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EFFECT OF COOPERATIVE LEARNING STRATEGY ON STUDENTS' ACADEMIC ACHIEVEMENT AND INTEREST IN FINANCIAL ACCOUNTING IN ABIA STATE

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Abstract
This study determined the effect of cooperative learning strategy on secondary school students' academic achievement and interest in Financial Accounting in Abia State. Two research questions and two null hypotheses guided the study. The design of the study was quasi-experimental design, with pretest and posttest non-equivalent control group. The population of the study comprised 846 public senior secondary school two (SS 2) students in Abia State. A sample of 55 students was drawn using purposive sampling technique for the study. The instruments for data (achievement test – FAAT, and interest questionnaire – FAIQ) were validated by three experts. Reliability coefficients of 0.80 and 0.79 were obtained using Kudder Richardson formula 20 and Cronbach's alpha respectively. Mean and standard deviation were used to answer the research questions and ANCOVA was used to test the null hypothesis at 0.05 level of significance. The findings revealed that the students taught financial accounting using cooperative learning strategy performed better than their counterparts taught using lecture method. Also, cooperative learning strategy enhanced the interest of students more than those taught using lecture method. Based on the findings of the study, it was concluded that cooperative learning strategy has proved to be more efficacious in enhancing students' academic achievement and interest in Financial Accounting than lecture method. Two recommendations were made based on the findings of the study.
Keywords. Cooperative Learning, Academic Achievement, Financial Accounting, Interest
Introduction.

Introduction

Accounting is an act of identifying, interpreting and disseminating information on the financial state of a business for easy assessment by the financial users for a particular purpose. Accounting as an important aspect of any business, plays a major role in stating the financial condition of an organization and interpreting the mode of operation as well as the income, profit and loss of an individual or organization. Audu, Aigboduwa and Okoye (2013) defined accounting as an integrated discipline which is found in diverse areas of socio-economic activities. The American Institute of Certified Public Accountants (AICPA, 2010) defined accounting as the act of identifying, recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are of financial character and interpreting the result thereof. Accounting is classified into three major branches. They are cost accounting, management accounting and financial accounting. In this study, financial accounting is to be considered.

Financial accounting is one of the branches of accounting that deals on the profit and loss of a business in a particular period of time. It is one of the core subjects of vocational education

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taught at the senior secondary level of education. Thomas and Ward (2009) defined financial accounting as the act of classifying and recording of monetary transactions and of the financial results of the activities of an entity. It is the basic fundamentals which guide accountants in recording, appreciating and assessing accounting information as well as the preparation and interpretation of financial statements. Igben (2004) opined that financial accounting is the process of collecting, recording, presenting, analysing and interpreting financial information for the users of financial statements.

The major aim of teaching and learning exercise is to promote learning about financial matters. Ayeni (2011) asserted that teaching is a continuous process that involves bringing about desirable changes in learners through the use of appropriate teaching methods. The general objectives of teaching financial accounting at senior secondary school level is to prepare the students who want to further offer the subject at advanced level and lay proper foundation for those students. Osuala (2009) posited that the aims of financial accounting are to give students additional vocational skills that will enhance their opportunities for future occupational success; to enable students become proficient in financial accounting transactions and management; to equip students with better understanding of business practice and procedure; to provide vocational training to students in the practical knowledge of daily recording of activities; and to help students understand the cycles and steps involved in financial accounting so that the relations of each step to others are properly understood. Francis (2014) opined that every individual irrespective of the social status requires the knowledge of financial accounting to meet daily activities.

These important objectives of introducing the subject might not be achieved or realized if the financial accounting teachers' roles are not properly played. According to Braun and Sellers (2012), the roles of financial accounting teachers are to teach their students communication skills, positive work ethics and appropriate professional behaviour besides providing them with accounting knowledge and skills. Accounting Education Change Commission (AECC) cited in Raluca (2016) stated that accounting programs should not focus primarily on memorization of technical facts but students should be taught skills and strategies that will help them to learn more effectively and how to use the effective learning strategies to continue to learn throughout their lifetimes. The use of appropriate teaching method enhances the academic achievement of students.

