

EFFECT OF INSTRUCTIONAL SCAFFOLDING STRATEGY ON FINANCIAL ACCOUNTING STUDENTS' ACADEMIC ACHIEVEMENT IN COLLEGES OF EDUCATION IN SOUTH-WEST, NIGERIA

Jimoh Abiodun Ganiu (Ph.D)¹, Olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Odusina, Abiodun Oluwatosin (M.Ed)⁴

Department of Educational Management and Business Studies,
Olabisi Onabanjo University, Ago-iwoye, Nigeria.

Department of Business Education,
Faculty of Vocational and Technical Education,
Adeyemi Federal University of Education, Ondo, Nigeria

Department of Business Education,
Tai Solarin University of Education, Ijagun, Ijebu-Ode, Ogun State

abiodunjimoh25@gmail.com

. ayodejiolafare@gmail.com

kehindemercy9@gmail.com

odusinaoluwatosin3@gmail.com

Abstract

This study investigated the effect of scaffolding instructional strategy on students' academic achievement in colleges of education in South-west, Nigeria. A quasi-experimental design was used for the study with a 2x2 factorial matrix. The population for this study consists of two thousand, two hundred and thirty-two (2,232) NCE II Business Education students in Colleges of Education in South-west, Nigeria. The study employed a simple random sampling technique in a multi-stage procedure to pick a sample of 268 students from their full classes of 75 and 196. A validated instrument, the Financial Accounting Achievement Test with coefficient of 0.92, was utilised for data collection. Data collected were analysed using the statistical measures of Mean, Standard Deviation, and Analysis of Covariance (ANCOVA). The study revealed that there was a significant main effect of treatment (with scaffolding instructional strategy) on students' academic achievement in financial accounting ($F = 8640.30, p < 0.05$) because students taught with scaffolding instructional strategy performed better than those taught using conventional lecture method (mean gain of $E = 22.17 > C = 2.01$). There was no significant effect of gender on students' academic achievement in financial accounting ($F = 0.19, p > 0.05$). The findings also indicated that there was no statistically significant interaction effect of treatments (scaffolding) and gender on the academic achievement of students in financial accounting ($F = 0.29, p > 0.05$). The study concluded that the scaffolding instructional technique is a valid and efficient teaching method for improving the academic achievement of both male and female students in Financial Accounting. Given the results, it is advised that business educators at colleges of education should also use scaffolding instructional strategies when teaching financial accounting to further improve students' academic performance.

Keywords: Academic Achievement, Scaffolding, Instructional Strategy Gender

Introduction

Financial accounting is a Business Education subject provided in Colleges of Education to familiarise students with the fundamental concepts of bookkeeping, accounting, and financial

Jimoh Abiodun Ganiu (Ph.D)¹, Olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Odusina, Abiodun Oluwatosin (M.Ed)⁴

management. The broad objective of Financial Accounting is to equip students with relevant skills, knowledge and right attitude needed to teach business subjects at the secondary school level. It provides training to students in the practical knowledge of daily book-keeping activities and the steps involved in financial management so that, on graduation, they should be able to secure paid jobs or be self-employed. In addition, the role of Financial Accounting in the survival of an enterprise in today's competitive business environment cannot be over-emphasised. This is because the knowledge of Financial Accounting is also very useful in performing financial management duties of a business outfit, as an employee and for successful management of financial records of self-business as an entrepreneur, thus, enabling them to contribute their own quota to the economic growth and development of the country.

The actualization of the Financial Accounting objectives depends on the quality of instruction offered by the teachers and how students are able to grasp the principles and concepts of the subject as reflected in their academic achievement during their course of study. Therefore, students' academic achievements and retention in Financial Accounting go a long way in accomplishing its objectives. Academic achievement refers to the tangible results of learning in an educational setting, specifically the degree to which teachers successfully attain their learning or instructional objectives. Academic achievement refers to the level of success achieved by pupils in their academic pursuits following exposure to classroom instruction (Jimoh et al., 2021). Within an educational environment, the academic performance of students is often evaluated through classroom activities, assignments, ongoing evaluation, and both internal and external academic tests. It can be used to indicate the students' level of success in a particular task previously exposed to or as indicators of students' capacity to successfully complete a different task.

Regrettably, the academic achievement of students enrolled in the Nigerian Certificate in Education (NCE) programme, specifically in the field of Financial Accounting, within the South-west region of Nigeria, is currently unsatisfactory and equally worrisome which may impede the successful attainment of the program's intended goals. For instance, the past five years result summary in financial accounting from some colleges of education revealed that NCE students who score merit grade and above were below 50%. This showed that a significant proportion of students who took part in the Financial Accounting examination over a period of five year before this study exhibited a performance level that was below the average. According to Agboh (2015), the primary goals of Financial Accounting are defeated as a result of the continuous poor academic achievement and declining interest of students. This is an indication that learners in Colleges of Education may be facing challenges in the learning of Financial Accounting concepts and principles. Apart from the poor academic achievement, knowledge retention is another challenge faced by Colleges of Education students in Financial Accounting.

