



Effect of Zoom Classroom Instructional Resources on Business Education Students' Academic Achievement and Retention in Financial Accounting

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Abstract

This study determined the effect of teaching Financial accounting with zoom classroom instructional resources on Business education students' academic achievement and retention in Financial accounting. Two research questions and two hypotheses guided the study which adopted pretest posttest non-equivalent group quasi-experimental design. The sample size comprised 44 year-one business education students from two intact classes drawn using purposive sampling technique. The instrument for data collection was Financial Accounting Achievement Test (FAAT). The reliability of the instrument was determined using Kuder Richardson (KR 21) formula which yielded a coefficient of 0.71. Mean score and standard deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. Results showed that zoom instructional resources had a significant effect on students' achievement and retention in financial accounting than the conventional classroom approach. It was recommended that Accounting Educators should adopt the zoom classroom instructional resources in the teaching of financial accounting as it has a higher effect on students' academic achievement and retention.

Keywords: Zoom classroom, Achievement, Retention, Financial Accounting

Introduction

One of the subjects that bring about growth and nation development is Financial accounting. Financial accounting is a core vocational business education course that plays an essential role in preparing competent professionals for the financial and business sectors of any economy. Financial accounting is a pivot upon which all vocational business education revolves. Vocational business education is an aspect of the educational programme that prepares the individual to acquire relevant skills that are needed for personal use or for employment or for managing business (Sofolahan, 2023). Dambo and Nwauzor (2023) ascertained that business education has a way of shifting the focus of students from paid employment to self-employment, with sound knowledge of the programme. They went further to explain that a graduate of business education programme can compete maximally in the world of work even without the paid employment based on

what the country is facing now currently. This has to do with acquiring the skills and competencies that are needed to carry out commerce effectively. Oladunjoye (2016) stated that business education programme provides instruction and training for office occupations like secretaries, accountants, computer operators, data processors and so on, and also exposes students to the knowledge of economic, financial, marketing, accounting and managerial aspects of business endeavor.

Ubulom and Ogwunite (2017), states that Financial Accounting helps in the acquisition of vocational skills, knowledge, attitudes, values and competencies towards solving problems and the satisfaction of real needs in life. Agbata, Okaro and Onyeogubalu (2022) upheld that Financial Accounting through all its various transformations serves as a train that moves sustainable development. In spite of the importance of Financial Accounting to

the individual and national development, Onutu (2025) stated that the poor student performance in accounting education has become a source of concern in many tertiary institutions across Nigeria.. Ijeoma and Aronu (2021) stated that research has shown that student performance in accounting is influenced by multiple factors including teaching methods, availability of resources, student attitudes, and institutional support systems. . To address the poor performance and few students enrollment into financial accounting in universities in Nigeria, Adamu and Kusa (2018) posited that there is need to shift from conventional classroom approach to zoom classroom instructional resources.

Zoom is a web-based platform that allowed users to have video conferences and share media, and is one of the most recent software-based conferences (Maduabuchukwu 2024). Nnamni and Onumba (2023) opined that zoom is an interactive audio and video programme based on cloud technology. Zoom classroom features for communication and discussion include; HD Video and Audio: which enables face-to-face virtual interaction with clear sound and video quality for individual or group participation, Breakout Rooms: which is use to divides the main class into smaller, private virtual rooms for focused group work, peer discussions, and collaborative problem-solving, Live polling: enables instructors to launch multiple-choice or single-choice questions to test student comprehension and gather instant feedback., Screen Sharing: Allows the host or participants to share documents, slides, applications, or web browsers to present instructional materials Okoroh and Omeire (2024) opined that Zoom video conferencing technology took centre stage and emerged as an essential tool of communication and information distribution, thus facilitating effective teamwork, coordination and communication in an era of social distancing and general restrictions on movement.

