



## EFFECT OF THINK-PAIR-SHARE ON SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN FINANCIAL ACCOUNTING IN OGUN STATE

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### Abstract

This study examined the effects of think-pair-share strategy on secondary school students' academic achievement in financial accounting in Ogun State. The study adopted a quasi-experimental design with a 2 x2 factorial matrix. The population for this study was five thousand, four hundred and thirty-two (5,432) SS 2 financial accounting students in all secondary schools in Ogun East Senatorial District. A total of three hundred and twenty-two (322) SS 2 financial accounting students were selected as samples using simple random sampling in a multi-stage procedure. Two instruments: the Financial Accounting Achievement Test (FAAT) and the locus of control questionnaire (LOC) validated by experts were used for data collection. The reliability of the FAAT was ensured using KR-20 while that of LOC was ensured using Cronbach alpha and coefficients of 0.77 and 0.82 were obtained for FAAT and LOC respectively. Data collected were analyzed using mean, standard deviation and analysis of covariance (ANCOVA). The results of the analysis showed that there was a significant main effect of treatment ( $F = 3074.636$ ;  $p = 0.00$ ,  $p < 0.05$ ) and locus of control ( $F = 22.331$ ;  $p = 0.00$ ,  $p < 0.05$ ) on students' academic achievement in Financial Accounting in senior secondary schools. There was a significant interaction effect of treatment strategy and locus of control ( $F = 6.318$ ,  $p = 0.002$ ,  $p < 0.05$ ) on the students' academic achievement in Financial Accounting in senior secondary schools. It was concluded that think-pair-share strategy was more effective in improving students' academic achievement in Financial Accounting in senior secondary schools than the conventional method. Based on the findings, it was recommended among others that financial accounting teachers at the secondary school level should deploy the use of a think-pair-share strategy in teaching financial accounting to improve students' academic achievement in Financial Accounting.

**Keywords:** academic achievement, conventional lecture method, financial accounting achievement test, locus of control, think-pair-share

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### Introduction

Financial Accounting is a practical subject taught in senior secondary schools to provide students with fundamental information, skills, and professional values necessary for a business career or starting their businesses. Financial Accounting is the systematic procedure of documenting, communicating, and assessing economic events and transactions that impact business entities and the overall economic condition of a country. Accounting is the process of documenting, analyzing, confirming, and communicating the financial activities of a company in conformity



with established accounting rules. It is also a subject taught in senior high school. Financial Accounting is primarily concerned with the collection, administration, and maintenance of business transaction records to make informed decisions and report on the management of resources. The main aim of providing instruction in accounting concepts in Nigerian secondary schools is to provide learners with the necessary information and understanding of basic accounting procedures and concepts, as well as how they are applied in commercial activities. This will empower them to proficiently pursue employment in the discipline of accounting in the future.

The attainment of the Financial Accounting objectives relies on the level at which secondary school students can comprehend the principles and concepts of the subject, as evidenced by their academic achievement throughout their studies. Hence, the academic achievement of students in Financial Accounting significantly determines the accomplishment of its laudable goals. Academic achievement pertains to the extent of accomplishment that individuals attain in their studies after receiving school-based instruction (Jimoh, et al., 2021). Within an educational environment, students' academic achievement is typically evaluated through classroom exercises, assignments, ongoing assessments, as well as internal and external tests. It might be employed to showcase the pupils' mastery of an activity they may have already encountered or as indications of their capability to effectively complete a distinct assignment (Adegboye, 2021). In Financial Accounting, academic achievement is the level of success of students after learning the principles and concepts of the subjects and it is determined from the scores obtained in the Financial Accounting Achievement Test (FAAT).

Despite the admirable and important goals of Financial Accounting and its relevance to personal and national progress, the academic achievements of students in secondary schools in understanding the ideas and concepts of the subject matter have consistently demonstrated that there is room for enhancement, especially in external examinations (Inuwa et al., 2018; Ezeugwu et al., 2016). Similarly, Obidile et al. (2017) expressed the view that the performance of learners in Financial Accounting seemed unsatisfactory, particularly at the level of secondary school. According to Onyali et al. (2018), the occurrences of students having poor grades in certain disciplines, such as Financial Accounting, continue to persist regardless of the government's persistent efforts to improve students' performance in external exams like WAEC. Also, the trend in students' performance in the subject has been a source of concern to business educators and other stakeholders as it relates to the future careers of students offering the subjects in secondary schools. Similarly, Bupo et al. (2018) asserted that the disappointingly poor performance of students in Financial Accounting year in and year out has become a constant source of concern, worry, and anxiety for all stakeholders in education.