Literature has shown that achievement and retention are affected by the quality of instruction, the method of teaching and learning as well as learner's memory capacity, among other factors (Eze *et al.*, 2016). Financial Accounting students' achievement and knowledge retention can be best sustained through effective teaching and active involvement of the learners in the learning process. This continuous poor achievement and retention in Financial Accounting may worsen business education students' employability status, hence contributing to the increasing unemployment rate among youths in the country. The inadequate academic achievements of Financial Accounting students suggest that the traditional lecture structure commonly employed by Business Educators is unsuitable for teaching. Validating this assertion, Uduafemhe (2015) underscores that the lack of success among students in academic disciplines can be ascribed to the persistent employment of inappropriate teaching approaches, particularly the traditional lecture technique, by professors in their teaching. Adamu et al. (2022) proposed

that the primary factor contributing to the low academic achievement of students in Financial Accounting is the utilisation of a teacher-centered lecture approach. Some teachers/lecturers, due to the time frame, may not want to explore different methods of teaching to discover the most appropriate and effective one for the selected contents and students. They rather opt for the convenient lecture method they are used to, which may seemingly be cheaper in terms of cost and time.

Conventional lecture method is an instructional strategy which affords the teacher the opportunity to present a wide content to a large class of students within a short time. It allows the teacher to present a verbal discourse on a particular subject or deliver a lesson to the students with little or no instructional-aids. The lecture method of teaching is profitable in a verbal dissemination of learning contents that need to be covered within a short period in a large class size (Eziyi, Mumuni & Nwanekezi, 2016; Salisu & Samuel, 2022). When this method is used, the teacher does most of the talking and the students become passive listeners, learn by note-taking and memorization of facts which may make learning ineffective and thereby leading to poor academic achievement and retention.

Meanwhile, Financial Accounting by its nature majorly involves calculation of monetary values of an organisation to reveal profit from an operation and show its financial position which makes it a practical and tasking subject. There is the need for accounting education lecturers to employ innovative and learner-centred strategies that will facilitate the successful instruction and comprehension of financial accounting concepts and principles. Researchers have suggested that teaching strategies that support and allow learners to construct their own meaning and understanding, reason and develop self-confidence to overcome academic challenges should be used. Among the strategies suggested are guided discovery, meta-cognitive learning, experiential learning, think-pair-share including scaffolding instructional strategy considered in this study due to little applicability in financial accounting instruction.

Instructional scaffolding is an educational approach that enables teachers to provide help or aid to students with the aim of improving academic learning and proficiency in various abilities. The idea of instructional scaffolding is linked to the views of McLeod (2020) students learn better by interacting with more knowledgeable others such as adults, older peers, teachers, or the internet (Joda, 2019; Ile & Nkiruka, 2020). It is an instructional support or series of techniques which are used during the learning process, aimed at bringing maximum achievement, understanding and output (Aditi, 2017; Nwoke, 2020). Scaffolding in education represents the helpful activities offered by the teacher to the learners to enable them to learn something beyond their independent efforts. The effectiveness of implementing this instructional structure is anchored on the premise that, with help and support, a student would be able to achieve more than what he/she could do alone (Torprv et al, 2022; Omiko, 2015).

Scaffolding strategies can provide resources, an engaging task, templates, and direction on how to build social and cognitive skills. Winnips (2001) states that learning become easy when students receive adequate supports from the teacher. Similarly, Alake and Ogunseemi (2013) asserted that instructional scaffolding is more effective in teaching than the traditional chalk and talk method. In addition, the use of scaffolding strategies developed a positive attitude of students towards learning (Obialor & Chukwuagu, 2020; Siyelen, 2021). Base on the foregoing, it became pertinent to raise a question that: can the use of instructional scaffolding for teaching improve the learning of financial accounting in Colleges of Education than the lecture method?

Gender has also been identified as one of the factors influencing students' achievement at all levels of education (Gambari et al., 2016). This means that, apart from teaching strategies, gender is another factor to be considered when trying to unravel situation surrounding the issue of students' poor learning outcomes in financial accounting. Gender is the range of physical and

biological characteristics pertaining to and differentiating the feminine from masculine (Adigun et al., 2015). Differences in students' achievement based on gender have been of great concern to researchers just as many studies found that gender plays a significant role in the achievement differences among students. For instance, some studies found that gender has a significant influence on the academic achievement in school subjects stating that male students perform better than female in school subjects (Githae et al., 2015; Kurumah, 2004). Contrary to this viewpoint, certain studies have reported a notable impact of gender on student achievement in favour of females (Olarinoye, 2015). Other studies have found no statistically significant disparity in academic performance between males and females (Adeyemi & Awolere, 2016; Gambari et al., 2016; Timayi, 2016; Nnorom, 2015; Gabi, 2015). Considering the diverse reports of gender imbalances in the learning outcomes and the potential implications of gender in employing jigsaw model and instructional scaffolding for teaching Financial Accounting; it is imperative to investigate whether there is an impact of gender on students' academic achievement and retention in learning of Financial Accounting.

