Effect of Think-Pair-Share Instructional Strategy on Secondary School Students’ Academic Achievement and Retention in Financial Accounting in Abia State

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ABSTRACT

This study determined the effect of think-pair-share instructional strategy on students’ academic achievement and retention in financial accounting in secondary schools in Abia State. Four research questions guided the study and four null hypotheses were tested. Quasi-experimental research design specifically, pre-test post-test non-equivalent control group design was adopted for the study. Population was 846 senior secondary two (SS2) Financial accounting students in Abia. A purposive sampling technique was used to select a sample size of 78 senior secondary two (SS2) financial accounting students. Financial Accounting Achievement Test (FAAT) and adapted Academic Self-efficacy Scale (ASS) was used for data collection. The face and content validity of the instruments were established using three experts in the field of Business Education and Measurement and Evaluation. Kuder-Richardson Formula 20 (KR-20) was used to establish the reliability of FAAT while Cronbach Alpha was used to determine the internal consistency of academic self-efficacy scale. Reliability coefficients of 0.92 and 0.79 were obtained. Mean and standard deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance. Some of the findings of the study revealed that the think-pair-share instructional strategy is more effective in enhancing students’ academic achievement and retention ability of students in financial accounting when compared to the conventional teaching method. Furthermore, there were significant difference in the achievement and retention of students taught financial accounting using think-pair-share strategy and those taught with conventional method. The researchers recommended among others that, financial accounting teachers should use more of think-pair-share instructional strategy in their instructional delivery in order to enable students actively participate in classroom teaching and learning process.

Key Words: Think-Pair-Share, Instructional Strategy, Academic Achievement, Retention and Financial Accounting
INTRODUCTION

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 shareholders. For a business owner to effectively monitor, 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 (Baru & Osahon, 2012). 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 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 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 students with relevant knowledge, skills and work habits for gainful employment or self-employment.

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. It is an occupationally-oriented subject which provides trained manpower for the development of the nation. The above definitions mean that the understanding of financial accounting can expose the students to a wealth of skills and competences required in the world of works. 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 schools geared towards preparing students for employment in a range of business careers. In the same vein, the Nigerian Educational Research and Development Council (NERDC) (2007) highlighted one of the goals of studying the subject as 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 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 C. C. Okolocha & Nwaukwa Faith Chukwudi
Ubulom and Ogwunte (2017) showed that the achievement of students in financial accounting in Nigeria has not been encouraging.

Similarly, in Abia State, 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% (WAEC Chief Examiner’s Report, 2015, 2016 & 2017) respectively. This poor academic achievement of students in financial accounting could make it difficult to produce future competent accountants who are highly needed in business organizations. 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). Academic achievement, according to Awan and Noureen (2011) is examination marks, teachers’ given grades and percentiles in academic subjects.

Poor academic achievement of students in financial accounting has been attributed to various factors such as lack of motivation of teachers, lack of teaching aids, and inadequate teachers’ teaching methods (Ezeagba, 2014). It 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 according to Nwagu, Nwaukwa and 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.

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 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.

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.

When a subject is delivered using appropriate instructional strategy, learning increases, however, with inappropriate instructional strategies, 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 and retention in financial accounting in Abia State.

**Statement of the Problem**

The WAEC Chief Examiner’s Report of 2015, 2016 and 2017 showed that students performed poorly in financial accounting in Abia State. The poor academic performance in financial accounting makes it difficult for students to go further in 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 problem of this study is that students of financial accounting in senior secondary schools in Abia State are not performing well in both external and internal examinations probably due to over reliance of teachers on conventional teaching methods in teaching the subject. This results to students not being employed or going for further studies. Therefore, the study was carried out to determine if the use of think-pair-share instructional strategy in teaching financial accounting improved students' academic achievement and enhanced their retention ability in the subject.

