

EFFECT OF SCAFFOLDING TEACHING METHOD ON STUDENTS' ACADEMIC PERFORMANCE IN FINANCIAL ACCOUNTING IN SECONDARY SCHOOLS IN ANAMBRA STATE, NIGERIA

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ABSTRACT

The study was on the effect of scaffolding teaching method on the academic performance of students in financial accounting in secondary schools in Anambra State, Nigeria. Two research questions guided the study while two null hypotheses were tested. The research design was quasi-experimental design. From a population of 218 students, 57 students were randomly selected from the population as sample for the study. The instrument used for data collection was Financial Accounting Achievement Test (FAAT). The instrument for data collection was validated by experts. The reliability of the instrument was ascertained using Kuder-Richardson (K-R21) procedure, from which a reliability coefficient of 0.81 was obtained. The data collected from the students' post-test scores were analyzed using mean and standard deviation while the null hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). The results revealed that instructional scaffolding method was superior to the conventional method in improving the achievement of male and female students in financial accounting. The test of interaction effect showed that there was no significant interaction effect of treatment and gender with teaching approach on students' mean achievements. It was concluded that scaffolding teaching method was more effective in improving students' academic performance. The researchers recommended that teachers should teach Financial Accounting using scaffolding teaching method because it facilitates the academic achievement of students.

Key Words: Scaffolding Teaching Method, Quasi-experimental design, Financial Accounting Achievement Test.

1. INTRODUCTION

Education, as the foundation of all societies and globally competitive economies, is the most efficient way through which a society can face the challenges of today and tomorrow. It is one of the most important drivers for ending poverty and boosting shared prosperity (The World Bank Group, 2014). It not only imparts knowledge, skills and inculcates value, but it is also responsible for building human capital. It is a process of discovery. The Federal Republic of Nigeria (FRN), (2013) defined education as an instrument par excellence in effecting national development. No nation will develop without education. Adesina in Olaleye (2011) revealed that teachers are the primary indicators and determinants of quality of education. This calls for

teachers to use suitable teaching methods to achieve effective teaching and learning especially in financial accounting

Teaching methods comprise the principles and techniques used during instruction (Joshua & Olayinka, 2015). They are the tools or means through which practicing teachers engage their students in meaningful activities as a result of which ideas, values and facts are learnt. Instructional methods focus on not only the educational contents but also on the methods and environments of the teaching process. Students' development levels, interest and experiences are considered while choosing a particular teaching strategy so that they can self-accomplish their goals (Richa, 2014). These teaching methods enable students to focus their attention on the content being taught, organize their learning materials for better understanding and help teachers to provide suitable platforms for strategic learning. A teaching method could be teacher-centered or student-centered. The teacher-centered methods are referred to as the traditional teaching methods.

Traditional teaching methods usually rely on lectures, explanations and note-taking by students and often without the use of teaching aids (Talley & Littlefield, 2009). Traditional teaching methods usually revolve around the teacher explaining a particular topic and the students taking down notes that would help them in their studies. It is centered on more of passive learning experiences with minimal interaction between students and teachers. Logsdon (2014) saw traditional teaching methods as being based on models similar to: teachers modeling the skills, often on a blackboard or overhead projectors; students being given practice work, usually in workbooks or on handouts; teachers reviewing students' work and/or tests; groups using pencil and paper test; teachers providing feedback on students' performance, usually in the form of grades for the work and marks on items missed.

Traditional method of teaching may have been effective in the pass years but today, students seem to need different methodologies to help them become independent and strategic learners (Richa, 2014). With the evolution in education, there is also a shift in the use of traditional teaching methods, to non-traditional methods which is known as student/learner -centered methods.

Learner-centered teaching method is an approach to teaching that is increasingly being encouraged in the education system. This approach emphasizes different types of methods that shift the role of instructors from givers of information to facilitators of students learning. Learner-centered teaching is an approach to teaching that is increasingly being encouraged. Learner-centered teachers do not employ a single teaching method. This approach emphasizes a variety of different types of methods that shift the role of the instructors from givers of information to facilitating students learning (Darsih, 2018). The benefits of learner-centered education include increased motivation for learning and greater satisfaction with school. These lead to greater achievement.