Meanwhile, several research studies have been conducted on the effect scaffolding instructional strategy in enhancing students' academic achievement in school. Most of these studies were carried out in secondary schools (Aditi, 2017; Timayi, 2017; Eziyi et al., 2016; Gul, 2016; Omiko, 2015; Uduafemhe, 2015; Alake & Ogunseemi, 2013; Zakaria et al., 2013) while those conducted in colleges of education focused on subjects other than financial accounting (Al-Salkim, 2015; Mari and Gumel, 2015; Marhamah & Mulyadi, 2013). Little has been done to determine the effectiveness of scaffolding instructional in the teaching financial accounting. Therefore, this study intends to fill the gaps in literature by investigating the effect of scaffolding instructional strategy on financial accounting students' academic achievement in colleges of education in South-west, Nigeria.

Purpose of the Study

The main objective of this study was to determine the effect of scaffolding instructional strategy on financial accounting students' academic achievement in colleges of education in South-west, Nigeria. Specifically, the study sought to determine the:

1. Effect of treatment on students' academic achievement in financial accounting in colleges of education in South-west, Nigeria.
2. effect of gender on the students' academic achievement in financial accounting
3. Interaction effect of treatments and gender on students' academic achievement in financial accounting.

Research Questions

The following research questions were raised and answered in this study:

1. What is the difference between the mean achievement scores of students taught financial accounting using treatment strategies?
2. What is the difference between the mean academic achievement scores of male and female students' taught financial accounting using treatment strategies?

Statement of the Hypotheses

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

- Ho₁ There is no significant main effect of treatment on students' achievement scores in financial accounting in colleges of education in South-West, Nigeria

- Ho₂ There is no significant effect of gender on student's academic achievement scores in financial accounting in colleges of education in South-West, Nigeria
- Ho₃ There is no significant interaction effect of treatment and gender on the mean achievement scores of students in financial accounting.

Theoretical Framework

Instructional scaffolding aligns with the zone of proximal development (ZPD) concept, which suggests that individuals learn better when provided with necessary support or collaborative activities with skilled individuals. McLeod (2020) asserts that Vygotsky's ZPD concept as stated in the social cultural theory of cognitive development identifies the gap between a learner's mastery level and their instructional level, supports this view. Instructional scaffolding techniques can be applied to any subject, ensuring that every student can learn effectively. Bruner (1985) suggests that scaffolding may not be necessary for instruction below a learner's ZPD, but for instruction beyond their ZPD. Good instructional scaffolding helps students learn independently or collaboratively, advancing their development.

Conceptual Framework

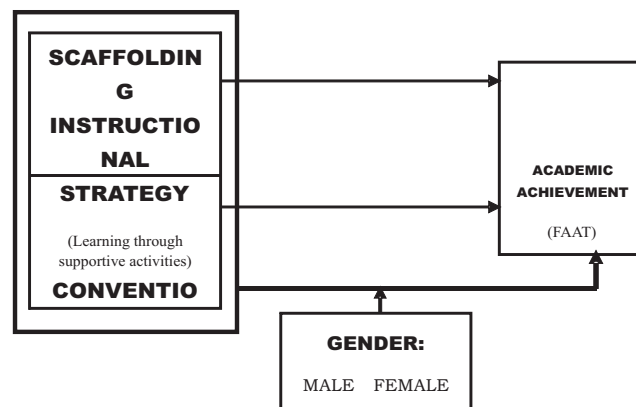


Figure 1: Conceptual Framework on the effect of jigsaw and instructional scaffolding strategies on financial accounting students' academic achievement and retention.

The conceptual model as shown in Figure 1 indicates that the experimental study seeks to find out the effectiveness of two instructional strategies (instructional scaffolding and conventional lecture method) on one dependent variables (students academic achievement). The model also showed the moderating effect of gender (male and female) on students' academic achievement when the strategies are used.

Methodology

This study adopted a quasi- experimental research design of pretest-posttest-delayed posttest, control group. This design is considered appropriate because the experiment took place in a normal school setting where assignment of subjects to experimental and control group was difficult. Therefore, the researcher only assigned intact classes to groups for treatments without interrupting the normal pre-existing school arrangement. In addition, a 2x2 factorial matrix comprising of two instructional strategies (instructional scaffolding and conventional lecture

Jimoh Abiodun Ganiu (Ph.D)¹, Olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Odusina, Abiodun Oluwatosin (M.Ed)⁴

method) and gender in two levels (male and female) was also adopted for the study. The population for the study is two thousand, two hundred and thirty-two (2,232) NCE II Business Education students in twelve (12) public Colleges of Education in South-west, Nigeria for 2023/2024 academic session (Source: Business Education Department Offices). NCE II accounting students of Business Education were chosen because the poor performance of students in accounting is prevalent at this NCE II level and topics of experiment were taught at this level. The sample for this study is two hundred and sixty-eight (268) NCE 2 Business Education students of two Colleges of Education in their intact classes. A simple random sampling technique was adopted to select the sampled in a multi-stage procedure. The sample comprises 75 students of Tai Solarin College of Education (TASCE), Omu-Ijebu, Ogun State and 196 students of Federal College of Education (Special), Oyo State.