**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 and retention 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. Difference between the academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.
4. Difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

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

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

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

REVIEW OF LITERATURE

Think-Pair-Share Instructional Strategy and Academic Achievement

Think-pair-share instructional strategy has been found to be an effective strategy for teaching chemistry (Kitaoka, 2013). This is because, it is easy to learn and use, and 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. Ahmad (2016) revealed that think-pair-share instructional strategy had statistically significant effect on students’ 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 using non-equivalent pretest-posttest quasi-experimental design. 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. 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. Findings of the study showed that there was no significant difference in the academic performance mean scores between experimental groups (Co Op-Co Op), (Think-Pair-Share) and control group (traditional method). Bamiro (2015) investigated the effects of three strategies (guided discovery, think-pair-share, and lecture) on senior secondary...
school students’ achievement in chemistry. It was found that guided discovery and think-pair-share strategies had great potential for improving achievement in chemistry and science learning generally. 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. 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.

**Think-pair-share Instructional Strategy and Students’ Retention**

Retention is defined as a preservative factor of the mind. The mind acquires the materials of knowledge through sensation and perception (Chianson, Kurumeh & Obida, 2011). According to Divoll (2010), retention is 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. Sampsel (2013) stated that think-pair-share instructional strategy encourages students’ 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. Roswati, Zaim and Radjab (2014) in agreement disclosed that implementing think-pair-share instructional pedagogy enabled 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 the writing class.

**METHOD**

The design for this study was a quasi experimental design, specifically, non-equivalent control group, pretest-posttest design. The population of the study consisted of 846 senior secondary school (SS 2) financial accounting students from 2018/2019 session in state owned secondary schools in Abia State. Purposive sampling technique was used to select 78 SS 2 financial accounting students from two state owned co-educational secondary schools in Abia State. The control and experimental schools comprised 38 (15 male and 23 female) students and 40 (13 male and 27 female) students respectively. Instruments for data collection were 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. The instruments for data collection were...
face validated by three experts in the field of Business Education and Measurement and Evaluation all in Nnamdi Azikiwe University, Awka.

The reliability of FAAT was determined using Kuder-Richardson Formula 20 (KR-20) and reliability coefficient of 0.92 was obtained while the internal consistency of ASS was determined using Cronbach alpha and reliability coefficient yielded value of 0.79. The research questions were answered using mean while hypotheses were tested using the analysis of covariance (ANCOVA). With regards to the research questions, the benchmark for achievement scores was 60% while the benchmark. Achievement scores of 60% and above means that the instructional strategy is effective in enhancing students’ academic achievement 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.

RESULT

Research Questions 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?

Table 1: Academic achievement mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught using conventional method

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>N</th>
<th>Pre-test Mean</th>
<th>Post-test Mean</th>
<th>Pre-test SD</th>
<th>Post-test SD</th>
<th>Mean Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>38</td>
<td>30.84</td>
<td>68.68</td>
<td>7.88</td>
<td>3.94</td>
<td>37.84</td>
</tr>
<tr>
<td>Control Group</td>
<td>40</td>
<td>19.93</td>
<td>36.83</td>
<td>2.86</td>
<td>4.86</td>
<td>16.09</td>
</tr>
</tbody>
</table>

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?

Table 2: Retention mean scores of students taught financial accounting using think-pair-share instructional strategy and those taught with conventional teaching method

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>N</th>
<th>Post-test Mean</th>
<th>Retention Mean</th>
<th>Post-test SD</th>
<th>Retention SD</th>
<th>Loss in Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>38</td>
<td>68.68</td>
<td>64.82</td>
<td>3.94</td>
<td>5.62</td>
<td>3.86</td>
</tr>
<tr>
<td>Control group</td>
<td>40</td>
<td>36.83</td>
<td>35.10</td>
<td>4.86</td>
<td>5.44</td>
<td>1.73</td>
</tr>
</tbody>
</table>

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

Table 3: Academic achievement mean scores of students taught financial accounting with think-pair-share instructional strategy with respect to gender

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>N</th>
<th>Pre-test Mean</th>
<th>Post-test Mean</th>
<th>Pre-test SD</th>
<th>Post-test SD</th>
<th>Mean Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15</td>
<td>21.00</td>
<td>62.40</td>
<td>8.03</td>
<td>3.62</td>
<td>41.04</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>15.78</td>
<td>65.87</td>
<td>5.66</td>
<td>4.20</td>
<td>50.09</td>
</tr>
<tr>
<td><strong>Mean Gain Difference</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>9.05</strong></td>
</tr>
</tbody>
</table>

Data in Table 3 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 4:** What is the difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy?