The idea of scaffolded approach to learning is linked to scholars such as Jerome Bruner and Lev Vygotsky. Vygotsky was of the view that children learn by interacting with more knowledgeable others such as adults, older peers, teachers, or, the internet. According to Yu and Tsai (2013), scaffolding is a term coined by Wood, Bruner, and Ross (1976) as a form of support to help learners reach pedagogical goals which they may not be able to achieve if unaided. In particular, it attempts to bridge the gap between learners' current abilities (actual development) and the intended goals (potential development). Raymond in Azih and Nwosu (2011) stated that

instructional scaffolding is a teaching approach that underscores the teaching of new skills by engaging pupils collaboratively in tasks that would be too difficult for them to complete on their own.

Scaffolding is a teaching method that emphasizes the teaching of new skills by engaging students collaboratively in tasks that would be too difficult for them to complete on their own (Olson and Prath in Okpeh (2014). Scaffolding is a more systematic approach to supporting the learner, focusing on the tasks, the environment, the teachers and the learners. In the process of scaffolding, the teacher helps students master tasks they were initially unable to grasp alone. The scaffolding techniques a teacher could use include clarifying doubts, inviting responses, focusing on tasks, reinforcing important facts and evaluating students' works (Casem & Oliva, 2013). Thus, scaffolding teaching method can influence students' learning in Financial Accounting and improve their academic performances.

Financial Accounting is concerned with recordkeeping system, preparation, analysis, and communication of financial information (Francis, 2014). In Nigeria, financial accounting is part of the vocational subjects offered at secondary school level to enable students acquire relevant knowledge and skills that are necessary for national growth and development (Seyi, 2014). It is one of the subjects offered in senior secondary schools in Nigeria and is among the subjects taken at the West African Senior School Certificate Examination, National Examination Council School Certificate Examinations, and National Business and Technical Examinations Board. This subject equips the recipients with the competency needed to keep financial accounting records. The subject is taught in secondary schools usually using the traditional methods of instruction such as discussion and lecture methods and offered by both males and females in senior secondary schools.

Gender refers to state of being male or female. For a long time, gender was listed by researchers as one of the factors that influenced the academic achievement of the child (Gupta & Sharma, 2012; Abubakar & Oguguo, in Uduafemhe 2015). Thus, there has been a lot of debate on whether gender really affects academic achievement. Some researchers believed that male often out- perform their female counterparts in most subject areas, while some conclude the other way round (Maliki, Ngban & Ibu, 2009; Jabor, Machtmes, Kungu, Buntat, & Nordin, 2011). Current trends show that the gap that once existed between genders is fast closing (Abubakar & Bada, 2012). This suggests that females are getting more exposure to educational activities more than ever.

Academic performance is the result of students' mental ability in an educational setting. Jimoh, Idris and Olatunji (2016) viewed academic performance as the desired success attained by students. Jimoh (2014) held that academic achievement is the level of success attained by the students in school subjects. Ezenwosu and Nworgu (2013) noted that academic performance is commonly measured using classroom exercises, assignment and continuous assessments as well as internal and external examinations. Olorode and Jimoh (2016) asserted that students' performances in financial accounting examinations in recent years are below expectations. They authors opined that the low performance of students in financial accounting in secondary schools in recent years may be attributed to traditional teaching method popularly used by teachers in instructional delivery. Consequently, the researchers chose to determine the effects of scaffolding teaching method on the students' academic performance in Financial Accounting in senior secondary schools in Anambra State Nigeria.

Statement of the Problem

One of the major difficulties facing the education sector in Nigeria is the low level of academic performance of students in local and standardized examinations. It has become a great concern for researchers, educators and stake-holders in the educational sector over the years. As a result, the poor performance of students in Financial Accounting has been attributed to many factors including ineffective instructional methods.

Different teaching methods such as lecture, demonstration, discussion, project and socratic have been used but could not improve the achievement of students in financial accounting. The teaching of accounting depends undoubtedly on the effective teaching of the subject and available resources. The teaching of accounting in senior secondary school ought to be dynamic, practice oriented and activity based through the application of effective teaching method. The teaching method that seems not to be commonly used in teaching financial accounting is scaffolding.

This neglect comes through strong emphasis on traditional teaching method. Against this backdrop, the researchers were motivated to carry out a study to determine the effect of scaffolding teaching method on students' academic performance in Financial Accounting in secondary schools in Anambra State.

2. PURPOSE OF THE STUDY

The major purpose of this study was to determine the effect of scaffolding teaching method on the academic performance of students in financial accounting in senior secondary schools in Anambra State. Specifically, the study determined the:

1. effect of scaffolding teaching method on the mean performances of male and female students taught financial accounting.
2. interaction effect of treatments and gender on academic performance of students taught Financial Accounting with traditional and scaffolding teaching method.