A self-developed Financial Accounting Achievement Test (FAAT) was the instrument validated and used for data collection. The instrument consists of forty (40) multiple choice items (questions) with four options (A-D). The questions contained in the instruments were on partnership and manufacturing accounts aspect of financial accounting as contain in NCCE curriculum (Green-book). Reliability of the instrument (FAAT) was ensured using Kuder Richardson 20 (KR-20) formula which yielded a reliability coefficient of 0.92 for FAAT. Treatment in the experimental group was implemented using scaffolding instructional guide adapted from Murtagh and Webster (2010). The procedures identified by Murtagh and Webster were modified and re-arranged into weekly activities in order to meet the purpose of the study. The Guide contains the subject code and title, the topic of experiment, instructional objectives, procedure for instructional scaffolding strategy (including the roles of teacher and students in a scaffolding learning environment), Major scaffold in Financial Accounting class and weekly activities and scaffold for treatment. In collecting data; a week prior to the commencement of the treatment, pre-experimental briefing sections was organized to brief the research assistants on the procedure for the experiment in each of the schools. After the briefing, pre-tests were administered across the treatment groups in order to obtain the pre-test scores which revealed the students' initial group difference/equivalence. From week two, the actual treatments (which lasted for five weeks) commenced in the respective schools where NCE II accounting students in TASCE were taught financial accounting using professional accountants as supportive tutor for scaffolding instructional strategy and NCE II accounting students in Federal College of Education, Oyo Special were taught using the normal financial accounting lecturers for conventional lecture method. A week after the treatments, the post-tests were administered to students in both experimental and control groups to obtain the achievement scores. The data collected from pre-tests and post-test were analyzed using mean, standard deviation and Analysis of Covariance (ANCOVA). Mean ratings and standard deviation was used to answer the research questions while ANCOVA was used to test the hypotheses at 0.05 level of significance.

Results

Answers to the Research Questions

Research Question One: What is the difference between the mean achievement scores of students taught Financial Accounting using treatment strategies?

Table 1: Mean Achievement Score and Standard Deviation of students taught Financial Accounting with Instructional Scaffolding and Conventional Lecture Method

Treatment Strategies	N	Pretest		Posttest		Mean Gain	Diff.
		Mean	Std. Dev	Mean	Std. Dev		
Instructional Scaffolding Strategy	75	10.04	1.39	32.21	1.88	22.17	20.16
Conventional Lecture Method	196	9.68	1.44	11.69	1.49	2.01	

Result in Table 1 shows a pretest mean achievement score of 10.04 and a posttest mean achievement of 32.21 for students taught Financial Accounting with Instructional Scaffolding Strategy. The result also shows a pretest mean achievement score of 9.68 and posttest mean achievement score of 11.69 for students taught Financial Accounting with conventional lecture method. A comparison shows a mean gain achievement score of 22.17 for experimental group two and 2.01 for control group with a difference of 20.16 in favour of students in the experimental group two. This result indicates that students taught Financial Accounting with Instructional Scaffolding Strategy performed better than those taught with conventional lecture method.

Research Question Two: What is the difference between the mean academic achievement scores of male and female students' taught financial accounting using treatment strategies?

Table 2: Mean Achievement Score and Standard Deviation of Male and Female Students taught Financial Accounting using Treatment Strategies

Treatment Strategies	Gender	N	Pretest		Posttest		Mean Gain
			Mean	Std. Dev	Mean	Std. Dev	
Instructional Scaffolding	Male	50	10.12	1.48	32.06	1.92	21.94
	Female	25	9.88	1.20	32.52	1.78	22.64
Conventional Lecture Method	Male	100	9.72	1.47	11.75	1.53	2.03
	Female	96	9.62	1.41	11.59	1.43	1.97

Result in Table 2 shows mean achievement gain of 21.94 for male and 22.64 for female students taught Financial Accounting using Instructional Scaffolding Strategy. A mean achievement gain of 2.03 was shown for male and 1.97 for female students taught using the conventional lecture method. This result shows that the academic achievement of female taught Financial Accounting using Instructional Scaffolding is slightly better than their male counterparts.

Test of Hypotheses

Hypotheses One: There is no significant main effect of treatments on students' achievement scores in Financial Accounting in Colleges of Education in Southwest, Nigeria.

Table 3: Analysis of Covariance Showing the Effect of Treatment on Students' Academic Achievement in Financial Accounting

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	35357.86 ^a	4	5892.98	3083.87	0.00
Intercept	6493.51	1	6493.51	3398.14	0.00
Pretest	0.83	1	0.83	0.44	0.51
Treatments	33021.54	1	16510.77	8640.30	0.00
Gender	0.36	1	036	0.19	0.67
Treatments * Gender	4.74	1	2.37	1.24	0.29
Error	762.45	263	1.91		
Total	363845.00	268			
Corrected Total	36120.32	267			

Result in Table 3 showed F-value of 8640.30 and p-value (computed significant value) of 0.00. Since the computed significant (P-value) is less than the Alpha level of significant ($p < 0.05$), the null hypothesis is hereby rejected. This result indicates that there is a significant main effect of treatments on students' achievement scores in Financial Accounting in Colleges of Education in Southwest, Nigeria.