Different reasons have been advanced for this seemingly unending student's unstable/poor performance in Financial Accounting. However, studies have identified poor instructional methods as the chief of all other reasons; hence, the use of traditional methods (conventional) has been questioned on its capability to enhance students' achievement in Financial Accounting. Uduafemhe (2015) supports this perspective by highlighting that students' lack of success in



academic topics might be ascribed to the persistent use of inappropriate teaching methods, particularly the traditional lecture approach, employed by teachers. Also, Adamu *et al.* (2022) expressed that the major reason behind the poor performance of students in Financial Accounting is the use of teacher-oriented lecture methods. Meanwhile, the conventional lecture method may not be effective for improving students' achievement in skill-based subjects due to low student involvement and reliance on teachers (Nwaukwa & Okolocha, 2020). Financial Accounting requires sound theoretical knowledge and intensive practice, making it difficult to master through rote learning. Over-reliance on the conventional method can lead to teacher satisfaction and student dissatisfaction. Traditional pedagogical practices, such as telling, reading, and memorizing, fail to address the need for scientific knowledge for development particularly in subjects like Financial Accounting.

Research on instructional strategies for teaching secondary school students in Financial Accounting is crucial for preparing them for exams and showcasing teachers' efforts. Also, Ayo-Sobowale and Oyeyemi (2023) suggested that strategies that focus on students' involvement, communication, reasoning, and self-confidence should be encouraged and used for instructional delivery. Researchers have confirmed and suggested the use of more effective, innovative, interactive, and student-centred instructional strategies like cooperative learning against conventional strategies (Salisu & Samuel, 2022; Nwaukwa & Okolocha, 2020; Adamu *et al.*, 2022). Parts of these strategies include the think-pair-share strategy.

Think-pair-share (TPS) teaching strategy is a strategy that encourages students to practice speaking with their ideas. In implementing the think-pair-share teaching strategy, the teacher gives the students some financial accounting task or questions with a specified time duration to think about the task or question individually; the students then share their thoughts in pairs and finally with the larger class (Okolocha & Nwaukwa, 2020). This teaching technique enhances students' participation in the classroom by promoting their level of positive engagement and interaction instead of the rote or recitation method in which the teacher asks a question and a student is asked to provide information for the question (Abiodun *et al.*, 2022). Think-pair-share encourages the students to actively participate in-class activities. Studies have shown that this strategy not only teaches the content of the material but also increases the interaction among students and as well unites the cognitive and social aspects of learning, promoting the development of thinking and the construction of knowledge (Adeyinka & Ogunbiyi, 2023; Alabi & Sanni; 2021).

The think-pair-share strategy has many advantages over the traditional questioning structure as indicated in the literature. The think-pair-share technique promotes the cultivation of detailed and carefully considered responses among students, so encouraging them to take risks and generate ideas. This is achieved through the process of testing their ideas with their partners, ultimately leading to enhanced academic performance. The effectiveness of the think pair share strategy has been affirmed in various subjects. For instance, Yusuf *et al.* (2018) as well as Nwaubani *et al.* (2016) reported that the TPS strategy significantly improved students' achievement in civic education and economics. Similarly, Adeyinka and Ogunbiyi (2023) as well



as Marwan (2015) reported a significant improvement in students' performance in Geography and psychology using the TPS strategy. The findings of Akanmu (2019) and Alabi and Sanni (2021) all reported a significant positive effect of the think-pair-share strategy on achievement Mathematics. The foregoing attests to the fact that TPS has been proven to be effective in various subjects and the need to check its effectiveness in Financial Accounting instruction led to its consideration in this study.

Apart from strategy, locus of control is another factor that may influence students' academic achievement. Locus of control is a personality attribute that influences students' academic achievement. It determines the degree of belief in control over life events, either internal or external (Azlina, 2015). Internally, individuals believe their abilities and talents are responsible for their success, leading to motivated work and positive study habits (Sabiha & Indranee, 2017). Externally, individuals attribute life events to factors outside their control, such as fate or chance (Bereketet *al.*, 2019). Research has found a significant relationship between locus of control and students' academic success, with studies showing a positive impact on students' learning habits and attitude towards learning (Azlina, 2015; Bereketet *al.*, 2019). However, lots of empirical evidence exists on the effectiveness of cooperative and collaborative strategies. Many of these studies focus and are centred on science subjects like mathematics, physics, chemistry and biology. Little has been done to examine the effect of think-pair-share on students' achievement in Financial Accounting in Ogun state. This study, therefore, investigated the effect of think-pair-share strategy on students' academic achievement in Financial Accounting in Ogun State, Nigeria.