Research Questions

The following research questions guided the study:

1. What is the effect of scaffolding teaching method on the mean performances of male and female students taught financial accounting?
2. What is the interaction effect of treatments and gender on academic performance of students taught Financial Accounting with traditional and scaffolding teaching methods.

Hypotheses

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

1. There is no significant difference between the mean performances of male and female students taught financial accounting using scaffolding teaching method.
2. There is no significant interaction effect of treatments and gender on the academic performance of students taught financial accounting with traditional and scaffolding methods.

3. METHOD

The study was carried out using quasi-experimental research design. Quasi experimental research design was used for the study because there was no random assignment of subjects to treatment

conditions. Nwogu (2015) in agreement to this said that in a situation where there is no randomization in the assignment of individual participants to treatment conditions, quasi experimental method is most suitable. Under such situation, the researcher resorted to quasi-experimental design. Two groups were used for the study namely experimental (treatment) group and control group. Pre-test and post-tests were administered to the two groups.

The population of the study comprised all the 218 SS 111 students in all the secondary schools in Anambra State who registered financial accounting in the West African Examinations Council (WAEC) examinations in 2018/2019 academic session. A sample size of 57 financial accounting students was used for the study. One school was randomly selected from each of the six education zones in the area and grouped into two for the study. The first group had 30 students (11 males and 19 females) while the second group had 27 students (10 males and 17 females) offering financial accounting.

Instrument for data collection was Financial Accounting Achievement Test (FAAT). The Financial Accounting Achievement Test (FAAT) contained twenty objective questions based on partnership accounts adopted from West African Examinations Council (WAEC) past questions. Each item has options but only one was the correct answer. Each correct answer had one point while each incorrect answer will score zero. The experimental procedure was carried out using two instructional packages consisting of prepared lesson plans on selected topics based on scaffolding instructional strategy on the one hand, and conventional method of instruction on the other hand.

At the beginning of the experiment, the subjects in both treatment and control groups were given the pre-test. After the pre-test the regular financial accounting teachers began the experiment in their respective schools ensuring that they followed the lesson procedure developed from the instructional package during the pre-experimental training. The treatment group was taught using the instructional package for the experimental group while the control group was taught using the instructional package for the control group. This experiment lasted for six (6) weeks and it was conducted during the normal school periods, according to the school time table. The post-test was administered to the subjects in the two groups at the end of the experiment. The collected data were analyzed using mean and standard deviation to answer the research questions, while the analysis of co- variance (ANCOVA) was used to test hypotheses at 0.05 level of significance. Where the calculated F-value was equal or greater than the F-table value at 0.05 level of significance, the null hypothesis was rejected but where the F-calculated was less than F-table value, the null hypotheses was not rejected

4. RESULTS

Research Question 1: What is the effect of scaffolding teaching method on the mean performances of male and female students taught financial accounting?

Table 1: Mean score and standard deviation of male and female students taught financial accounting with scaffolding method

Gender	N	Minimum	Maximum	Mean	Std. Deviation	Mean gain
Male	10	44.00	76.00	64.30	9.14	4.70
Female	17	48.00	90.00	69.00	13.27	

Table 1 shows the mean scores for female and male students as 69.00 and 64.30 respectively with a mean gain of 4.70 in favour of the female group. This implies that female students performed better than their male counterparts in Financial Accounting when taught using scaffolding method.

Research Question 2: What is the interaction effect of treatments and gender on academic performance of students taught Financial Accounting with traditional and scaffolding teaching methods?

Table 2: Mean score and standard deviation on the interaction effect of treatments and gender on academic performance of students taught financial accounting with traditional and scaffolding method

Teaching method	Gender	N	Post – test X	SD
Scaffolding Teaching Method (STM)	Male	10	64.30	9.14
	Female	17	69.00	13.27
Traditional Method (TM)	Male	11	57.91	10.53
	Female	19	51.05	13.63

Data in Table 2 show that the female students performed more than their male counterpart in scaffolding teaching method. This is shown by the mean scores of 69.00. While the male students under traditional teaching method performed better than their female counterpart with the mean score of 57.91. However, to determine if these observed differences are significant, the second hypothesis was tested at 0.05 level of significance.

Testing of Hypotheses

Hypothesis 1: There is no significant difference between the mean performances of male and female students taught financial accounting using scaffolding teaching method.