Hypotheses Two: there is no significant effect of gender on student's academic achievement scores in Financial Accounting in Colleges of Education in South-West, Nigeria.

Result in Table 3 on gender effect, showed F-value of 0.19 and P-value of 0.67 (computed significant value). Since the computed significant (p-value) is greater than the Alpha level of significant ($p > 0.05$). Therefore, the null hypothesis of no significant effect is hereby accepted. This result indicates that there is no significant effect of gender on students' academic achievement scores in Financial Accounting in Colleges of Education in South-west, Nigeria.

Hypotheses Three: there is no significant interaction effect of treatment and gender on student's academic achievement in Financial Accounting in Colleges of Education in South-west, Nigeria. Result in Table 3 on interaction effect of treatment and gender showed F-value of 1.24 and p-value (computed significant value) of 0.29. Since the computed significant (p-value) is greater than the Alpha level of significant ($p > 0.05$), the null hypothesis of no significant interaction effect is hereby accepted. This result indicates that there is no significant interaction effect of treatment and gender on students' academic achievement scores in Financial Accounting in Colleges of Education in South-west, Nigeria.

Discussion of Findings

Finding of research question one indicates that students taught Financial Accounting with Instructional Scaffolding Strategy performed better than those taught with conventional lecture method. Possible reason for this result is the fact that instructional scaffolding renders all forms of helps needed by the students to reach their Zone of proximal development and with these helps and supports, Financial Accounting students are able to achieve more than what they could do without such assistance. This result agreed with the reports of (Omiko, 2015; Torpevet *al.*, 2022) who found in their separate studies that instructional scaffolding strategy is more effective in enhancing students' achievement than the conventional lecture method. Similarly, it

is also consistent with the findings of Nwoke (2020) and Obialor & Chukwuagu (2020) that instructional scaffolding helps to improve students' achievement significantly.

This result shows that the academic achievement of female taught Financial Accounting using Instructional Scaffolding is slightly better than their male counterparts. This result may be due to gender awareness that what man can do, female can do better. This may be a source of motivation for female students in striving towards a better academic achievement in financial accounting. This finding is in agreement with the reports of Amobi and Uche (2022); George *et al.* (2021); Obialor and Chukwuagu (2020), who found in their separate studies that female students taught using instructional scaffolding had higher mean achievement scores than their male counterparts. It is in converse with the finding of Enebechi, (2016), Omiko (2015) and Umuoke and Nwafor (2014) that male students achieved better than the female students when taught with instructional scaffolding. This finding is not also consistent with the position of Akinjide (2018); Omwirhiren and Ibrahim (2016) and Torpevet *et al.* (2022), found that there is no difference in the mean achievement of male and female exposed to teaching with instructional scaffolding while Fasasi and Istifanus (2022) as well as Mohammed and Samuel (2022) found that there is no difference in the mean achievement scores of male and female students taught using jigsaw II learning strategy

The finding of hypothesis one showed that there is a significant main effect of treatments on students' academic achievement scores in Financial Accounting. This means the use of scaffolding instructional strategy is more effective in enhancing students' academic achievement in Financial Accounting than the conventional lecture method. This better academic achievement could be due to the fact that instructional scaffolding renders all forms of help and supports needed by the students to reach their Zone of proximal development and with these help and support, Financial Accounting students are able to solve accounting problems and achieve more than what they could do in the conventional learning situation. This finding is in consonance with the reports of Amobi and Uche (2022); Boris (2020); Joda *et al.* (2019) as well as Owenvbiugie and Iyoha (2017) that treatment with scaffolding strategy significantly enhances students' academic achievement than the use of conventional lecture method. This result also aligns with the research report by Johnson and Jinks (2021), which revealed that the implementation of scaffolding strategy enhanced students' engagement and increased learning results. According to the findings of Chen and Wang (2022), scaffolding strategy had a notable impact on the academic achievements of students in the field of physics while Yang and Looi (2023) study revealed that the use of scaffolding in computer science education had a beneficial impact on students' ability to solve problems. In contrast, Smith (2019) discovered that the influence of scaffolding on academic achievement in mathematics was less significant among students, highlighting the necessity for additional research.

Hypothesis two found that there is no significant effect of gender on students' academic achievement in Financial Accounting. This means that the use of scaffolding in Financial Accounting instruction is not gender biased or sensitive which means that both male and female performed better. This result could be as a result of the helps and supports rendered to students by financial accounting experts without sentiment to a particular gender or group of students which give male and female students the opportunity to display their understanding through high achievement scores. This finding is in line with the report of Torpevet *et al.* (2023) who reported that there was no significant difference in academic achievement of male and female students that were exposed to scaffolding teaching strategy. Also, Owenvbiugie and Iyoha (2017) that scaffolding method is a good teaching method for enhancing students' achievement in Financial Accounting irrespective of gender while Durojaiye (2015) reported that gender did not contribute significantly to varying students' achievement scores in Financial Accounting. On the

Jimoh Abiodun Ganiu (Ph.D)¹, Olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Oduşina, Abiodun Oluwatosin (M.Ed)⁴

contrary, Olorode and Jimoh (2016) revealed in a study that there was significant difference between the academic achievement of male and female students, taught Financial Accounting using guided discovery learning strategy.

