D) nominal partners.
16. A partner's drawings are debited to (A) Profit and Loss Appropriation Account (B) Interest Account (C) Loan Account (D) Current Account.
17. Where fixed capitals are maintained in a partnership, share of profits are (A) credited to partners capital accounts (B) credited to partners current accounts (C) debited to partners capital accounts (D) debited to partners current accounts.
18. Which of the following is treated under partnership Appropriation Account? (A) Interest on loan (B) Salary of workers (C) Electricity (D) Salary of partner.
19. Which of the following is not true of a partnership business without written agreement? (A) profit and losses will be shared equally. (B) interest not to be paid on capital. (C) interest on drawings is to be at the rate of 5% per annum. (D) salaries are not allowed to partners.
20. The balance sheet equation shows (A) current assets minus current liabilities (B) the difference between fixed assets and current liabilities (C) assets and sources of financing them (D) Sources of financing owner's equity.

**v) Use the following information to answer questions 21-23.**

	<del>₦</del>
Opening stock	2,300
Purchases	11,874
Sales	18,600
Closing stock	3,600
Cost of goods sold	11,500

21. The percentage of gross profit to sales is (A) 61.82% (B) 38.17% (C) 28.49% (D) 14.25%
22. What is the rate of stock turnover? (A) 7 times (B) 6 times (C) 5 times (D) 4 times
23. The balance on Ibinabo's Current Account on 31<sup>st</sup> December, 2017 was (A) ~~₦~~66,500 (B) ~~₦~~53,500 (C) ~~₦~~51,500 (D) ~~₦~~43,500 .

**vi) Use the following information to answer questions 24 and 25**

	<b>Ade</b>	<b>Bola</b>
	<del>₦</del>	<del>₦</del>
Capital	40,000	30,000
Drawings	10,000	15,000

Interest on drawings is 5% profit is shared equally

Net profit for the period is ~~₦~~4, 250.

24. Ade's share of profit is (A) ~~₦~~5,500 (B) ~~₦~~4,250 (C) ~~₦~~2,750 (D) ~~₦~~1,250
25. Bola's share of profit is (A) ~~₦~~4,500 (B) ~~₦~~4,250 (C) ~~₦~~3,000 (D) ~~₦~~2,750.

**vii) Circle the correct answer to questions 26-36**

26. Goodwill is recognized in partnership account when (A) The business makes a huge profit. (B) The business has good customer relationship (C) A partner is dormant (D) A new partner is admitted.
27. In which of the following account is interest on partners' capital found? (A) Profit and loss (B) Trading (C) Income surplus (D) profit and appropriation.

28. Which of the following is not stated in the partnership agreement? (A) Profit sharing ration (B) Interest on capital (C) Interest on fixed asset (D) Purpose of partnership.
29. Which of the following is found on the credit side of a partnership's appropriation of profit account (A) Interest on capital (B) Interest on drawings (C) Share of profit (D) drawings.
30. The balance sheet is prepared to reveal (A) the result of the operations for the period under review (B) the financial position of the business (C) the arithmetical accuracy of the ledger accounts (D) the accrual and payments.
31. In preparing partnership accounts, interest on drawing is debited to current accounts and credited to (A) Capital account (B) appropriation account (C) drawings account (D) Profit and loss account.
32. Where there is no agreement between the partners, the Partnership Act states that (A) 5% interest is to be paid on capital (B) profit and losses are to be shared in proportion to their capital (C) 50% interest is to be charged on drawings. (D) No salary is to be paid to partners.
33. The financial statement which is an expression of the accounting equation is the (A) trading account (B) profit and loss account (C) Balance sheet (D) statement of cash flow.
34. Upon the dissolution of a partnership business, the party to be settled first out of the proceeds realized is (A) Unsecured creditors (B) partners' loan and advances (C) secured creditors (D) Partners' capital.
35. Agreement between partners is contained in the Partnership (A) Act (B) Deed (C) Accord (D) Deal
36. Partners whose liabilities are restricted to their financial contribution to the partnership in the event of winding up are (A) ordinary partners. (B) limited partners (C) dormant partner (D) sleeping partners.