### **Statement of the Problem**

There have been issues of persistent poor students' grades in financial accounting examinations in secondary school in Ogun state; an issue that is causing serious concern among business educators and other stakeholders. Generally, the analysis and statistics of WAEC results in Ogun State for five years from 2017 to 2021 showed an unstable/poor achievement of students in major subjects including Financial Accounting. The Chief Examiner's Report for Ogun State on Financial Accounting shows slightly good 2017 performance, a decline in 2018 and consecutive declines in 2019, 2020, and 2021 (WAEC Chief Examiner's Reports, 2021). The report identified students' poor performance in Financial Accounting as due to lack of proper understanding of accounting principles, poor knowledge of account preparation procedures, and incorrect value placement. This is an indication that students are facing lots of challenges in understanding the concepts and principles of Financial Accounting and this problem may have been caused by the popular conventional method. Meanwhile, scholars have reported the effectiveness of think-pair-share in enhancing students' achievement in science, engineering and other subjects but little has been done in financial accounting, particularly in Ogun state where students' performance in the subject is not satisfactory. To fill this gap, this study, therefore, examined the effect of think-pair-share strategy on students' academic achievement in Financial Accounting in Ogun State, Nigeria.



### Research Hypotheses

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

- H<sub>01</sub>:** There is no significant main effect of treatment (using think-pair-share and conventional method) on the students' academic achievement in Financial Accounting in senior secondary schools
- H<sub>02</sub>:** There is no significant effect of locus of control (internal and external) on students' academic achievement in Financial Accounting in senior secondary schools
- H<sub>03</sub>:** There is no significant interaction effect of treatment and locus of control on students' academic achievement in Financial Accounting in senior secondary schools.

### Methodology

The study adopted a quasi-experimental research design of pre-test, post-test and control group design with a 2x2 factorial matrix. The population for this study comprises 5,432 senior secondary school two commercial students offering Financial Accounting in Ogun East Senatorial District of Ogun State. The sample for this study was three hundred and twenty-two (322) SS 2 Financial Accounting students which comprised 154 students in Ijebu North LGA and 168 students in Sagamu LGA. The sample was selected using a simple random sampling technique in a multi-stage procedure. In the first stage, a simple random sampling technique was used to select two local governments (Ijebu North and Sagamu). In the second stage, a simple random sampling technique was used to select one secondary school from each local government (Kegbo Community Comprehensive High School and Olomimeji Community High School, Emuren-Remo). In the third stage, the two local governments were randomly assigned into treatment groups. Financial Accounting Achievement (FAAT) was the instrument validated by experts in Business Education and used for data collection. The reliability of the instrument was established using the K-20 method and a coefficient of 0.77 was obtained. Data collected was analyzed using inferential statistics of Analysis of Covariance (ANCOVA) with the Multiple Classification Analysis (MCA) to test the hypotheses at 0.05 level of significance.

### Results

#### Presentation of Demographic Data

The distribution of the participants in terms of data and locus of control are presented below;

**Table 1:** *Demographic Distribution of the Participants*

Variables		Value Label	N
Treatment Groups	1.00	Think-pair-share	154
	2.00	Conventional method	168
Locus of Control	6.00	internal locus of control	126
	7.00	external locus of control	196

Table 4.1 reveals the demographic distribution of the participants. A total of 322 participants including 154 in the think-pair-share experimental category and 168 in the conventional group which served as the control group participated in the group. The table also revealed that 126



students were rated as having an internal locus of control while 196 students manifested an external locus of control.

### Hypotheses Testing

**Hypothesis One:** There is no significant main effect of treatment (think-pair-share and conventional method) on the students' academic achievement in Financial Accounting in senior secondary schools.

