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EFFECTS OF CLASS-WIDE PEER-TUTORING ON SLOW LEARNERS' ACHIEVEMENT IN FINANCIAL ACCOUNTING IN OYO STATE

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Abstract

The study investigated the effects of class wide peer-tutoring (CWPT) on slow learners' achievement in financial accounting. The study adopted a quasi experimental design; specifically, pre-test post-test non-equivalent control group design. Two research questions were raised and answered while two null hypotheses were tested at 0.05 level of significance. A total of 39 Senior Secondary School slow learners participated in the study. Financial Accounting Achievement Test (FAAT) instrument was used for data collection which was validated by experts in measurement and evaluation and financial accounting education. Reliability of the instrument was tested using test-retest method which yielded a correlation coefficient of 0.83. The arithmetic mean was used to answer the research questions while Analysis of Covariance (ANCOVA) was used in testing the null hypotheses at 0.05 level of significance. The findings from the study revealed that the slow learners who were taught financial accounting using CWPT performed higher than the slow learners taught using conventional method at post-test. The result of the study also indicated that male and female slow learners taught using CWPT were not significantly different in their achievement in financial accounting. It was recommended that teacher training colleges and faculties of education in Nigeria universities should incorporate CWPT in their curriculum so that prospective teachers will acquire basic skills for design and implementation of CWPT technique in order to improve understanding of students in the subject taught.

Background to the Study

Financial accounting is one of the key business subjects offered at Senior Secondary School level in Nigeria. Inclusion of the subject in the Senior Secondary School is to enable the students understand basic accounting principles and their applications to modern business activities (National Examination Council (NECO), 2002). No business can survive without requisite knowledge of how to keep accounting records of the day to day activities of business. In order to ensure smooth economic progress in a business, there is need for proper accounting records keeping. Therefore, there is need for adequate preparation and training of minds for record keeping in all types of business. That could be the reason for generically referring accounting as the language of business. It is an aid to trade and one of the

foundations on which the whole structure of business rests.

Financial Accounting is the art of recording, classifying, summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof. (American Institute of Certified Public Accountants (AICPA) cited in Glautier, Underdown & Morris, 2011). It measures the results of an organization's economic activities and conveys this information to a variety of users including investors, creditors, management and regulators. The objectives of financial accounting in general are to provide:

- (i) specialised instructions to prepare students for career in accounting field;
- (ii) fundamental instructions to help students assume their economic roles as consumers, workers and citizens;
- (iii) background instructions to assist students in preparing for other professional careers requiring advanced studies in accounting and,
- (iv) book keeping and accounting skills for personal use in future (Yusuff, n.d., P.1).

In 2002, National Examination Council (NECO) outlined the general objectives of studying book-keeping and accounts at Senior Secondary Schools to include:

- (i) to enable Senior Secondary Schools students appreciate the basic rules, functions and principles of accounting;
- (ii) to lay proper foundation for further study of accountancy and allied courses of higher level and
- (iii) to enable the students understand basic accounting principles and their applications to modern business activities.

These laudable objectives are not being achieved as the performance of students has been consistently poor. In recent years, the consistent poor performance of Senior Secondary School students in financial accounting in Senior School Certificate Examinations has continued to hinder achievement of the objectives for which financial accounting is included in the curriculum of Senior Secondary School. The records available at West African Examinations Council (WAEC) reveal that between 2011 and 2015, out of 101,364 students who sat for May/June financial accounting in Oyo State, only 37,426 students representing 37.29% made credits while 63,938 students representing 62.71% could not secure credit in the subject (WAEC Result Summary). One of the problems of teaching and learning of financial accounting as enunciated by Yusuff (2015) is poor academic performance. Although other factors could be attributed to the poor performance, the way a subject is taught has a significant effect on students assimilation and retention. The performance of students in any subject may be influenced by the overall performance of slow learning students in a group of students. However, if such slow learners are given special attention like being taught using

innovative method could enhance their performance. In a study conducted by Azubuike (2012), it was revealed that slow learners who were taught biology concepts using peer-tutoring instructional strategy performed higher than those taught biology using expository method. It is on the basis of this that this study was conceived to see whether the application of new teaching methods by financial accounting teachers could improve the performance of slow learners.

