

EFFECTS OF SCAFFOLDING METHOD OF TEACHING ON THE ACADEMIC PERFORMANCE OF STUDENTS IN FINANCIAL ACCOUNTING IN KWARA STATE**BY****OGUNDELE Israel Segun: Department of Business and Entrepreneurship Education, College of Education, Kwara State University, Malete; E-mail: israel.ogundele@kwasu.edu.ng/
<https://orcid.org/0000-0001-6323-5323>****Abstract**

This study was undertaken to determine the effects of scaffolding method of teaching on the academic performance of secondary school students in financial accounting in Kwara State, Nigeria. The full population of the survey was 1,759 comprising all the senior secondary school students, offering financial accounting in Ilorin South Local Government, Kwara State, Nigeria. The sample size is 275 students using simple random sampling technique. One of the specific objectives was to determine the effect of treatment of scaffolding method on the academic performance of secondary school students. The research design of the study was based on the pretest-post-test non-equivalent control group design. Mean, and Standard deviation were used as the statistical tools to analyze the data to answer the research question. Analysis of Co-variance (ANCOVA) was used to test the null hypothesis at the 0.05 level of significance. The findings of this study showed that the scaffolding method of teaching has a positive effect on secondary school students' academic performance in financial accounting. The study also revealed that there was a significant treatment effect of scaffolding method on the academic performance of students in financial accounting. The study concluded that the scaffolding method is an effective method of teaching financial accounting in secondary schools. The implication, therefore, is that, when the scaffolding method is well utilized, the students' performance is expected to improve. The study recommends among others that for students' achievement in financial accounting to be improved, financial accounting teachers should ensure regular use of scaffolding method in the classroom while teaching.

Keywords: *Scaffolding, method, Treatment, effect, Academic performance, Financial accounting*

Introduction

Teaching methods refers to the way or technique of passing information to learners. They are techniques which the teacher employs to make instruction more effective. Methods of teaching vary as the concept to be taught. Since the introduction of Accounting Education, it is believed that many teaching methods have been used by teachers in teaching, each of which has yielded some degree of successes. Today, due to changes in the world of work in terms of technology and the way people do things, also due to expansion in knowledge and the complexity of the world of work, these teaching methods need to be re-evaluated in line with the current realities. The current realities demand that students should be exposed to methods of teaching that make them active learners rather than passive listeners. Besides, teachers should not be the dispenser of knowledge, but a facilitator of learning such that students will have the opportunity to participate fully in the teaching/learning process. Scaffolding method is one of the teaching methods that can make students, active learners.

The term scaffolding has traditionally been used to mean the process by which a teacher or more knowledgeable peer assists a learner, modifying the learning task so the learner can solve problems or accomplish tasks that would otherwise be out of reach. In the area of teaching, the term scaffolding refers to a process in which teacher models or demonstrates the problem-solving procedure, step back and then offers support as required. It is a method in which students are offered support until when they can apply new skill and strategies individually (Rosenshine & Meister, 2008). Scaffolding method is now increasingly used in the educational setting. The aim of the support is not only to aid learners in accomplishing tasks but also permit them to learn from experience. The scaffolding method differs from the lecture method because it ensures student's participation at all levels of the learning process.

Lecture method is an organized verbal presentation of a body of content centered on a specific topic. It uses an oral form of communication and usually to the entire class. Lecture method, according to Bligh (2010), is one of the oldest and the most popular and extensively used method today in colleges and universities. When the method is appropriately used, it can assist in introducing activities for motivating students, summarizing at the end of the unit and explaining difficult points. Giwa in Ogundele and Lasun (2015) agreed that the lecture method could be useful in bridging gaps between topics to be studied in depth and for presenting the information. Being a one-way medium and a teacher-centered method, it is primarily a method for cognitive learning and factual transfer of information, but when the objective is to develop concepts and problem-solving skills, other methods are preferable.