**Table 2:** ANCOVA Showing the Effect of Treatment (Think-Pair-Share and Conventional Method) on Students' Academic Achievement in Financial Accounting

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	33858.465 <sup>a</sup>	14	2418.462	640.223	.000
Intercept	20429.147	1	20429.147	5408.069	.000
Pretest	34.140	1	34.140	9.038	.003
Treatment	23229.062	2	11614.531	3074.636	.000
Gender	6.371	1	6.371	1.687	.195
Locus of Control	84.356	1	84.356	22.331	.000
Treatment * Gender	43.751	2	21.876	5.791	.003
Treatment * Locus of Control	47.732	2	23.866	6.318	.002
Gender * Locus of Control	9.075	1	9.075	2.402	.122
Treatment * Gender * Locus Control	17.449	2	8.724	2.310	.101
Error	1643.226	309	3.778		
Total	592577.000	322			
Corrected Total	35501.691	321			

a. R Squared = 0.954 (Adjusted R Squared = 0.952)

The result of the analysis in Table 2 on the significant main effect of instructional strategy (think-pair-share and conventional method) on the students' academic achievement in Financial Accounting in senior secondary schools reveals an F-value of 3074.636 and a computed significance of 0.00. Since the computed significant value is less than the alpha significant ( $p < 0.05$ ); the postulated null hypothesis which says there is no significant main effect of instructional strategy (Think-pair-share and conventional method) on students' academic achievement in Financial Accounting in senior secondary schools is rejected. This means that the treatments using think-pair-share significantly improved students' academic achievement in Financial Accounting in senior secondary schools.





**Hypothesis Two:** There is no significant effect of locus of control on students' academic achievement in Financial Accounting in senior secondary schools.

**Table 3:** *ANCOVA Showing the Effect of Locus of Control on the Students' Academic Achievement in Financial Accounting*

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	33858.465 <sup>a</sup>	12	2418.462	640.223	.000
Intercept	20429.147	1	20429.147	5408.069	.000
Pretest	34.140	1	34.140	9.038	.003
Treatment	23229.062	2	11614.531	3074.636	.000
Gender	6.371	1	6.371	1.687	.195
<b>Locus of Control</b>	<b>84.356</b>	<b>1</b>	<b>84.356</b>	<b>22.331</b>	<b>.000</b>
Treatment * Gender	43.751	2	21.876	5.791	.003
Treatment * Locus of Control	47.732	2	23.866	6.318	.002
Gender * Locus of Control	9.075	1	9.075	2.402	.122
Treatment * Gender * Locus Control	17.449	2	8.724	2.310	.101
Error	1643.226	309	3.778		
Total	592577.000	322			
Corrected Total	35501.691	321			

a. R Squared = .954 (Adjusted R Squared = .952)

The result of the analysis presented in Table 3 on the effect of locus of control on students' academic achievement in Financial Accounting in senior secondary schools shows a F-value of = 22.331 and a computed significant p-value of 0.00. Since the computed significant value is less than the alpha significant ( $p < 0.05$ ), the postulated null hypothesis which says that there is no significant effect of locus of control on students' academic achievement in Financial Accounting in senior secondary schools was rejected. This means that there is a significant effect of locus of control on students' academic achievement in Financial Accounting in senior secondary schools.



**Hypothesis Three:** There is no significant interaction effect of treatments and locus of control on students' academic achievement in Financial Accounting in senior secondary schools

**Table 4:** ANCOVA Showing the Interaction Effect of Treatments Strategies and Locus of Control on the Students' Academic Achievement in Financial Accounting

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	33858.465 <sup>a</sup>	12	2418.462	640.223	.000
Intercept	20429.147	1	20429.147	5408.069	.000
Pretest	34.140	1	34.140	9.038	.003
Treatment	23229.062	2	11614.531	3074.636	.000
Gender	6.371	1	6.371	1.687	.195
Locus of Control	84.356	1	84.356	22.331	.000
Treatment * Gender	43.751	2	21.876	5.791	.003
<b>Treatment * Locus of Control</b>	<b>47.732</b>	<b>2</b>	<b>23.866</b>	<b>6.318</b>	<b>.002</b>
Gender * Locus of Control	9.075	1	9.075	2.402	.122
Treatment * Gender * Locus Control	17.449	2	8.724	2.310	.101
Error	1643.226	309	3.778		
Total	592577.000	322			
Corrected Total	35501.691	321			

a. R Squared = .954 (Adjusted R Squared = .952)

The analysis presented in Table 4 on the interaction effect of treatment and locus of control revealed an F-value of 6.318 and a computed significant value of 0.002. Since the computed significant value is less than the alpha significant ( $p < 0.05$ ), the null hypothesis which states that there is no significant interaction effect of treatment and locus of control on the students' academic achievement in Financial Accounting in senior secondary schools is hereby rejected. This means that there is a significant interaction effect of instructional strategies and locus of control on the students' academic achievement in Financial Accounting in senior secondary schools.