Table 3: ANCOVA Summary of mean academic performance of male and female students taught financial accounting using scaffolding teaching method Dependent Variable: Male and Female

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	139.085 ^a	1	139.085	.975	.333	
Intercept	111878.196	1	111878.196	783.878	.000	
Gender	139.085	1	139.085	.975	.333	Not significant
Error	3568.100	25	142.724			
Total	125850.000	27				
Corrected Total	3707.185	26				

a. R Squared = .038 (Adjusted R Squared = -.001)

Results in Table 3 show an F-value of 0.975 and a p-value of 0.33 (p-value = 0.33 > $\alpha=0.05$) which fall on the acceptance region of the hypothesis. This implies that there is no significant difference between the mean academic performance of male and female students taught financial accounting using scaffolding teaching method in secondary school in Anambra State.

Hypothesis 2: There is no significant interaction effect of treatments and gender on academic performance of students taught financial accounting with traditional and scaffolding method.

Table 4: ANCOVA Summary of Interaction Effect of Treatments and Gender on academic performance of students taught financial accounting with traditional and scaffolding teaching methods.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	3130.886 ^a	3	1043.629	6.899	.001	
Intercept	194106.122	1	194106.122	1.283E3	.000	
Gender	15.380	1	15.380	.102	.751	

Accounting method	1959.067	1	1959.067	12.950	.001	
Gender*Accounting Method	441.692	1	441.692	2.920	.093	Not significant
Error	8017.956	53	151.282			
Total	216709.00	57				
Corrected Total	11148.842	56				
a. R Squared =.281(Adjusted R Square = .24)						

Table 4 shows an F-value of 2.920 and a p-value of 0.093 (p-value =0.093 > α =0.05) which falls on the acceptance region of the hypothesis. This implies that there is no significant interaction effect of treatments and gender on the academic performance of students taught financial accounting using scaffolding teaching and traditional teaching method in secondary school in Anambra State.

5. DISCUSSION OF FINDINGS

The findings of the study showed that female students has a mean gain of 4.70, meaning that the female students performed better than male students taught using scaffolding teaching method. This implies that for optimum result, scaffolding teaching method should be employed in teaching of female students. The ANCOVA test result of the first hypothesis showed that there was a significant difference in the mean academic performance scores of male and female students taught financial accounting using scaffolding teaching method in secondary schools in Anambra State. This finding disagreed with the findings of Omiko (2015) on the effect of gender on students’ achievement using scaffolding method which proved that male students performed better than the female students. The findings also disagreed with the opinions of researchers like Maliki, Ngban and Ibu, (2009); Jabor, Machtmes, Kungu, Buntat, and Nordin, (2011), who believed that male students often out-perform female students in most subject areas. The result however supported the views of Abubakar and Bada (2012) that women are getting more exposure to educational activities more than ever. The findings are also in line with the finding of Owenubiugie and Iyoha (2017) that female performed better than their male counterparts in financial accounting when taught using scaffolding teaching method.

On the interaction effect between teaching methods and gender, the study showed that there was no significant interaction effect of treatments and gender on the academic performance of students taught financial accounting using traditional and scaffolding methods in Anambra State. This means that the teaching methods used had no interaction effect on gender with respect to students’ performance in financial accounting. This supported the findings of Azih and Nwosu

(2011) and Eze, Ezenwafor and Obidile (2016), which reported that gender had no significant interaction with teaching approach on students' mean achievement scores in financial accounting.

6. CONCLUSION

The need to find the most appropriate instructional approach to assist financial accounting students in their academic activities, stimulate and sustain their interest better in the account field is very important. This is because interest is a key ingredient for recording high performance in any academic pursuit. This study therefore, ascertained the effects of scaffolding teaching method on the academic performance of students in financial accounting in secondary schools in Anambra State. The study found out that scaffolding teaching method is more effective in improving students' academic performance. Since this is the case, it meant that the performance of financial accounting students would get better if scaffolding method of teaching the subject is applied by accounting teachers. It will also lead to better acquisition of accounting skills and consequently lead to the development of the nation.

7. RECOMMENDATIONS

Sequel to the findings and conclusions of the study, the following recommendations are put forward:

1. Teachers should teach Financial Accounting using scaffolding teaching method because it facilitates the academic achievement of male and female students.
2. School authorities and ministries of Education should ensure adequate and regular supervision of schools and instructions to ensure that suitable instructional teaching methods are used by teachers with a view to ensure a rise in students' academic achievement.

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