Achievement is the level of success made by an individual or a group of people after carrying out a task. Academic achievement is an academic position a student occupies in his class against the position of others in the class. It is the outcome a student attains after being subjected to lessons or task within a period of time. Agboh (2015) stated that academic achievement is the learning outcome - the determination of the extent to which a student has achieved her educational goal, and which can be measured by any form of assessment technique. Akinbobola (2006) described achievement of students as learning outcomes which include the knowledge, the skill and experiences acquired in both classroom and laboratory practices. It has been recorded that despite the efforts made by the teachers, parents, Government and students over the years to improve the performance of students, there has been consistent low performance of students in financial accounting. The Head of National Officers reports (WAEC, 2018) announced the decline in the overall performance of candidates that obtained credit pass and above in minimum of five subjects including general subjects and Financial accounting, from 59.22 percent in the year 2017 to 49.98 percent in 2018 May/June examinations. The poor performances in the subject and other core subjects have made a lot of business subject students unable to gain admission into tertiary institutions. Musa (2015) had earlier observed that a

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number of students in Federal Government Colleges in Nigeria wrote WAEC and NECO examinations a number of times before they passed financial accounting and other important subjects. The author further stated that some of these students still failed after several attempts, resulting to inability to get admission into institutions of higher learning and some students cannot even start their own businesses to be self a reliance due to lack of skills.

Teaching-learning experience has shifted from teacher-centered method to students-centered method. Chang (2002) opined that teaching methods work effectively mainly if they suit learner's needs since every learner interprets and responds to questions in a unique way. Cooperative learning strategy is one the student-centered teaching methods that promotes interaction among students during lesson. Cooperative learning strategy is teaching method whereby the students are split into heterogeneous groups to carry out a task or project or assignment, the teacher acts as a guide or facilitator. Jimoh, Idris and Olatunji (2016) described cooperative learning as an instructional method that allows students to learn in group under the guidance of a teacher. The authors defined cooperative learning as an instructional process in which students learn by working in small groups and helping one another to learn for a common goal. Cooperative learning is a teaching method that involves students in learning process in order to understand and learn content of the subject (Slavin, 2011). Gull and Shehzad (2015) opined that cooperative learning has edge over other teaching methods in terms of its effectiveness for improved cognition, social skills and motivation.

Cooperative learning strategy is not just about splitting and arranging the students to sit in groups during lessons, it requires careful monitoring of learning by the teacher or facilitator to ensure that the students are doing what they are expected to do in their various groups for effectiveness. Bennett and Rolheiser in Grech (2013) noted that ill-conceived group work is one of the least effective approaches in the teaching and learning process. Egbulefu, Amaele and Sunday (2015) adduced that cooperative learning is the instructional use of small groups in such a way that student's work together to achieve shared goals. The students in cooperative learning groups which should be heterogeneous deliberately work actively and interdependently to achieve their goals for individuals and the group or team. Opedcam and Everart (2012) identify died five basic characteristics of team-based learning whereas George (2004) called them cooperative learning principles proposed for cooperative learning. They are; heterogeneous grouping, collaborative skills, group autonomy, simultaneous interaction, individual accountability, equal participation, positive interdependence and cooperation as a value. To enhance achievement among students in financial accounting, teaching method that promotes interaction among students is essential hence the need for use of appropriate teaching method. Boyle and Dunleavy in Agboh (2015) stated that students' achievement in learning are determined by factors such as teacher's ability, motivation, interest, meaningfulness of subject matter, methods of instruction, memory capacity of the learners and gender of the students.

Interest is an act of having a person's attention engaged in something. Igboanugo (2011) asserted that interest as an aspect of affective domain is a construct that has to do with one's readiness to like or dislike something. It could be aroused in individual by activity that tends to satisfy the individual's needs (Geoscience, 2007). Suwaid and Dambata (2009) opined that low interest leads to poor achievement of students. Mtseem in Alachi, Owadara and Iwu (2016) affirmed that teaching method affects the responses of students and determines their level of motivation, interest and involvement in a lesson in such a way that promotes achievement.

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Purpose of the Study

This study determined the effect of cooperative learning strategy on secondary school students' academic achievement and interest in Financial Accounting in Abia state. Specifically, the study ascertained the:

1. Difference between the mean achievement scores of students taught financial accounting with cooperative learning strategy and those taught with lecture method.
2. Difference between the mean interest scores of students taught financial accounting using cooperative learning strategy and those taught with lecture method.

Research Questions

The following research questions guided the study:

1. What is the difference in the mean academic achievement scores of students taught financial accounting with cooperative learning strategy and those taught with lecture method?
2. What is the difference in the mean interest scores of students taught financial accounting with cooperative learning strategy and those taught with lecture method?

Research Hypotheses

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

1. There is no significant difference in the mean academic achievement scores of students taught financial accounting using cooperative learning strategy and those taught with lecture method.
2. There is no significant difference in the mean interest scores of students taught financial accounting using cooperative learning strategy and those taught with lecture method.