**viii) Use the following information to answer question 37 - 40**

Okoro and Osula are in partnership sharing profits and losses in the ratio 3:2 respectively. Their respective capitals are ₦40,000 and ₦15,000 and their drawings are ₦7,000 and ₦5,000. Interest on capital is 5% and interest on drawings is 10% the net profit is ₦30,000.

37. Okoro's share of the profits is (A) ₦17,070 (B) ₦16,070 (C) ₦11,380 (D) ₦10,000
38. Osula's interest on drawings is (A) ₦2,000 (B) ₦750 (C) ₦700 (D) ₦500
39. The total interest on capital is (A) ₦4,000 (B) ₦2,750 (C) ₦2,000 (D) ₦750
40. The minimum number of persons required to form a partnership business is (A) 2 (B) 3 (C) 5 (D) 10.



## Appendix D

### Financial Accounting Achievement Test (FAAT)

#### Answers

- |     |   |     |   |
|-----|---|-----|---|
| 1.  | C | 25. | D |
| 2.  | B | 26. | B |
| 3.  | B | 27. | A |
| 4.  | A | 28. | C |
| 5.  | C | 29. | B |
| 6.  | C | 30. | A |
| 7.  | D | 31. | B |
| 8.  | C | 32. | A |
| 9.  | B | 33. | C |
| 10. | C | 34. | B |
| 11. | C | 35. | B |
| 12. | C | 36. | B |
| 13. | A | 37. | A |
| 14. | D | 38. | D |
| 15. | C | 39. | B |
| 16. | D | 40. | A |
| 17. | B |     |   |
| 18. | D |     |   |
| 19. | C |     |   |
| 20. | C |     |   |
| 21. | B |     |   |
| 22. | D |     |   |
| 23. | C |     |   |
| 24. | C |     |   |

## Appendix E

**Table of Specification for Financial Accounting Achievement Test (FAAT)**

Topics	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	Total
Introduction to Partnership	3	4	3	1	-	2	13
Capital Contribution	2	3	6	3	-	1	15
Partnership Account I	2	2	4	2	-	2	12
Total	7	9	13	6	-	5	<b>40</b>

## Appendix F

### Academic Self-Efficacy Scale (ASS)

#### Section A: Personal Data

INSTRUCTION: Please fill this section appropriately as it applies to you

Gender: Male ☐ Female ☐

#### Section B:

**Instruction:** Listed below are statements on academic self-efficacy. Using the keys to the response options below, tick (✓) in the option that suits your position on self-efficacy

Always - AL

Most times - MT

Sometimes - S

Rarely - R

Never - N

S/N	Items	AL	MT	S	R	N
1.	During examinations, I recollect what I have learnt in financial accounting					
2.	I do my financial accounting assignments well.					
3.	I read and understand financial accounting textbooks.					
4.	Irrespective of the type of accounting problems, I am confident that I can solve them.					
5.	Compared to my classmates, I solve most financial accounting problems					
6.	I score high grades in the short answer type questions in financial accounting.					
7.	I answer any question posed by the teacher in financial accounting class					
8.	I am one of the good grade holders in financial accounting.					
9.	If a sudden test is conducted in financial accounting without prior notice, I perform very well					
10.	I complete my accounting assignment without					

	any help from guidebooks and previous notes					
11.	I am very calm in accounting examination as I am confident of my ability to perform well					
12.	If I miss some classes in financial accounting for some reasons, I compensate for the loss fairly well					
13.	I utilize the available library facility for my financial accounting study.					
14.	When I study a concept in financial accounting, I relate it to prior topics taught					
15.	I develop the reading skill required to learn financial accounting.					
16.	I am weak in understanding the accounting classes of my teachers					
17.	I achieve the goals that I have set for myself in financial accounting					
18.	I am assured that I have a few friends who would be helpful in my financial accounting study					
19.	I ensure that my financial accounting notes are up to date.					
20.	I cannot deal efficiently with the unexpected problems in financial accounting.					