The finding of hypothesis three indicates that there is no significant interaction effects of treatment and gender on students' mean academic achievement in Financial Accounting in Colleges of Education in South-West, Nigeria. This result shows that a change in academic achievement of students in Financial Accounting as a result of treatment is not dependent on gender. Therefore, the effect of the treatments on achievement in Financial Accounting does not vary with gender. This finding is in line with the report of Owenvbiugie and Iyoha (2017) that scaffolding method is a good teaching method for enhancing students' achievement in Financial Accounting irrespective of gender which according Agboh (2015) means that gender of the students had no significant interaction effects with the treatment given to them. Similarly, Nnorom (2015) reported that there was no significant interaction effect of treatment and gender on students' achievement in Biology. Also, Eze et al. (2016) reported that there was no interaction effect of treatments and gender on students' academic achievement in Financial Accounting.

Conclusion

The study concluded from the results that scaffolding strategy is a good and effective teaching approach for enhanced students' academic achievement in financial accounting. This is because the support and assistance render by the teacher in a scaffolding teaching classroom are good techniques that enables students to achieve what may be difficult for them to achieve without such help. It was also concluded that there is no significant effect of gender on students' academic achievement in financial accounting which means that the used of scaffolding instructional strategy is not gender bias. Scaffolding strategy gives both male and female students equal opportunity to learn and achieve their learning goal.

Recommendations

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

1. Business educators at colleges of education should also employ Instructional Scaffolding strategy for teaching Financial Accounting and to enhance students' academic achievement and retention in Business Education.
2. Lecturer should ensure proper monitoring of male and female students when using scaffolding strategy in order not to give room for gender bias when using scaffolding for instruction.
3. Government through NCCE should include Scaffolding instructional strategy in the list of suggested methods for teaching Financial Accounting in the curriculum of Colleges of Education in Nigeria.
4. Administrators of Business education department in Colleges of Education should create positive atmosphere for the utilization of scaffolding instructional for teaching by making available those accounting documents and inviting practicing accountants that will model the necessary practical skills to students.
5. Administrators of Business education department in Colleges of Education should organize seminars and workshops for both students and educators on the procedure and benefits of scaffolding instructional strategy in Financial Accounting classroom.

References

- Adamu, I., Umar, I., & Adamu, I. (2022). School factors as determinants of secondary school students' performance in financial accounting in Bauchi State, Nigeria. *Al-Hikmah Journal of Business Education*, 2(1), 77-84
- Adeyemi, S. B., & Awolere, M. A. (2016). Effects of experiential and generative learning strategies on students' academic achievement in environmental concepts. *Journal of Human Ecology*, 56(3), 251-262.
- Adigun, J., Onihunwa, J., Irunokhai, E., Sada, Y., & Adesina, O. (2015). Effect of Gender on Students' Academic Performance in Computer Studies in Secondary Schools in New Bussa, Borgu Local Government of Niger State. *Journal of Education and Practice*, 6(33), 1-7.
- Aditi, B. (2017). Effect of instructional scaffolding on high school students' academic achievement and attitude towards science. *International Journal of Science Technology and Management*, 6(3), 228-235.
- Agboh, C. I. (2015). Effects of computer assisted instructional technique on students' achievement in financial accounting in colleges of education in South-East, Nigeria. *Research Journal of Finance and Accounting*, 6(20), 31-38
- Akinjide, A. (2018). The status of biology in Nigerian secondary school curriculum: implications for scientific literate society. *International Journal of Biology Education*, 4(3), 2-7.
- Alake, E. M., & Ogunseemi, O. E. (2013). Effects of scaffolding strategy on learners' academic achievement in integrated science at the junior secondary school level. *European Scientific Journal*, 9(19), 149-160.
- Al-Salkhi, M. J. (2015). The effectiveness of Jigsaw strategy on the achievement and learning motivation of the 7th primary grade students in the Islamic Education. *International Journal of Humanities and Social Sciences*, 5(4), 111-122
- Amobi, U. V., & Uche, E. D. (2022). effect of instructional scaffolding on students' academic achievement in biology. *Irish Journal of Educational Practice*, 5(05), 35-44. <https://aspjournals.org/Journals/index.php/ijep>
- Boris, O. O. (2020). Effects of scaffolding teaching strategy on secondary school chemistry in Ekiti State. *International Journal of Scientific Development and Research*, 5(8), 457-461
- Bruner, J. S. (1985). Vygotsky: A historical and conceptual perspective. In J. V. Wertsch (Ed.), *Culture, communication, and cognition: Vygotskian perspectives* (pp. 21-34). Cambridge, England: Cambridge University Press.
- Chen, J., and Wang, T. (2022). Effects of scaffolding on students' conceptual understanding and problem-solving skills in physics. *International Journal of Science Education*, 44(3), 377-397.
- Durojaiye, O. M. (2015). Relative effect of computer assisted instruction and cooperative learning strategies on student's academic achievement in Financial Accounting [Unpublished M.Ed Thesis]. Tai Solarin University of Education, Ijagun Ijebu-Ode
- Enebechi, R. I. (2016). Effects of two instructional scaffolding strategies on secondary school students' achievement and interest in biology [Unpublished M.Ed Thesis]. University of Nigeria, Nsukka
- Eze, T. I., Ezenwa for, J. I., & Obidile, J. I. O. (2016). Effect of Gender on Students' Academic Performance and Retention in Financial Accounting in Technical Colleges. *Journal of Education, Society and Behavioural Science*, 18(4), 1-9. <https://doi.org/10.9734/BJESBS/2016/29583>
- Eziyi, M. E., Mumuni, A. A., & Nwanekezi, A.U. (2016). Effect of guided inquiry and