The continued search for effective methods of teaching Financial Accounting, which would be suitable for increasing the level of performance, became a worthwhile exercise because of the demand of the 21st-century world of work. Consequently, the performance of students in financial accounting has not been encouraging because many students failed in external examinations. This poor performance is evident in the analysis of 2017 NECO and WAEC results. Available figures from Ministry of Education, Kwara State revealed that out of 6,795 students who sat for WAEC examinations in 2017 May/June, only 5% scored "A", 7% scored "B", 8% scored "C", 11% scored "D", 18% scored "E" and 51% scored "F" and in NECO examinations 2017, May/June 8% scored "A", 6% scored "B", 9% scored "C", 14% scored "D", 16% scored "E", and 47% scored "F".

The situation presented above calls for concern but much as it calls for concern, the reason responsible for this poor performance is not known. However, prominent among the factors identified as a core contributor to the low level of performance in financial accounting is poor methods of teaching adopted by the teachers (Osokoya, 2011). Therefore, it becomes apparent that the lecture method, which is currently the predominant teaching method in secondary schools, is inappropriate and very ineffective for achieving the goal of financial accounting as a program. It is as a result of these reasons that this study was conducted to determine the effects of scaffolding method of teaching on secondary school students' academic performance in financial accounting in Kwara State.

When most of the people hear the word scaffolding, they think of new office buildings going up, or else aging skyscrapers needing repair. Scaffolding is what gets erected outside a tall building so that workers can climb up and hammer away. From the ground below, scaffolding sometimes looks like an external skeleton, yet any long gaze will reveal it has nothing to do with supporting the actual weight of the building it surrounds (Okpeh, 2014). Rather, what is apparent is the transient nature of its framework, individual bits of which are planned to disassemble quickly. Instructional scaffolding is similarly transient. Scaffolding in an educational setting is a process by which a teacher offers students with a temporary framework for learning. When scaffolding is done correctly, such structuring encourages a student to get his or her initiative, motivation, and resourcefulness (Okpeh, 2014). Once students build knowledge and develop skills on their own, the constituents of the framework are dismantled. Finally, the initial scaffolding is removed altogether; students no longer demand it (Lawson, 2002).

In the classroom, scaffolding refers to the teaching method where the facilitator gives learners a short time guide for learning. When this teaching method is made out correctly; students are encouraged to build up their creativity, motivation, and resourcefulness (Lawson, 2002). When students amass knowledge in the classroom and increase their skills on their own, given the support of the facilitator, the fundamentals of the framework are dismantled. After the lesson, the teaching method is removed altogether; students no longer need it because the instructional scaffolds are temporary support structures faculty put in place to assist students in accomplishing new tasks and concepts they could not typically achieve on their own. Once students can complete or master the task, the scaffolding is gradually taken out or fades away, and the obligation of learning shifts from the teacher to the student (Lawson, 2002).

Scaffolding is also identified as the process in which pupils are given support until they can use new skills and strategies independently (Rosenshine & Meister, 2008).

Scaffolding's usefulness as an instruction strategy is backed up by research and theory. Of special relevance are Piaget's cognitive constructivism theory and to a greater extent than any other theory, the social constructivism ideas generated by Vygotsky. Bruner's beliefs about how students build upon prior knowledge might also be seen. Before appearing at various constructivist ideas, however, it is helpful to understand constructivism as a whole. The core of constructivism is that humans build their learning by building new knowledge upon old (Herber and Herber, 2007). They further submitted that this aspect of learning contrasts with one in which learning is the passive transmission of information from one person to another, a perspective in which reception, not construction, is lively. According to Hoover, learners build new understandings using what they already know; learning is dynamic rather than inactive. Learners confront their understanding in light of what they come across in the new learning situation. If what learners encounter is inconsistent with their current understanding, their understanding can change to accommodate new experience, and based on that; they can modify knowledge (Herber & Herber, 2007).