## APPENDIX G

### Population Distribution of SS 2 Financial Accounting Students in Abia State Owned Secondary Schools by Local Government Area

S/N	Local Government Area	No of Secondary Schools	No of Financial Accounting Students
1	Aba North LGA	6	50
2	Aba South LGA	10	96
3	Arochukwu LGA	9	44
4	Bende LGA	3	30
5	Ikwuano LGA	2	53
6	Isiala Ngwa North LGA	4	57
7	Isiala Ngwa South LGA	8	89
8	Isuikwuato LGA	5	38
9	Obi Ngwa LGA	6	63
10	Ohafia LGA	6	52
11	Osisioma LGA	7	69
12	Ugwunagbo LGA	3	23
13	Ukwa East LGA	5	55
14	Ukwa West LGA	3	49
15	Umuahia North LGA	3	28
16	Umuahia South LGA	4	37
17	Umunneochi LGA	2	13
<b>Totals</b>		<b>86</b>	<b>846</b>

**Source: Secondary Education Management Board, Umuahia, Abia State as at 15<sup>th</sup> October, 2018.**

## Appendix H

### Sample Distribution of SS 2 Financial Accounting Students in Co-educational State Owned Secondary Schools by Groups and Gender.

Groups	Title	Male	Female	Total
I	<b>Experimental Group:</b> Okpu-Umuobo Comprehensive Secondary School	15	23	38
II	<b>Control Group:</b> Okigwe Road Secondary School	13	31	40
		27		
	<b>Total</b>	<b>28</b>	<b>50</b>	<b>78</b>

## Appendix I

### Review of Performance of Senior Secondary School Financial Accounting Students in WAEC Examination for 2014/2015, 2015/2016 and 2016/2017 sessions in Abia State

#### 2014/2015 Session

<b>No Registered</b>	<b>Male</b>	<b>Female</b>	<b>% Male</b>	<b>%Female</b>
523	219	304	41.87%	58.13%
<b>Grade</b>				
A	5	11	0.96%	2.10%
B	13	27	2.49%	5.16%
C	28	47	5.35%	8.99%
D	17	39	3.25%	7.46%
F	150	178	28.68%	34.01%
ABS	6	2	1.14%	0.38%
<b>Total</b>	<b>219</b>	<b>304</b>	<b>41.87%</b>	<b>58.13%</b>

#### 2015/ 2016 Session

<b>No Registered</b>	<b>Male</b>	<b>Female</b>	<b>% Male</b>	<b>%Female</b>
671	287	384	42.77%	57.23%
<b>Grade</b>				
A	8	15	1.19%	2.23%
B	26	35	3.87%	5.21%
C	62	85	9.23%	12.67%
D	11	18	1.64%	2.68%
F	176	219	26.23%	32.64%
ABS	4	12	0.60%	1.79%
<b>Total</b>	<b>287</b>	<b>384</b>	<b>42.77%</b>	<b>57.23%</b>

#### 2016/2017 Session

<b>No Registered</b>	<b>Male</b>	<b>Female</b>	<b>% Male</b>	<b>%Female</b>
792	362	430	45.71.16%	54.29%
<b>Grade</b>				
A	11	18	1.39%	2.27%
B	29	40	3.66%	5.05%
C	87	107	10.98%	13.51%
D	35	32	4.42%	4.04%
F	191	230	28.11%	29.04%
ABS	9	3	1.14%	0.38%
<b>Total</b>	<b>362</b>	<b>430</b>	<b>45.71%</b>	<b>54.29%</b>

**Source: Secondary Education Management Board, Umuahia**

## Appendix J

### Calculation of Reliability Coefficient using Kuder-Richardson Formula 20 for FAAT

$$\mathbf{K-R_{20}:} \quad r_{11} = \frac{(n)}{(n - 1)} \quad \frac{d - \sum pq}{d}$$

where:

$r_{11}$  = kuder-Richardson Reliability Coefficient

$n$  = number of items in the test

$d$  = variance of the total scores on the test

$p$  = proportion of individuals who passed each item

$q$  = proportion of individuals who failed each item

### Calculation of the Variance

<b>X</b>	<b>F</b>	<b>FX</b>	<b>X<sup>2</sup></b>	<b>FX<sup>2</sup></b>
15	3	45	225	675
17	1	17	289	289
19	1	19	361	361
21	2	42	441	882
23	1	23	529	529
24	1	24	576	576
28	2	56	784	1568
30	1	30	900	900
32	2	64	1024	2048
36	1	36	1296	1296
<b>Σ</b>	<b>15</b>	<b>356</b>		<b>9124</b>

$$\begin{aligned}
 \text{Variance} &= \frac{\sum FX^2}{N} - \frac{\sum FX^2}{N^2} \\
 &= \frac{9124}{15} - \frac{356^2}{15^2} \\
 &= 608.27 - 563.26 \\
 &= \mathbf{45.0}
 \end{aligned}$$



Item No.	No. passed	No. failed	Proportion passed (p)	Proportion failed (q)	Pq
1	12	3	0.80	0.20	0.16
2	5	10	0.33	0.667	0.22
3	11	4	0.73	0.267	0.19
4	13	2	0.867	0.133	0.12
5	11	4	0.73	0.267	0.19
6	14	1	0.93	0.067	0.06
7	12	3	0.80	0.20	0.19
8	13	2	0.867	0.133	0.12
9	8	7	0.533	0.467	0.25
10	14	1	0.93	0.067	0.06
11	14	1	0.93	0.067	0.06
12	11	4	0.73	0.267	0.19
13	1	14	0.067	0.93	0.06
14	3	12	0.20	0.80	0.16
15	1	14	0.067	0.93	0.06
16	13	2	0.867	0.133	0.12
17	12	3	0.80	0.20	0.16
18	2	13	0.133	0.867	0.12
19	14	1	0.93	0.067	0.06
20	12	3	0.80	0.20	0.16
21	14	1	0.93	0.067	0.06
22	12	3	0.80	0.20	0.16
23	10	5	0.667	0.33	0.22
24	12	3	0.80	0.20	0.16
25	1	14	0.067	0.93	0.06
26	2	13	0.133	0.867	0.12
27	2	13	0.133	0.867	0.12
28	1	14	0.067	0.93	0.06
29	14	1	0.93	0.067	0.06
30	13	2	0.867	0.133	0.12
31	12	3	0.80	0.20	0.16
32	13	2	0.867	0.133	0.12
33	13	2	0.867	0.133	0.12
34	1	14	0.067	0.93	0.06
35	1	14	0.067	0.93	0.06
36	10	5	0.667	0.33	0.22
37	15	0	1	0	0
38	12	3	0.80	0.20	0.16
39	9	6	0.60	0.40	0.24
40	13	2	0.867	0.13	0.12
<b><math>\Sigma</math></b>					<b>4.58</b>

[

$$r_{11} = \frac{(n)}{(n - 1)} \frac{d - \sum pq}{d}$$

$$\begin{aligned} r_{11} &= 40/39 [45 - 4.58 / 45] \\ &= 40/39 [40.42/45] \\ &= 40/39 [0.898] \\ &= 1.026 [0.898] \\ &= \mathbf{0.92} \end{aligned}$$

## Appendix K

### Measurement of Reliability Coefficient using Cronbach Alpha for ASS

```
RELIABILITY  
  /VARIABLES=item1 item2 item3 item4 item5 item6 item7 item8 item9 item10  
item11 item12 item13 item14 item15 item16 item17 item18 item19 item20  
  /SCALE('ALL VARIABLES') ALL  
  /MODEL=ALPHA.
```

### Reliability

[DataSet0]

### Scale: ALL VARIABLES

**Case Processing Summary**

		N	%
Cases	Valid	15	100.0
	Excluded <sup>a</sup>	0	0.0
	Total	15	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha <sup>a</sup>	N of Items
.844	20

## Appendix L

### Test Scores

(Experimental Group)