Slow learners have been defined by Shaw, Grimes and Bulman (2005) as students who are doing poorly in school, yet are not eligible for special education. Borah (2013) defined slow learners as students with below average cognitive abilities whom cannot be termed as disabled. Borah (2013) emphasised that slow learners struggle to cope with the traditional academic demands of the regular classroom but the problem is that they are simply not interested in studying under traditionally accepted system of education. Slow learners in classroom respond to learning poorly and this could have negative impact on their achievement in subjects taught by the teachers.

Olawoyin (2015) viewed achievement as the result of one's previous effort towards a particular goal. Olawoyin (2015) further asserted that achievement could either be low or high and achievement in class room setting is measured through conduct at tests or examinations either in objective, essay or oral form. The test instrument is coined based on what the students have so far been exposed to during the teaching and learning process.

Topping (2005) defined class-wide peer tutoring as breaking the entire class into dyads. Each child participates by providing prompts, error correction and help to their partners. Students are given task cards to keep them focused on the objectives of lesson. The tutors take the task cards and fill in. The main benefit of this approach is that the entire class is involved in the tutoring activity. In class-wide peer-tutoring, the class splits into two in which one acts as a tutor while the rest maintains position of tutees. In this type of method, the role of a subject teacher is to monitor the students during the tutoring process and to intervene in class discussion if necessary.

Purpose of the Study

The purpose of this study was to determine the effects of class wide peer-tutoring on slow learners' achievement in financial accounting. Specifically, the study determined:

1. mean achievement scores of slow learners taught financial accounting using CWPT and those taught using conventional method.
2. mean achievement scores of male and female slow learners taught financial accounting using CWPT.

Research Questions

The following research questions guided the study:

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1. what are the mean achievement scores of slow learners taught financial accounting using CWPT and those taught using conventional method?
2. What are the mean achievement scores of male and female slow learners taught financial accounting using CWPT?

Null Hypotheses

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

1. there is no significant difference between the mean achievement scores of slow learners taught financial accounting using CWPT and those taught using conventional method.
2. there is no significant difference between the mean achievement scores of male and female slow learners taught financial accounting using CWPT.

Method

The study adopted quasi-experimental research design of non-equivalent pre-test and post-test control group. The design was considered appropriate as intact classes were used. The area of the study was Oyo Education Zone of Oyo State. Oyo Education Zone was made up of four local government areas namely; Afijio, Atiba, Oyo East and Oyo West. All local governments in this area possessed common educational and cultural characteristics Oyo Education Zone occupies a total landspace of 3,149km² and had a total population size of 562,501 people (National Population Census, 2006). The major occupation of the people are farming, trading and teaching.

The population of the study was 6,342 students in all senior secondary schools (SS II) in the year 2014 in Oyo Education Zone. This number was made up of 2,251 males and 4,091 females. The SS II class was chosen for the study because they were preparing for Senior School Certificate Examination.

The sample consisted of thirty nine (39) Senior Secondary School two (SS II) financial accounting slow learners (16 males and 23 females) from six intact classes randomly sampled using simple random sampling technique from two senior secondary schools in Afijio local government area of Oyo Education Zone which had fifteen co-educational public senior secondary schools. Afijio local government area was selected through purposive sampling technique from the four local government areas in Oyo Education Zone. This selection was based on the fact that all local government areas have similar educational and cultural characteristics. Therefore, Afijio local government area was a representative of the four local government areas' characteristics. The two Senior Secondary Schools were selected through simple random sampling technique from the fifteen co-educational public senior secondary schools in Afijio local government area. Simple random sampling technique was also adopted in assigning the two schools to experimental group (E) with 18 slow learners and control group (C) with 21 slow learners. In each of the schools, all the identified slow

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learners in SS II were used for the study. The slow learners in each of the SS II classes were identified by their financial accounting teachers based on the following characteristics:

- a. ability to learn necessary academic skills at a rate and depth below average of same age peers.
- b. scores were consistently low in achievement tests.
- c. masters skills slowly; some skills may not be mastered at all

The slow learners in all arms of SS II in the experimental and control schools were used for the study. The teaching of the lesson in both experimental and control groups took place after school hours. The peer tutors were made to teach the slow learners in the experimental school after school hours in the evening while the regular financial accounting teacher in the control school taught the control group using traditional method. The peer tutors taught financial accounting using the language level of the tutees for easy understanding. The peer tutors also taught the financial accounting sequentially to the tutees following the lesson step by step. the financial accounting teacher in the experimental group monitored the students and intervened in their discussion when necessary.