Jimoh Abiodun Ganiu (Ph.D)¹, Olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Odusina, Abiodun Oluwatosin (M.Ed)⁴

- cooperative instructional strategies on SS1 students' academic achievement in conceptual understanding of photosynthesis. *IOSR Journal of Engineering*, 6(8), 01-11.
- Fasasi K. M., & Istifanus, H. (2022). Effect of Jigsaw II Cooperative Learning Strategy on Senior Secondary School Students' Academic Achievement in Algebra in Gombe State, Nigeria. *AJSTME*, 8(2), 169-175. <https://www.ajstme.com.ng>
- Gabi, A. (2015). Effects of audio-visual aids on students' academic achievement in social studies in junior secondary schools in Bauchi State, Nigeria [Unpublished M.Ed thesis]. Ahmadu Bello University, Zaria, Nigeria
- Gambari, A. I., Shittu, A. T., Daramola, F. O. & Jimoh, M. A. (2016). Effects of video instructional packages on achievement of senior secondary school students in mathematics in Minna, Nigeria. *ABTU Journal of Science, Technology and Education (JOSTE)*, 4(2), 179-196.
- George, P. C., Obikezie, M. C., & Abumchukwu, A. A. (2021). Impact of generative learning model on academic self concept and achievement of secondary school students in chemistry in Onitsha education zone of Anambra state Nigeria. *International Journal of Research in Education and Sustainable Development*, 1(4), 1-16.
- Githae, R. W., Keraro, F. N., & Wachanga, S. W. (2015). Effects of Collaborative Concept Mapping Teaching Approach on Secondary School Students' Achievement in Biology in Nakuru North Sub-county, Kenya. *Global Science Research Journals*, 3(5), 321-328
- Gul, N. K. (2016). Effect of Jigsaw technique of Cooperative learning (JCL) on academic achievement of Secondary School Students. *Global Advanced Research Journal of Educational Research and Review*, 5(2), 028-031
- Ile, C. M. & Nkiruka, N. (2020). Effect of scaffolding teaching method on students' academic performance in financial accounting in secondary schools in Anambra State, Nigeria. *International Journal of Education Humanities and Social Science*, 3(1), 150-160. <http://ijehss.com/Page 150>
- Jimoh, A. G., Abanyam, F. E., & Uloko, C. I. (2021). Effect of One-Minute-Paper Cooperative Learning Strategy on Junior Secondary School (JSS2) Students' Academic Achievement in Business Studies in Ogun State, Nigeria. *International Business Education Journal*, 14(1), 49-64. <https://doi.org/10.37134/ibej.vol14.1.4.2021>
- Joda, F. M. (2019). Effects of instructional scaffolding strategy on senior secondary biology students' academic achievement and retention in Taraba State, Nigeria. *Education Quarterly Reviews*, 2(2), 2019, Available at SSRN: <https://ssrn.com/abstract=3414779>
- Joda, F. M. (2019). Effects of Instructional Scaffolding Strategy on Senior Secondary Biology Students' Academic Achievement and Retention in Taraba State, Nigeria. *Education Quarterly Reviews*, 2(2), 269-275. <https://www.asianinstituteofresearch.org/>
- Johnson, J., and Jinks, J. (2021). Examining the effects of scaffolding on student engagement and learning in science inquiry. *Journal of Research in Science Teaching*, 58(2), 190-218.
- Kurumah, M.S.(2004). Effect of ethno-mathematics approach on students' achievement in geometry and measurement. *Journal of Mathematical Association of Nigeria. (MAN)*, 31 (1), 35-44
- Marhamah, L. A., & Mulyadi, J. C. (2013). Jigsaw cooperative learning a viable teaching-learning strategy. *Journal of Educational and Social Research*, 3(7), 710-715.
- Mari, J. S. & Gumel, S. A. (2015). Effects of Jigsaw Model of cooperative learning on self efficacy and achievement in chemistry among concrete and formal reasoners in Colleges of Education in Nigeria. *International Journal of Information and Education Technology*, 5(3), 196-199.