### Discussion of Finding

The study found that there is a significant main effect of treatment (think-pair-share and conventional method) on students' academic achievement in Financial Accounting in senior secondary schools. This shows that the use of think-pair-share is more effective than the conventional method in teaching financial accounting. This result might be because think-pair-share in Financial Accounting classrooms helps to develop Financial Accounting capacity for independent thinking encourages individualized as well as collaborative learning and develops students' presentation skills. All these advantages are possible because of the three main stages of think, pair and share which were employed during Financial Accounting instruction. Therefore, cooperative instructional strategies such as think-pair-share are bound to arouse students' interest, stimulate students' learning, improve positive mutual dependence and internal





motivation for students as well as improve academic achievement in Financial Accounting. This finding aligns with the report of Nwaubani et al (2016) who found that the think-pair-share strategy significantly improved students' achievement in Economics. It also aligned with the finding of Salviana and David (2017) who reported that think-pair-share strategies are both efficacious in improving high school students' academic achievement in commercial subjects. It is also in agreement with the result of Okolocha and Nwaukwa (2020) that the use think-pair-share instructional strategy is more effective in enhancing students' academic achievement and retention of students in Financial Accounting. The findings of Alabi and Sanni (2021) as well as Adeyinka and Ogunbiyi (2023) that there is a significant effect of think-pair-share on students' academic achievement in schools is very much in tandem with the report of this study.

The study shows that there is a significant effect of locus of control on students' academic achievement in financial accounting. It means that the use of think-pair-share in enhancing students' academic achievement was locus of control sensitive, suggesting that it favours students with an internal locus of control. This finding is not surprising because students with internal locus of control tend to be happier, more independent and more focused because they have the belief that their academic success depends on their actions and not on factors outside their control. Based on this fact, they are physically healthier and motivated to solve Financial Accounting problems. Therefore, the high academic achievement of students with internal locus of control as against those with external locus of control is very understandable. This finding is very much in agreement with the report of Yenti et al. (2023) that the internal locus students had superior academic resilience and achievement than the external locus students because they always link results with their efforts or actions in achieving their desires. Similarly, Abid et al. (2016) reported that the learning performances of the students with internal locus of control are high because they are more proactive and effective during the learning process. Also in congruence with this is the finding of Chinedu and Nwizuzu (2021) that a significant relationship exists between the locus of control and the academic achievement of students in public schools. The result of this finding contradicts the report of Mohammad (2012) who found that locus of control (LoC) is not a predictor of students' academic achievement in school subjects.

The study found that there is a significant interaction effect of instructional strategies and locus of control on the students' academic achievement in Financial Accounting in senior secondary schools. This finding attests to the previous result which shows that students with internal locus of control across groups performed better than their counterparts with external locus of control. Therefore, the implementation of treatment strategies (think-pair-share and group investigation) favours students of internal locus control across groups. The finding significantly indicated that locus of control moderated the effect of the treatments on students' achievement in Financial Accounting. This finding is consistent with the reports of Chinedu and Nwizuzu (2021); and Arsini, Ahman and Rusmana (2023) in their separate studies that there is a significant interaction effect of treatment and locus of control on students' academic achievement. The result is also in tandem with the finding of Sibuea and Marianum (2022) who reported that there is a significant interaction effect of learning strategies and locus of control on students' learning



outcomes/academic achievement. On the other hand, this result is in contradiction with the report of Ogunyemi and Itasanmi (2019) that there is no significant interaction effect of treatment and locus of control on the students' achievement scores in sustainable development concepts. It also disagrees with the finding of Aboukhatwa and Elkbany (2019) that there is no significant interaction effect of learning strategies and locus of control on achievement, performance of production skills, product quality and learning satisfaction of students.

### **Conclusion**

The study concluded from the findings that think-pair-share strategy were more effective in improving students' academic achievement in Financial Accounting in senior secondary schools than the conventional method. In addition to the main effect, it was also inferred that the use of the think-pair-share strategy favours students with internal locus of control because they performed better than counterparts with external locus of control.

### **Recommendations**

The following recommendations were presented based on the findings of this study:

1. Financial Accounting teachers at secondary school level should deploy the use of think-pair-share strategy and group investigation strategies in teaching Financial Accounting to improve students' academic achievement in Financial Accounting.
2. Financial Accounting teachers should take into cognisance the locus of control of the students by ensuring that all students' categories are considered during teaching using the think-pair-share strategy and group investigation because they are locus of control bias.
3. Teacher training institutions where secondary school teachers are trained should incorporate a think-pair-share strategy into the curriculum of teacher-trainees so that they can be able to effectively inculcate the strategy in teaching the subject.

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