The benefits of instructional scaffolding as adapted from Northern Illinois University (2014) includes: challenges students through deep learning and discovery, engages students in meaningful and dynamic discussions in small and large classes, motivates learners to become improved students (learning how to learn), increases the likelihood for students to meet instructional objectives, provides individualized instruction (especially in smaller classrooms), affords the opportunity for peer-teaching and learning, scaffolds can be "recycled" for other learning situations and provides a welcoming and caring learning environment. According to Northern Illinois University (2014), the following were considered as challenges for instructional scaffolding: preparation for and implementing scaffolds, is time consuming and exacting, selecting appropriate scaffolds which match the diverse learning and communication styles of pupils, knowing when to remove the scaffold so the student does not rely on the support and not knowing the students well enough (their cognitive and affective abilities) to provide appropriate scaffolds. The general purpose of the study was to determine the effects of scaffolding method of teaching on the academic performance of secondary school students in financial accounting in Kwara State. The specific purpose of the study is to determine the effect of treatment of scaffolding method on the academic performance of secondary school students in financial accounting in Kwara State.

Research Question

1. What is the effect of treatment of scaffolding method on the academic performance of secondary school students in financial accounting in Kwara State?

Research Hypothesis

The following hypothesis was tested at 0.05 level of significance.

H₀: There is no significant main effect of treatment of scaffolding and lecture methods on the academic performance of students in financial accounting in secondary schools.

Methodology

Quasi-experimental research design was adopted for the study. Specifically, pre-test post-test nonequivalent control group design was used for the study. The population of the study consisted of all (SS2) senior secondary school students offering financial accounting in Ilorin South. There are total numbers of 1,759 students. The schools were selected using simple random sampling technique. The schools assigned to treatment and control groups using simple random sampling were to give them equal chance of being in any group. The sample population size includes 140 and 135 for the experimental group and control group respectively. The instruments used to generate relevant data for this study were Financial Accounting Performance Pre Test (FAPPT) and Financial Accounting Performance Post Test

(FAPPT). The instruments consist of twenty objective questions and one essay question on final accounts of a sole trader (Trading, Profit and Loss Account and Balance Sheet). The two instruments have very similar items. The marking schemes for Financial Accounting Performance Pretest and Posttest are also similar. The objective questions were scored 40% i.e 2marks for each question while the essay was scored 60%. The time allowed to answer the FAPPT was 120 minutes. Split-half method was used to calculate the reliability coefficient of 0.71.

Mean and standard deviation performance levels of the students for both the pre-test and post-test for the experimental and control groups was computed and compared to answer the research question. Analysis of Co-variance (ANCOVA) was used to test the null hypotheses. Any group with the highest mean was considered to perform better. For the hypotheses, if the observed probability value of null hypothesis is less or equal to the fixed value (0.05), then the null hypothesis was rejected and if otherwise, the null hypothesis was not rejected at 0.05 level of significance.

Results

Research Question: What is the effect of treatment of scaffolding method on the academic performance of secondary school students in financial accounting in Kwara State?

This research question was answered using financial accounting performance pre-test and post-test scores from the students.

Table 1: Mean of pre-test and post-test scores of treatment group taught financial accounting using scaffolding method

GROUP	N	\bar{X}	SD
PRE-TEST	140	38.78	8.63
POST-TEST	140	54.41	9.53
MEAN & SD DIFFERENCE	140	15.63	0.90

The data presented in Table 1 revealed that the treatment group taught financial accounting with scaffolding method had a mean score of 38.78 in the pretest and a mean score of 54.41 in the post-test with standard deviation of 8.63 and 9.53 for the pre-test and post-test, respectively, pre-test ($\bar{X} = 38.78$; $SD = 8.63$), post-test ($\bar{X} = 54.41$; $SD = 9.53$). The result gave a pre-test, post-test mean gain of the treatment group taught with scaffolding method to be 15.63. The low standard deviation difference (0.90) showed that the scores of students in both the pre-test and post-test are clustered around their respective mean scores alike. With this result, it is clear that scaffolding method is effective in improving students' performance in financial accounting.