- McLeod, S. (2020). Vygotsky's Socio cultural Theory of Cognitive Development. *Simply Psychology*. Retrieved from <https://www.simplypsychology.org/vygotsky.html>
- Mohammed, B. K. & Samuel, I. R. (2022). Effect of jigsaw II learning strategy on students' achievement in cell and its environment in Niger state, Nigeria. *International Journal of Innovative Education Research*, 10(1), 69-76.
- Nnrom, N. R. (2015). Effect of Cooperative Learning Instructional Strategy on Senior Secondary School Students Achievement in Biology in Anambra State, Nigeria. *International Journal for Cross-Disciplinary Subjects in Education (IJCDSE)*, 5 (1), 2424-2427
- Nwoke, B. I. (2020). Impact of Instructional Scaffolding Approach on Secondary School Students Achievement in Mathematics. *Malikussaleh Journal of Mathematics Learning (MJML)*, 3(2), 46-50. DOI: <https://doi.org/10.29103/mjml.v3i2.3168>
- Obialor, C. O. & Chukwuagu, K. (2020). Effect of instructional scaffolding on students' academic achievement in secondary school chemistry in Mbaitoli Local Government Area of Imo State. *Unizik Journal of Educational Research and Policy Studies*, 10 (1), 84-92. <https://unijerps.org>
- Olarinoye, T. T. (2015). Comparative effects of cooperative and guided discovery methods on secondary school students' performance in accounting in Plateau, Nigeria [Unpublished M.EdThesis]. Ahmadu Bello University, Zaria
- Olorode, J. J. & Jimoh, A. G. (2016). Effectiveness of Guided Discovery Learning Strategy and Gender Sensitivity on Students' Academic Achievement in Financial Accounting in Colleges of Education. *International Journal of Academic Research in Education and Review*. 4(6), 182-189
- Olorode, J. J. & Jimoh, A. G. (2016). Effectiveness of guided discovery learning strategy and gender sensitivity on students' academic achievement in financial accounting in colleges of education. *International Journal of Academic Research in Education and Review*, 4(6), 182-189
- Omiko, A. (2015). Impact of instructional scaffolding on students' achievement in chemistry in secondary schools in Ebonyi State of Nigeria. *International Journal of Education, Learning and Development*, 3(7), 74-83.
- Omwirhiren, E. M., & Ibrahim, K. U. (2016). The Effects of Two Teachers' Instructional Methods on Students' Learning Outcomes in Chemistry in Selected Senior Secondary School in Kaduna Metropolis. Nigeria. *Journal of Education and Practice*, 7(15), 1-9.
- Owenvbiugie O. O., & Iyoha, D. O., (2017). Effect of Instructional scaffolding on academic performance of students in financial accounting in secondary schools in Delta state, Nigeria. *Journal of Education Research and Behavioural Science*, 6(2), 21-28.
- Salisu, D. A., & Samuel, I. R. (2022). Interactive effects of jigsaw ii, learning together and guided-discovery learning strategies and gender on students' achievement and retention in basic science in Nasarawa State, Nigeria [Unpublished Doctoral Thesis]. Ahmadu Bello University, Zaria.
- Smith, R. (2019). Examining the impact of scaffolding strategies on mathematics achievement: A longitudinal study. *Journal of Research in Mathematics Education*, 50(2), 201-218.
- Timayi J. M. (2016). Effects of jigsaw iv cooperative learning on interest and academic performance of secondary school students in geometry in Kaduna State, Nigeria [Masters' Dissertation]. Ahmadu Bello University, Zaria
- Torpev, T. F., Baffa, M., & Kabir, S. (2023). Effect of scaffolding instructional strategy and gender on academic achievement of senior secondary school Islamic studies students. *Indonesian Journal of Multidisciplinary Research* 3(1), 139-144.

Jimoh Abiodun Ganiu (Ph.D)¹, olafare Elkanah Ayodeji (Ph.D)², Kehinde Mercy Temitope (Ph.D)³, Odusina, Abiodun Oluwatosin (M.Ed)⁴

<http://ejournal.upi.edu/index.php/IJOMR/>

- Uduafemhe, M. E. (2015). Comparative effects of scaffolding and collaborative instructional approaches on secondary school students' psychomotor achievement in basic electronics in North-central, Nigeria. *International Organisation of Scientific Research*, 5(6), 23-31.
- Umuoke, J. C., & Nwafor, C. C. (2014). Effects of instructional simulation on secondary school students' achievement in biology. *Journal of Education and Practice*, 5(19). <https://www.researchgate.net/profile/Chika-Nwafor2/publications>
- Unugo, L. O. (2022). Effects of scaffolding teaching strategy on the academic achievement of students in social studies for value reorientation and national development. *Unizik Journal of Educational Research and Policy Studies*, 6, 92 -200. <https://unijerps.org>
- Winnips J. C. (2001). Scaffolding by design: A model for world web based learner support [Doctorate dissertation, University of Twente, Enschede Netherlands].
- Yang, L., and Looi, C. K. (2023). Examining the effects of scaffolding on students' collaborative problem-solving in computer science education. *Computers and Education*, 171, 103-116.
- Zakaria, E., Solfitri, T., Daud, Y. & Abidin, Z. Z (2013). Effect of cooperative learning on secondary school students' mathematics achievement. *Creative Education*, 4(2), 98-100