



RESEARCH ARTICLE

IMPROVING THE ACHIEVEMENT OF STUDENTS IN FINANCIAL ACCOUNTING THROUGH THE USE OF INSTRUCTIONAL SCAFFOLDING IN SECONDARY SCHOOLS

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ARTICLE INFO

Article History:

Received 22nd February, 2017
Received in revised form
11th March, 2017
Accepted 30th April, 2017
Published online 31st May, 2017

Key words:

Instructional Scaffolding,
Achievement and Financial
Accounting.

ABSTRACT

This study was aimed at ascertaining the impact instructional scaffolding will make on the achievement of students in financial accounting in Abakaliki Urban of Ebonyi State, Nigeria. A pretest, posttest, control group, non randomized quasi experimental design was used in this study. The population of the study comprised all SS II students in all the secondary schools in Abakaliki Urban offering financial accounting. Out of the fourteen secondary schools in Abakaliki offering financial accounting, four secondary schools were selected. Two schools were assigned to the treatment group while the other two were assigned to the control group. A total number of one hundred and sixty-three students offering financial accounting were used for the study. Instructional packages were developed, one for the treatment group and the other was for the control group. Instructional scaffolding was used for teaching the treatment group while the control group was subjected to the conventional method of teaching financial accounting. The financial accounting achievement test was used for collection of data. The data were analyzed using mean and standard deviation while the analysis of co-variance was used to test the hypothesis. The result showed that instructional scaffolding method was superior to the conventional method in improving the achievement of students in financial accounting. The summary of the result showed that instructional scaffolding when used as a teaching approach will improve on the achievement of students in financial accounting and the researcher recommended that financial accounting lessons should be taught using scaffolding method for effective teaching and learning.

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Citation: Nonye Azih and Nwosu, B. O. 2017. "Improving the achievement of students in financial accounting through the use of instructional scaffolding in secondary schools", *International Journal of Current Research*, 9, (05), 51621-51624.

INTRODUCTION

Scaffolds are temporary structures that physically support workers while they complete jobs that would otherwise be impossible. Scaffolds provide workers with both a place to work and the means to reach work areas that they could not access on their own (Cherbert and Herber, 1993). Instructional scaffolding is the role of teachers and others in supporting the learner's development and providing support structures to get to that next stage or level (Raymond, 2000). It is a teaching strategy that depends heavily on the idea that children come to any educational setting with a great deal of pre-existing knowledge some of which may be naïve or incorrect. It is the process of building on what a student already knows that makes scaffolding an effective instructional technique. Raymond (2000) observed that Instructional scaffolding as a teaching strategy originated from Lev Vygotsky's socio-

cultural theory and his concept of the zone of proximal development (ZPD) His socio cultural theory proposes that social interaction plays a fundamental role on the development of cognition. He believes that learning occurs through the participation in social or culturally embedded experiences. In his views the learner does not learn in isolation, instead learning is strongly influenced by social interactions, which take place in meaningful contexts. Children's social interaction with more knowledgeable or capable people and their environment significantly affect their ways of thinking and interpreting situations. The activities provided in scaffolding instruction are just beyond the level of what the learner can do alone. An important aspect of scaffolding is that the scaffolds are temporary. Scaffolds are introduced at the Zone of Proximal Development (ZPD) level. ZPD is the distance between what children can do by themselves and the next learning that they can be helped to achieve with competent assistance (Alber, 2014). As the learners abilities increase the scaffolding provided by the more knowledgeable person is progressively withdrawn. Finally, the learner is able to complete the task or master the concepts independently (Chang, Sung and Uhem, 2002). Northern Illinois University

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(2008) explained that one of the main benefits of scaffolded instruction is that it provides for a supportive learning environment. Instructors are caring and interested in helping students learn. Students are free to ask questions, provide feedback and support their peers in learning new material. They further observed that instructors who use instructional scaffolding become more of a mentor and facilitator of knowledge than the dominant content expert. This teaching style provides the incentive for students to take a more active role in their own learning. Students share the responsibility of teaching and learning through scaffolds that require them to move beyond their current skill and knowledge levels. Through this interaction, students are able to take ownership of the learning event. The need to implement a scaffold will occur when you realize a student is not progressing on some aspect of a task or unable to understand a particular concept.