The instrument titled Financial Accounting Achievement Test (FAAT) adapted by the researcher based on the WAEC and NECO past questions between 2006 and 2010 was used to collect data for the study. The instrument was divided into two sections, section A sought the students bio data while section B was made up of 40 multiple choice objectives test items with five answer options. The instrument covered four content areas in SS II financial accounting syllabus, namely; depreciation account, manufacturing account, partnership account and shares issues terminologies. The 40 objective test items were used for both pre-test and post-test, except that they were reshuffled before they were given as post-test. The pre-test was used to establish the base line of slow learners before the start of the treatment while the post-test was used to determine the effects of CWPT on achievement of slow learners in financial accounting in Senior Secondary School.

The instrument was subjected to both content and face validities. The content validity was accomplished by ensuring that the test reflected the test blue print. Face validity was established by evaluation of the test items by two lecturers in the Department of Vocational Education and a lecturer in test and measurements from the department of Education Foundation, Nnamdi Azikiwe University, Awka.

In order to ensure that the items were consistent, test-retest reliability procedure was adopted. The instrument was administered on twenty slow learners from Senior Secondary Schools in Ogbomoso Education Zone. FAAT was administered on two occasions on slow learners with an interval of two weeks as interval of 7-14 days was appropriate (Nworgu, 2006). The scores obtained from the tests were correlated using Pearson Product Moment correlation which produced a reliability coefficient of 0.83. This value was considered as an acceptable level of reliability. This was supported with the view of Ogundare (2008) that 0.7

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or above is an acceptable reliability value.

FAAT was administered as pre-test to both the experimental and control groups before treatment. Post-test was administered after the teaching of financial accounting for a period of six weeks. Each item of the instrument was allotted one mark to make a total of 40 marks which was the highest mark expected to be scored. The scores were thereafter converted to percentages by dividing each student's score by 40 multiplied by 100.

The research questions were answered using mean and standard deviation. The null hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). In answering research questions, excess of post-test mean scores over pre-test mean scores indicated mean gain. In the test of null hypotheses using ANCOVA, p-value was used to determine the rejection or otherwise of the null hypotheses. Null hypothesis was rejected if p-value was less than or equal to the level of significance (0.05) otherwise, it was not rejected.

Data Analysis

Research Question 1

What are the mean achievement scores of slow learners taught financial accounting using CWPT and those taught using conventional method?

Table 1

Mean achievement scores of slow learners in experimental and control groups.

Subjects	Pre-test		Post-test		Mean Gain
	No	X	SD	X	SD
Experimental Group	18	23.00	5.22	69.72	8.12
Control Group	21	22.19	5.00	52.42	7.33

Table 1 shows that the mean achievement scores of slow learners in experimental and control groups are 69.72 and 52.42 respectively at post-test. The mean gain which represents the difference between the post-test mean scores of slow learners in the two groups is 17.30. This is an indication that the mean achievement score of slow learners in experimental group was higher than the mean achievement score of those in control group. This may be due to treatment given to experimental group.

Research Question 2

What are the mean achievement scores of male and female slow learners taught financial accounting using class wide peer-tutoring?

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Table 2

Mean achievement scores of male and female slow learners in experimental group.

Subjects	No	Pre-test		Post-test		Mean Gain
		X	SD	X	SD	
Male	7	23.57	6.13	68.14	8.43	2.59
Female	11	22.64	4.84	70.73	8.15	

Table 2 reveals that post-test mean achievement scores of males and females slow learners in the experimental group are 68.14 and 70.73 respectively. The mean gain derived is 2.59. This shows that female slow learners had higher post-test mean achievement scores than male slow learners in the experimental group.

Test of Null hypotheses

Null Hypothesis 1

There is no significant difference between the mean achievement scores of slow learners taught financial accounting using class wide peer-tutoring and those taught using convention method.

Table 3

Summary of ANCOVA of slow learners achievement scores in financial accounting in experimental and control groups after the treatment.'