Financial Accounting Achievement Scores					Self-efficacy Scores	
S/N	Gender	Pretest	Posttest	Retention Test	Pretest	Posttest
1	M	27	65	67	26	54
2	M	29	61	67	27	61
3	M	22	60	66	20	56
4	M	12	57	69	21	64
5	M	22	64	68	27	49
6	M	18	61	67	26	54
7	M	21	60	66	20	49
8	M	36	65	63	20	55
9	M	33	62	70	23	45
10	M	14	59	62	23	59
11	M	12	57	59	21	59
12	M	20	63	76	21	68
13	M	10	69	68	22	56
14	M	13	65	68	24	63
15	M	26	68	66	25	69
16	F	15	65	59	20	68
17	F	24	58	67	25	66
18	F	18	60	62	22	58
19	F	16	71	63	22	60
20	F	28	61	57	23	59
21	F	18	59	61	24	68
22	F	14	58	60	29	58
23	F	13	58	69	30	61
24	F	14	60	68	21	61
25	F	15	66	80	22	54
26	F	9	59	65	27	56
27	F	10	58	60	27	62
28	F	9	63	59	26	67
29	F	13	57	58	29	56
30	F	12	64	72	25	67
31	F	10	63	68	35	66
32	F	17	67	71	33	64
33	F	19	68	64	32	69
34	F	27	70	59	29	55
35	F	22	68	62	27	68
36	F	21	64	61	25	59
37	F	10	64	50	22	66
38	F	09	65	69	21	69

**(Control Group)**

<b>Financial Accounting Achievement Scores</b>					<b>Self-efficacy Scores</b>		
<b>S/N</b>	<b>Gender</b>	<b>Pretest</b>	<b>Posttest</b>	<b>Retention Test</b>	<b>Pretest</b>	<b>Posttest</b>	
1	M	09	28	38	20	29	38
2	M	17	36	32	22	32	32
3	M	12	32	30	24	34	30
4	M	8	37	34	30	34	34
5	M	8	27	27	21	22	27
6	M	14	25	34	22	24	34
7	M	08	28	31	24	28	31
8	M	11	30	33	20	22	33
9	M	13	29	32	20	29	32
10	M	13	30	35	24	30	35
11	M	10	26	26	26	34	26
12	M	10	28	28	22	38	28
13	M	8	27	40	20	39	40
14	F	09	25	34	20	34	34
15	F	10	31	34	21	25	34
16	F	12	45	36	28	35	36
17	F	10	28	32	21	25	32
18	F	08	20	24	30	34	24
19	F	10	27	19	26	29	19
20	F	16	26	23	21	26	23
21	F	09	30	22	20	24	22
22	F	08	29	24	22	28	24
23	F	08	28	19	22	28	19
24	F	10	29	27	20	26	27
25	F	13	24	26	20	24	26
26	F	11	28	21	28	32	21
27	F	07	26	34	24	28	34
28	F	12	29	25	28	34	25
29	F	10	31	25	20	29	25
30	F	08	29	22	22	28	22
31	F	11	28	24	24	27	24
32	F	9	29	25	28	32	25
33	F	02	18	29	26	30	29
34	F	09	17	28	22	30	28
35	F	09	20	25	22	24	25
36	F	06	27	26	22	24	26
37	F	07	23	33	24	38	33
38	F	12	29	32	26	35	32
39	F	08	29	33	28	33	33
40	F	12	25	38	28	34	38

## Appendix M

### Detailed Analysis of Research Questions and Hypothesis

#### Descriptives

#### Descriptives

**Descriptive Statistics**

	N	Mean	Std. Deviation
Pretest TPS	38	30.8421	7.88072
Posttest TPS	38	68.6842	3.93944
Pretest CTM	40	19.9250	2.86053
Posttest CTM	40	36.8250	4.85633
Valid N (listwise)	38		

#### Descriptives

**Descriptive Statistics**

	N	Mean	Std. Deviation
Posttest TPS	38	68.6842	3.93944
Retention TPS	38	64.8247	5.61749
Valid N (listwise)	38		

**Descriptive Statistics**

	N	Mean	Std. Deviation
Posttest CTM	40	36.8250	4.85633
Retention CTM	40	35.1047	5.43749
Valid N (listwise)	40		

#### Descriptives

Self-efficacy scores for experimental and control groups

**Descriptive Statistics**

	N	Mean	Std. Deviation
Pretest TPS	38	24.7895	3.84256
Posttest TPS	38	60.4737	6.25035
Pretest CTM	40	23.4500	3.15375
Posttest CTM	40	30.7750	4.56569
Valid N (listwise)	38		