Methods

The study employed quasi-experimental design, with pretest-posttest non-equivalent control. According to Nworgu (2015), quasi experimental design is a kind of experimental design where random assignment of subjects or respondents to experimental and control groups is not possible. The justification for the choice of this design is because there was no room for randomization of the subject. Hence, intact classes were used for the study. The population comprised of 846 public senior secondary school two (SS 2) financial accounting students of the 2018/2019 session in Abia State. A sample of 55 SS 2 financial accounting students was drawn from four public schools for the study, which is made up of two intact classes each for experimental and control groups. Multistage sampling technique was adopted. First stage involved school selection, while the second stage involved assigning of groups. To select the schools for the study, simple random sampling technique was employed. While purposive sampling technique was adopted in assigning groups such that there wer two schools for the experimental group (n = 25) and two schools for the control group (n = 30).

The instrument used for collected data were financial accounting achievement test (FAAT) adapted from WAEC past question between 2007 and 2017 based on the financial accounting topics of accounting for non-profit making organizations and manufacturing account which was part of the scheme of work for SS2 students. Also, financial accounting interest questionnaire (FAIQ) was used to measure the interest of students in financial accounting. FAAT and FAIQ were used for pretest and posttest. The instruments were validated by three experts. The

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instruments were subjected to reliability test using Kudder Richardson formula 20 (KR-20) and Cronbach's alpha respectively. The reliability coefficients are 0.80 and 0.79 respectively.

The regular financial accounting class teachers were used for the study in both experimental and control groups. Before the experiment in each of the sampled schools, pretest was used to stratify the students into heterogeneous groups. Then, groups of mixed abilities were formed in the class. The financial accounting teachers were briefed on the modalities for the experimental group on the application of the cooperative learning strategy. The teacher explained the features and practice of cooperative learning instructional strategy to the students. The lecture method was used in the control group without stratifying the students. The experimental class teacher was given note of lesson prepared by the researcher while the researcher vetted the lesson plan prepared by the financial teacher in the control group to ensure that the teacher did not deviate from the procedures of instructions commonly used. The procedure lasted for six weeks. The data were analyzed using mean and standard deviation scores to answer the research questions and analysis of covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question 1. What is the difference in the mean academic achievement scores of students taught Financial Accounting with cooperative learning strategy and those taught with lecture method?

Table 1. The mean achievement scores of students taught Financial Accounting using cooperative learning strategy and lecture method

Groups	N	Pre-test Mean	SD	Post-test Mean	SD	Mean Gain
Experimental	25	17.00	2.27	58.04	6.07	41.04
Control	30	14.17	4.73	31.23	7.17	17.06
Mean Difference		02.83		26.81		23.98

Table 1 shows that the post-test mean score of 58.04 for the experimental group is greater than their pre-test mean score of 17.00, with a mean gain of 41.04. For the control group, the post-test mean score of 31.23 is greater than the pre-test mean score of 14.17 with a mean gain of 17.06. Hence, the mean gain of the experimental group is almost three times that of the control group. The mean difference in the mean achievement scores between the students taught financial accounting using cooperative learning strategy and lecture method is 23.98. This shows that the cooperative learning strategy is more effective in enhancing students' academic achievement in Financial Accounting than the lecture method.

Research Question 2.What is the difference in the mean interest scores of students taught Financial Accounting with cooperative learning strategy and those taught with lecture method using their pretest and post test scores?

Table 2. The mean interest scores of students taught financial accounting using cooperative learning strategy and lecture method

Groups	N	Pre-test Means	SD	Post-test Means	SD	Mean Gains
Experimental	25	21.00	4.84	52.84	4.48	31.84
Control	20	20.77	5.33	40.43	6.34	19.66

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Table 2 shows that the post-test mean interest scores of 52.84 for the experimental group is greater than that of pre-test mean score of 21.00 with a mean gain of 31.84. In the control group, the post-test mean interest score of 40.43 is greater than the pre-test mean interest score of 20.77 with a mean gain of 19.66. Thus, the mean gain of the experimental group of is greater than that of the control group of 19.66. This shows that the cooperative learning strategy is more effective in enhancing students' interest in Financial Accounting compared to lecture method.

Hypothesis 1. There is no significant difference in the mean academic achievement scores of students taught Financial Accounting using cooperative learning strategy and those taught using lecture method.