Source	Sum of Square	Df	Meansquare	F	p-value	Decision
Groups	2898.68	1	2898.68	48.87	0.00	Rejected

Table 3 shows that at 0.05 level of significance for 1 df, the p-value is 0.00 which is lower than the level of significance (0.05). There exists enough evidence to reject the null hypothesis that there is no significant difference between the mean achievement scores of slow learners taught financial accounting using class wide peer-tutoring and those taught using conventional methods. The outcome of the analysis is a reflection of significant difference between the post- test mean achievement scores of slow learners taught financial accounting in both experimental and control groups.

Null Hypothesis 2

There is no significant difference between post test mean achievement scores of male

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and female slow learners taught financial accounting using class wide peer-tutoring.

Table 4:
Summary of ANCOVA of male and female slow learners achievement scores in financial accounting in experimental group after the treatment..

Source	Sum of Square	Df	Mean square	F	p-value	Decision
Gender	28.57	1	28.57	0.42	0.53	Not Rejected

A look at Table 4 shows that at 0.05 level of significance for 1 df, the p-value of 0.53 which is higher than the level of significance (0.05) was obtained. There exists enough evidence not to reject the null hypothesis that there is no significant difference between post-test mean achievement scores of male and female slow learners taught financial accounting using class wide peer-tutoring. This shows that male and female slow learners taught financial accounting using class wide peer-tutoring are not significantly different in their posttest mean achievement scores.

Discussion of Findings

The results from Table 1 showed that there was a higher mean gain between the mean achievement scores of the slow learners in the experimental group than that of control group. This indicated that the slow learners achievement in both groups are far from each other. In the same vein, when ANCOVA was used to test the null hypothesis 1 as reflected in Table 3, the result indicated that there was significant difference between the mean achievement scores of slow learners taught financial accounting using class wide per-tutoring and those taught using conventional method. This was in agreement with the findings of Azubuike (2012) Igboanugo (2013) and Olawayin (2015), Azubuike (2012) pointed out that the slow learners taught Biology using peer-tutoring performed better than those taught using conventional method. Also, Igboanugo (2013) and Olawayin (2015) revealed that there was significant difference between the mean achievement scores of students taught business studies using reciprocal peer-tutoring and those taught using conventional method.

Based on the results of research question 2 shown in Table 2, male and female slow learners taught financial accounting with classwide peer-tutoring had a very low mean gain in their post-test while the findings from test of hypothesis 2 in table 4 showed that there was statistical insignificance between the male and female slow learners achievement scores at posttest. This was an indication that male and female slow learners in the treatment group scored very closely at post test. This means that there was no significant difference between the mean achievement scores of male and female slow learners.

The outcome of this study lends credence to the findings of Obiunu (2008) which

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disclosed that sex has no significant impact on the career decision making process of subjects in the treatment (RPT) group at post test. Also, Abubakar and Adegboyega (2012) reported that gender was insignificant in the academic performance of students in mathematics. In contradiction to the findings above, Kolawole (2007) found that male students performed better than female students in the cognitive affective and psychomotor skills achievement. In addition to that, Okoli and Egbunonu (2012) found that male students exposed to lecture method achieved higher than their female counter parts in biology.

Conclusion

On the basis of the findings of this study, the following conclusions were drawn:
There was significant difference between the mean achievement scores of slow learners taught financial accounting using CWPT and those taught using conventional method. The study also reflected that there was insignificant difference between the mean achievement scores of male and female slow learners taught financial accounting using CWPT at post-test. The slow learners taught financial accounting using CWPT performed better than those taught using traditional method.

Implications of the Study

The study provides empirical proof that a participation in a conducive learning environment which provides the opportunity for students to teach themselves could bring about improved performance due to understanding of the subject in the process of teaching and learning. CWPT increased achievement in the experimental group.
Based on the observed effects of CWPT on the population of students, it is crucial that teachers should adopt classroom activities that encourage active participation of students and the exploration of the in-built knowledge of peers since they can perform very well, when they teach one another than the teachers teaching them as reflected in the result of this study.

Recommendations

- Based on the findings of this study, the following recommendations were made:
1. Curriculum planners should include class-wide peer-tutoring as instructional strategy to enhance achievement of slow learners.
 2. Teacher training colleges and faculties of education in Nigerian universities should incorporate CWPT in their curriculum so that prospective teachers will acquire basic skills for design and implementation of class wide peer-tutoring instructional strategy and thereby adopt same in the classroom.
 3. Teachers should adopt class wide peer-tutoring as innovative approach for teaching financial accounting to slow learners so as to improve their achievement.

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