Test of Hypothesis

H₀₁: There is no significant main effect of treatment of scaffolding and lecture methods on the academic performance of students in financial accounting in secondary schools

Table 2: Summary of Analysis of Covariance (ANCOVA) for Test of Significance of the Effects: treatments, Gender and Interaction Effect of Treatments and Gender on academic performance of students in financial accounting

Source	Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Covariate	3246.483 ^a	6	541.080	6.923	.000	.278
Intercept	8552.334	1	8552.334	109.430	.000	.503
Pretest	183.167	1	183.167	2.344	.029	.021

Treatment	2310.103	2	1155.052	14.779	.000	.215
Gender	112.444	1	112.444	1.439	.233	.013
Treatment * gender	43.053	2	21.527	.275	.760	.005
Error	8440.613	108	78.154			
Total	326507.000	115				
Corrected Total	11687.096	114				

a. R Squared = .278 (Adjusted R Squared = .238)

Significant @ sig<0.05

The data presented in Table 2 showed F-calculated values for three effects: treatment, gender, and interaction effect of treatments and gender on students' academic performance in financial Accounting. The Table showed that there was significant treatment effect of scaffolding and lecture method on academic performance in financial accounting ($F_{(2,114)} = 14.779$; $p < 0.05$; $\eta^2 = 0.215$). Hence, the null hypothesis that stated that there is no significant main effect of treatment of scaffolding and lecture methods on the academic performance of students in financial accounting in secondary schools was therefore rejected. This implied that the treatment given to the students produced a significant improvement on their academic performance. This showed that scaffolding and lecture methods have significant effect on academic performance of students in financial accounting when combined together.

Table 3: Estimated marginal means of both the treatment and control groups

Groups	Mean	Std. Error
Scaffolding	54.828 ^a	1.468
Lecture	45.477 ^a	1.518

The data in Table 3 showed estimated marginal means for the two groups, i.e the adjusted mean after the covariance. The Table revealed that the participants in experimental group (scaffolding method) performed better than their counterpart in lecture method because they had the highest adjusted post mean score (mean = 54.828). The implication here is that scaffolding method is the most effective method of teaching financial accounting in secondary school.

Discussion

The study found out that Scaffolding method is better than the lecture method in improving students' academic performance in financial accounting in terms of pre-test and post-test results of senior secondary school students. This means that post-test results were better than the pre-test results. There was evidence in the mean performance levels of 38.78 in the pre-test and 54.41 in the post-test. The result gave a pre-test mean gain of the treatment group taught with scaffolding method to be 15.63. This is in line with Uduafemhe (2015) who compared the pre-test and post-test results that revealed 57% pass in the post-test group's mean score which indeed indicated that students taught financial accounting with scaffolding method perform better which invariably were replica of the effects of scaffolding method of teaching on students' academic performance.

Conclusion

Based on the findings of the study it was concluded that the scaffolding method is an effective method of teaching financial accounting in secondary schools. The implication, therefore, is that, when the scaffolding method is well utilized, the students' performance is expected to improve. The lecture method that is predominantly used in teaching financial accounting is not as effective as the other method and this could be responsible for the poor performance of students in financial accounting in secondary schools. The continued use of this method means that students will continue to perform poorly and accounting knowledge will not be properly acquired. No wonder that most secondary school students who gained

admission into higher institutions suffer when it comes to accounting. In addition, it is not surprising that students perform poorly in external examination. The poor performance has also led to many examination malpractices and these combined together have negative effects on the development of the nation.

Recommendations

1. For student's achievement in financial accounting to be improved, financial accounting teachers should imbibe the spirit of regular use of scaffolding method in the classroom while teaching.
2. There is the need for school principals to train and retrain teachers on the use of scaffolding method of teaching financial accounting.
3. School authorities should create enabling environment for the use of scaffolding method of teaching financial accounting in secondary schools.

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