Table 3. ANCOVA test of significant difference in the mean achievement scores of students taught Financial Accounting with cooperative learning strategy and lecture method

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Decision
Corrected Model	9540.91[a]	4	2385.23	53.29	.00	
Intercept	4706.58	1	4706.58	105.16	.00	
Pretest (Covariate)	55.23	1	55.23	1.23	.27	
Treatment	7408.30	1	7408.30	165.52	.00	S
Error	2237.92	50	44.76			
Total	114163.00	55				
Corrected Total	11778.84	54				

a. R Squared = .810 (Adjusted R Squared = .795). S= Significant

Data presented in Table 3 reveals a calculated F-ratio of 165.52 with a p-value of 0.00 which is less than the alpha level of 0.05. This means that there is a significant difference in the mean academic achievement scores of students taught Financial Accounting using cooperative learning strategy and those taught using lecture method. Therefore, the null hypothesis was rejected.

Hypothesis 2.There is no significant different in the mean interest scores of students taught Financial Accounting using cooperative learning strategy and those taught using lecture method.

Table 4. ANCOVA test of significant difference in the mean interest scores of students taught Financial Accounting with cooperative learning strategy and lecture method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Decision
Corrected Model	2117.901[a]	4	529.48	16.26	.00	
Intercept	6751.539	1	6751.54	207.38	.00	
Pre interest	3.734	1	3.73	.12	.74	
Treatment	1991.218	1	1991.22	61.16	.00	S
Error	1627.808	50	32.56			
Total	120494.000	55				
Corrected Total	3745.709	54				

a. R Squared = .565 (Adjusted R Squared = .531). S = Significant

Table 4 shows that the difference in mean interest scores of students between the groups taught using cooperative learning strategy and lecture method is significant since the worked F-

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ratio of 61.16 is significant at P <.00. The difference in the mean interest scores between the treatment groups is therefore significant at P < .05. Therefore, the null hypothesis was rejected.

Discussion

The findings of this study revealed that students who were taught financial accounting with cooperative learning strategy achieved higher posttest mean scores than those taught with lecture method. This result is in line with the study carried out by Gull and Shehzad (2015) which showed that cooperative learning strategy has positive effect on students' academic achievement than those taught social studies using lecture method. The academic achievement of students taught Financial Accounting using cooperative learning strategy differed significantly from that of students taught using lecture teaching method in favour of the experimental group. This agrees with Egbulefu, Amaele and Sunday (2015) and Altun (2015) who reported that there was a significance difference in students' academic achievement scores in favour of those taught with cooperative learning strategy. The similarities among the findings revealed that the use of cooperative learning strategy could enhance academic achievement of students in different subjects or disciplines.

Findings of the study revealed that students taught Financial Accounting using cooperative learning strategy had higher interest scores than those taught using lecture teaching method. These findings are in line with the finding of Igboanugo (2011) which revealed that cooperative learning strategy was more efficacious than the peer-teaching in enhancing students' achievement and interest in difficult chemistry concepts. Also, there is significant difference in the mean interest scores of students in the experimental group and those in the control group in favour of the experimental group. The finding also agrees with that of Umaru, Umma and Mustapha (2014) which revealed that cooperative learning strategy significantly affected students' interest and achievement in Biology.

Conclusion

Cooperative learning strategy has proved to be more efficacious in enhancing students' academic achievement in financial accounting than lecture method. Financial accounting as a subject should be taught using more cooperative learning strategy to help achieve the objectives of introducing financial accounting in senior secondary schools. The higher improvement in the mean interest scores in students exposed to cooperative learning strategy as found in the study could be as a result of some of its attributes and elements such as individual accountability, simultaneous interaction, collaborative skill and positive interdependent. Also, cooperative learning strategy enables equal participation which fosters interest and positive achievement among students.

Recommendation

1. Financial accounting teachers should encourage students to use cooperative learning strategy to enhance their academic achievement irrespective of their gender as teachers require students' cooperation for its effectiveness.
2. The Government should organize seminars, workshops and conferences so that practicing teachers in the field would be opportune to learn how to make the best use cooperative learning strategy.

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References

Agboh, I. C. (2015). Effects of computer-assisted instructional technique on Students' achievement in financial accounting in colleges of education in Southeast Nigeria. *A Research Journal of Finance and Accounting, 6*(20), 31-38.

Akinbobola, A. O. (2006). Effects of cooperative and competitive learning strategies on academic performance of students in physics. *Journal Research in Education, 3*(1), 1-5.