## TPS Scores for Experimental group by Gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pretest TPS	Male	15	21.0000	8.02674	2.07250
	Female	23	15.7826	5.66453	1.18114
Posttest TPS	Male	15	62.4000	3.62137	.93503
	Female	23	65.8696	4.20286	.87636

## Experimental Group Retention Scores by Gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Retention TPS	Male	15	62.1000	3.82099	.98658
	Female	23	64.9022	6.30013	1.31367

## Experimental group Self-efficacy Scores by gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Male	15	23.0667	2.60403	.67236
	Female	23	25.9130	4.14414	.86411
Posttest	Male	15	57.4000	6.90548	1.78299
	Female	23	62.4783	4.97146	1.03662

## Analysis of Variance

Between-Subjects Factors			
		Value Label	N
TREATMENTMODELS	1.00	EXPERIMENTAL GROUP	38
	2.00	CONTROL GROUP	40

### Tests of Between-Subjects Effects

Dependent Variable: ACHIEVEMENT 2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14829.998 <sup>a</sup>	2	7414.999	53.762	.000	.589
Intercept	11315.550	1	11315.550	82.043	.000	.522
ACHIEVEMENT 1	2132.932	1	2132.932	15.465	.000	.171
TREATMENTMODELS	4930.073	1	4930.073	35.745	.000	.323
Error	10344.117	75	137.922			
Total	181777.000	78				
Corrected Total	25174.115	77				

a. R Squared = .589 (Adjusted R Squared = .578)

## Analysis of Variance

### Retention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	12908.778 <sup>a</sup>	2	3227.194	18.836	.000	.057
Intercept	11743.912	1	11743.912	68.544	.000	.685
Post-test	223.090	1	223.090	1.302	.256	.044
Method	3968.390	1	3968.390	23.162	.000	.003
Error	20046.116	75	171.334			
Total	318573.000	78				
Corrected Total	32954.893	77				

R Squared = .392 (Adjusted R Squared = .371)

## Analysis of Variance

### Between-Subjects Factors

	Value Label	N
TREATMENTMODELS	1.00 THINK-PAIR-SHARE	38
	2.00 CONVENTIONAL TEACHING	40

### Tests of Between-Subjects Effects

Dependent Variable: SELF-EFFICACY 2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13056.497 <sup>a</sup>	2	3264.124	34.655	.000	.655
Intercept	526.487	1	526.487	5.590	.021	.071
Self-EFFICACY 1	3463.840	1	3463.840	36.775	.000	.335
TREATMENTMODELS	1816.868	1	1816.868	19.289	.000	.209
Error	6875.875	75	94.190			
Total	133097.000	78				
Corrected Total	19932.372	77				

a. R Squared = .655 (Adjusted R Squared = .636)

## Analysis of Variance

### Between-Subjects Factors

	Value Label	N
Gender	1.00 Male	15



2.00	Female	23
------	--------	----

#### Tests of Between-Subjects Effects

Dependent Variable: ACHIEVEMENT 2 TPS

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	34.147 <sup>a</sup>	2	17.074	1.106	.342	.059
Intercept	15150.015	1	15150.015	981.830	.000	.966
ACHIEVEMENT 1	32.145	1	32.145	2.083	.158	.056
TPS	11.470	1	11.470	.743	.394	.021
Error	540.063	35	15.430			
Total	149888.000	38				
Corrected Total	574.211	37				

a. R Squared = .059 (Adjusted R Squared = .006)

### Analysis of Variance

#### Between-Subjects Factors

	Value Label	N
Gender 1.00	Male	15
2.00	Female	23

#### Tests of Between-Subjects Effects

Dependent Variable: Retention TPS

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	114.360 <sup>a</sup>	2	57.180	1.900	.165	.098
Intercept	397.248	1	397.248	13.201	.001	.274
PosttestTPS	24.398	1	24.398	.811	.374	.023
Gender	95.256	1	95.256	3.165	.084	.083
Error	1053.219	35	30.092			
Total	161198.000	38				
Corrected Total	1167.579	37				

a. R Squared = .098 (Adjusted R Squared = .046)