Accounting may be defined as the process of recording, classifying, summarizing, analyzing and interpreting financial transactions and communicating the results thereof to interested users (Chukwu, 2004) Financial accounting is one of the subjects studied in the senior secondary schools. It is among the subjects offered in West African School Certificate Examination and National Examination Council, which equips its recipients with reasonable skills that will prepare them for gainful employment. It prepares students for further study in the areas of accountancy, business education and other management courses in institutions of higher learning; and enables students prepare simple accounts of small business organizations and be able to read and interpret correctly financial statements of organizations. The poor performance of students in financial accounting is evident in the overall results of students in such examinations as the general certificate in education (G.C.E); Senior Secondary School Certificate Examinations S.S.C.E and National Business and Technical Examination Board (NABTEB) (Ekwue, 2004).

The traditional methods of teaching financial accounting such as the discussion method, demonstration method, Socratic method and project methods have been used but they seem to have failed to increase the level of achievement of students in financial accounting. Okon (2002) equally believes that these traditional methods are not challenging enough to the interests of the students. Scaffolding is believed to be an effective teaching technique provided it is executed effectively. Hartman (2002) observed that research and theory suggest that the educational outcomes of scaffolding can be positive, particularly when the instructor is well prepared and aware of the theoretical basis for the technique. This study therefore tries to ascertain how instructional scaffolding can improve the achievement of students in financial accounting.

Purpose of Study

The main purpose of study was to determine the impact of instructional scaffolding on the achievement of students in financial accounting.

Research Questions

The study was guided by the following research question:

- What impact will instructional scaffolding have on the achievement of students in financial accounting?

Hypothesis

The following null hypothesis, which was tested at an alpha level of 0.05 level of significance guided the study:

H₀₁: The mean achievement scores of senior secondary school students taught financial accounting using instructional scaffolding and those taught using the conventional method of teaching will not differ.

MATERIALS AND METHODS

The study used pre-test, post-test, control group, non-randomized quasi experimental research design. The experimental and control groups were used and there was no randomization of subjects hence intact classes were used. The population of the study comprised all SS11 students in fourteen (14) secondary schools offering financial accounting within Abakaliki Urban. Four secondary schools made up of two co-educational schools, one boys school and one girls school were sampled out of the entire population. Out of the four schools sampled two of them were assigned to the treatment group while the other two were assigned to the control group. The instrument for data collection was a Financial Accounting Achievement Test (FAAT) designed to measure students' achievement in financial accounting.

The experimental procedure was carried out as thus: Two instructional packages were developed by the researcher. The first package was based on Instructional Scaffolding method while the second package was based on traditional method. The questions were drawn from the same curriculum. 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 follow the lesson procedure developed from the instructional package during the pre-experimental training. The treatment groups were taught using the instructional package for the experimental group while the control groups were taught using the instructional package for the control group. This experiment lasted for six 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 data was collected using this procedure: At the beginning of the experiment, the FAAT was administered to both treatment and control groups as pre-test. This was performed by the subject teachers. After answering the questions in the pretest, they were collected from the students. The same instruments were administered to the students at the end of the experimental period, which is six weeks. These served as post-test. The responses obtained from the pre-test and post-test were subjected to analysis using both inferential and descriptive statistics. The collected data was analyzed. Mean and standard deviation were used to answer the research questions while the analysis of co-variance (ANCOVA) was used to test the hypothesis at an alpha level of 0.05.

RESULTS

What impact will instructional scaffolding have on the achievement of students in financial accounting?