Alachi, S., Owadara, A. B. & Iwu, O. A. (2016). Effect of project-based method on students' achievement in physics - implication for global competitiveness. *Journal of Research in National Development, 14*(2), 104-111.

Altun, S. (2015). The effect of cooperative learning on students' achievement and views on science and technology course. *International Electronic Journal of Elementary Education, 7*(3), 451-468.

Audu, G. O., Aigboduwa, O. R. & Okoye, E. A. (2013). Structure and formulation of accounting theory: A conceptual appraisal. *The Official Journal of Nigeria Accounting Association, 4*(2), 293-308.

Ayeni, A. J. (2011). Teachers' professional development and quality assurance in Nigerian Secondary Schools. *World Journal of Education,1*(2), 143-149.

Braun, K. W. & Sellers, R. D. (2012). Using a daily motivational quiz to increase students' preparation, attendance, and participation. *Issues in Accounting Education, 27*(1), 267-279.

Chang, W. (2002). *Interactive teaching approach in year one university physics in Taiwan: Implementation and evaluation,* Asia-Pacific Forum on science learning and teaching, 3. Retrieved from: http://www.ied.edu.hk/apfslt/v3_issue1/changwj/index.htm on 6th may, 2004.

Egbulefu, C. A., Amaele, S. & Sunday, D. O. (2015). Effect of cooperative learning strategy on students' learning experience and achievement in Mathematics. *International Journal of Education Learning and Development, 3*(4), 67-75.

Francis, N. P. (2014). Climate change and implication for senior secondary school financial accounting curriculum development in Nigeria. *Journal of Education and Practice, 5*(26), 153-157.

George, J. (2004). Cooperative learning: Theory, principles and techniques. *Research gate,* James Cook University Singapore. Retrieved from: http://www.researchgate.net/publication/254097701 on 26th January, 2006.

Geoscience (2007). *The role of affective domain in geosciences learning.* Retrieved from: http://www.tki.org.nz/r/science/curricu/ on March, 2008.

Grech, E. (2013). *Implementing cooperative learning and concept mapping: their impact on student learning and attitude in intermediate accounting.* (Published Master's Thesis), University of Toronto.

Gull, F. & Shehzad, S. (2015). Effects of cooperative learning on students' academic achievement. *Journal of Education and Learning, 9*(3), 246-255.

Igben, O. R. (2004). *Financial accounting made simple*. Lagos: ROI Publishers.

Igboanugo, B. I. (2011). *Effects of cooperative learning and peer-teaching on secondary school students' achievement and interest in some difficult chemistry concept.* (Published Master's Thesis), Faculty of Education, University of Nigeria.

Jimoh, A. G., Idris, L. O. & Olatunji, B. A. (2016). Effect of jigsaw cooperative learning strategy and gender on students' academic achievement in cost accounting in colleges of

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education in Ogun state Nigeria. *International Journal of Academic Research in Education and Review, 4*(5), 150-157.

Musa, O. S. (2015). *Effect of demonstration and assignment methods on students' performance in financial accounting*. (Published Master's Thesis), Ahmedu Bello University, Zaria.

Opdecam, E. & Everaert, P. (2012). Improving student satisfaction in a first-year undergraduate accounting course by team learning. *Issues in Accounting Education, 27*(1), 53-82.

Osuala, E. C. (2009). *Business and computer education*.Enugu: Cheston Books.

Raluca, S. (2016). Using interactive methods in teaching accounting. *Studies on Business and Economics, 11*(2), 12-23.

Slavin, R. E. (2011). Instruction based on cooperative learning. In R.E. Mayer & P.A. Alexander (Eds.), *Handbook of Research on Learning and Instruction* (344-360). New York: Taylor & Francis.

Suwaid, A. A. & Dambata, S. S. B. (2009). Inculcating interest in teacher trainees: An index to sustainable development in Africa. In Holbrook, J. & Eninyeju, P. (Eds), *Proceeding of African regional conference of international council of associations for Science Education*, (101-109). Ibadon: Oluseyi Press.

Thomas, A. & Ward, A. M. (2009). Introduction to financial accounting. Retrieved from: http://www.baswaldo.com on 15th November, 2014.

Umaru, Y., Umma, A. & Mustapha, A. I. (2014). Effect of cooperative instructional strategy on interest and achievement in biology among low-achieving senior secondary school students in Niger state in Nigeria. *European Journal in Educational Sciences, 1*(2), 97-109.

WAEC (2018). Chief Examiners reports: May/June WASSCE. Lagos.

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