Table 4: Retention mean scores of students taught financial accounting using think-pair-share instructional strategy with respect to gender

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

Data in Table 4 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.

**Test of Hypotheses**

**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.

Table 5: 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

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>Mean Square</th>
<th>Cal. F</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>14829.998*</td>
<td>2</td>
<td>7414.999</td>
<td>53.762</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>11315.550</td>
<td>1</td>
<td>11315.550</td>
<td>82.043</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>2132.932</td>
<td>1</td>
<td>2132.932</td>
<td>15.465</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>4930.073</td>
<td>1</td>
<td>4930.073</td>
<td>35.745</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>10344.117</td>
<td>75</td>
<td>137.922</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. C. Okolocha & Nwaukwa Faith Chukwudi
Data in Table 5 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.

Table 6: 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

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>Mean Square</th>
<th>Cal. F</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>12908.778(^2)</td>
<td>2</td>
<td>3227.194</td>
<td>18.836</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>11743.912</td>
<td>1</td>
<td>11743.912</td>
<td>68.544</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>223.090</td>
<td>1</td>
<td>223.090</td>
<td>1.302</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>3968.390</td>
<td>1</td>
<td>3968.390</td>
<td>23.162</td>
<td>.000</td>
<td>S</td>
</tr>
<tr>
<td>Error</td>
<td>20046.116</td>
<td>75</td>
<td>171.334</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>318573.000</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>32954.893</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data in Table 6 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 academic achievement mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

Table 7: 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

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>Mean Square</th>
<th>Cal. F</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>34.147(^2)</td>
<td>2</td>
<td>17.074</td>
<td>1.106</td>
<td>.342</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>15150.015</td>
<td>1</td>
<td>15150.015</td>
<td>981.830</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>32.145</td>
<td>1</td>
<td>32.145</td>
<td>2.083</td>
<td>.158</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>11.470</td>
<td>1</td>
<td>11.470</td>
<td>.743</td>
<td>.394</td>
<td>NS</td>
</tr>
<tr>
<td>Error</td>
<td>540.063</td>
<td>35</td>
<td>15.430</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>149888.000</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>574.211</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data in Table 7 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 4:** There is no significant difference between the retention mean scores of male and female students taught financial accounting using think-pair-share instructional strategy.

**Table 8: 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**

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

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

Data in Table 8 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.

**Discussion**

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 those taught using conventional teaching method. 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. 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 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.
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.

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. 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) who reported gender disparity in the use of cooperative instructional strategies on students’ achievement.

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. The finding of the study concurs with that of Ogunyeyi (2018) which revealed no significant difference between the post-test means scores of male and female students exposed to think-pair-share instructional strategy.

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 C. C. Okolocha & Nwaukwa Faith Chukwudi
has provided empirical evidence on the effectiveness of Think–Pair Share (TPS) instructional strategy in improving academic achievement and retention of students in financial accounting. It was concluded that: think-pair-share instructional strategy positively affected students’ academic achievement and retention in financial accounting, the academic achievement and retention ability 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 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 and retention.

Recommendations

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

1. Financial accounting teachers should use more of think-pair-share instructional strategy in their instructional delivery in order to enable students actively participate in classroom teaching and learning process.
2. The teacher should create effective classroom management in such a way that students can work individually, and in pairs for improved learning academic achievement.
3. Financial accounting teacher 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. 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.
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