Data used for answering the research question was obtained using financial Accounting Achievement Test (FAAT) for both

the treatment and control groups. The mean for pretest and post test were adjusted statistically in the analysis to take care of the initial equivalence of the research subjects. Summary of the result is shown below:

Table 1. Mean Achievement Scores of Students Taught Financial Accounting using Instructional Scaffolding and those taught using Conventional Method

| Group | Mean | Std | N |
|---------------------------|-------|-------|----|
| Instructional scaffolding | 51.61 | 10.66 | 83 |
| Conventional method | 34.42 | 14.59 | 80 |

The findings in Table 1 showed that instructional scaffolding approach of teaching financial accounting is better than the conventional method of teaching financial accounting in improving students' achievement in financial accounting. As indicated in the table, instructional scaffolding yielded a mean achievement score of 51.61 with a standard deviation of 10.66 while the conventional approach yielded a mean score of 34.42 and a standard deviation of 14.59.

Ho: The mean achievement scores of senior secondary school students taught financial accounting using instructional scaffolding and those taught using the conventional method of teaching will not differ.

The result of the test of hypothesis is shown below:

Table 2. Analysis of Covariance for Students Achievement in Financial Accounting based on Teaching Methods

| Sources of Variation | Sum of Square | DF | Mean Square | F | Fcv |
|----------------------|---------------|----|-------------|---------|------|
| Covariates | 21214.545 | 1 | 21214.545 | 935641 | |
| Main effects | 10702.582 | 2 | 5351.291 | 236.012 | |
| Methods | 8383.063 | 1 | 8383.063 | 369.725 | 3.86 |

In the ANCOVA table hypothesis 1 shows that the f-calculated (369.725) is greater than the f-critical value (3.86) at an alpha level of 0.05. Since the decision rule is to reject the null hypothesis when the calculated value exceeds the critical value at a given alpha level. The null hypothesis is therefore rejected. This is to say that there is a significant difference in the mean achievement scores of students taught financial accounting using instructional scaffolding approach and those taught using conventional methods.

DISCUSSION

Impact of Instructional Scaffolding on the Achievement of Students in Financial Accounting

The findings in Table 1 revealed that instructional scaffolding approach of teaching financial accounting is better than the conventional method in improving students' achievement in financial accounting. In the table, instructional scaffolding yielded a mean achievement score of 51.61 with a standard deviation of 10.66 while the conventional method yielded a mean score of 34.42 and a standard deviation of 14.59. The test of significance of difference in the mean achievement of students taught financial accounting using instructional scaffolding and those taught using the conventional method as shown in the ANCOVA table shows that the calculated f-value is 369.725 which is greater than the f-critical value of 3.86 at an alpha level of 0.05. On the basis of this result null

hypothesis was rejected by the researchers and they concluded that there is a significant difference in the mean achievement scores of students taught using instructional scaffolding approach and those taught using conventional method. This finding agrees with the views of Raymond (2000) and Brynes (2001) on the effectiveness of instructional scaffolding as a teaching approach. They believed that a teacher should provide scaffolds or supports to facilitate effective teaching and learning. The instructional scaffolds facilitate a students' ability to build on prior knowledge and internalize new information. The findings also agreed with the views of Chang, Sund and Chemn (2002) who observed that an important aspect of instructional scaffolding is that the scaffolds are temporary. As the learners' abilities increase the instructional scaffolds provided by the teacher is progressively withdrawn, finally the learner is able to complete or master the concepts independently. Northern Illinois University, Faculty Development Center also observed that one of the benefits of scaffolded instruction is that it provides a supportive learning environment. In a scaffolding learning environment, students are free to ask questions, provide feedback and support their peers in learning new material. When you incorporate scaffolding in the classroom, you become more of a mentor and facilitator of knowledge rather than the dominant content expert. This teaching pattern makes the students to take active role in the lesson thereby improving their level of achievement in the subject.

Conclusions

Instructional scaffolding is better than the conventional methods of teaching financial accounting in improving on the achievement of students' interest in financial accounting.

Recommendations

Teachers of financial accounting should guide students to perform accounting skills independently. Since instructional scaffolding approach sensitizes students to work and solve problems independently which shows that it is a good instructional approach. Curriculum planners should adopt instructional scaffolding as a teaching method for teaching financial accounting. Workshops, seminar, and symposiums should be organized for teachers on the importance of using instructional scaffolding approach in teaching financial accounting.

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