By this, it helps the students stay focused on group work, peer discussions, and collaborative problem-solving, which may help increase their level of academic achievement and retention in courses like Financial accounting. According to Nwanwukwu and Asiyai (2024) Academic achievement is the amount of knowledge attained by a student in achieving their short- or long-term educational goals. Ige and Omorotimi (2024) explained that academic achievement refers to the extent to which students attain learning objectives set by educational institutions. They went further to say that the

objectives encompass mastery of knowledge, critical thinking, problem-solving, and interpersonal skills. When students could achieve all these objectives, it is most likely that they could gain useful insights and knowledge on how to solve problems for themselves. This in turn may enhance their retention in financial accounting

Retention is the ability to remember and demonstrate understanding of concepts and skills over an extended period, through methods like recall, recitation, and application. According to Enwere, Ezenwafor and Eze (2020) retention is preservation of the after effects of experience and learning that makes recall or recognition possible. Retention in Financial Accounting is therefore, of great importance because the concepts are hierarchical in nature requiring students to build on already known concepts to establish unknown. Eze, Monday and Okoro (2024) stated that retention in learning is the ability to keep or retain facts, figures and information in the students' memory. The level of retention among students varies according to their abilities and skills. Therefore, the effect of zoom classroom instructional resources on business education students' academic achievement and retention in financial accounting calls for paradigm shift from teacher-centred to student-centred instructional strategies that permit active involvement of learners in the learning process such that more meaningful learning can be achieved

Literature evidence revealed that zoom classroom and other online learning platforms may be effective in improving students' achievement and retention in courses including Financial accounting. For example, Nnamni and Onumba (2023) revealed that using lecture via online medium such as zoom facilitates greater academic achievement and interest than physical lecture method in Health Education.). Edobor, Oboite and Omwanghe, (2023) revealed that the level of awareness of zoom technology among undergraduates was high. Zoom technology were used by undergraduates to interact with lecturers for instructional delivery, for cloud meetings and for video conferencing. Weli and Nwanekezi (2025) revealed that the use of Zoom Application and Google Meet as learning platforms significantly improves the academic performance of Biology concepts among students in public secondary schools in Rivers State when compared to traditional teaching methods. Okolo, Abah, Onechojo and Umoru (2022) revealed that the Biology education students were not sufficiently prepared to use zoom learning platform to

learn Biology, there were no sufficient zoom learning facilities available for Biology education students to learn Biology.

However, despite this growing body of evidence, there remains a paucity of focused empirical research investigating the specific effect of zoom classroom instructional resources on Business Education student's academic achievement and retention in financial accounting. Most existing studies either focus on other courses and other active-learning strategies. Therefore, this study seeks to contribute to filling this gap by rigorously examining the effect zoom classroom instructional resources on Business education students' academic achievement and retention in Financial accounting.

In line with the purpose of the study, the following research questions guided the study

1. What are the mean achievement scores of students' taught Financial accounting using zoom classroom and conventional classroom approach?
2. What are the mean retention scores of students taught Financial accounting using zoom classroom and conventional classroom approach?

The following hypotheses were also tested at 0.05 level of significance in line with the research questions

1. There is no significant difference in the mean achievement scores of students' taught Financial accounting using zoom classroom and conventional classroom approach.
2. There is no significant difference in the mean retention scores of students' taught Financial accounting using zoom classroom and conventional classroom approach.

Method

The design of study was quasi-experimental design specifically; a pretest-posttest non equivalent control group design. The study was carried out in Anambra state of Nigeria. The study area was used because it has universities with facilities that could facilitate the conduct of the study in the area. And also the students has iPad and laptops that could be used for zoom classrooms. The population for this study

comprised of 281 first-year business education students in universities in Anambra State. The sample for this study was made of 44 year one business education students in two universities offering business education in Anambra State. The sample size was made up of 21 business education (accountancy) students in the experimental group (11 males and 10 females), and 23 business education (accountancy) students in the control group (12 males and 11 females). Purposive sampling technique was used as intact classes were chosen for the study. The instrument that was used for the collection of data was an achievement test titled, Financial Accounting Achievement Test (FAAT). The instrument is made up of 50 multiple choice questions (with options A to E), which was standardized using item analysis. The instrument was validated by two experts in the field of business education and one expert in the field of measurement and evaluation. Kuder Richardson (K-21) formula was used to determine the reliability of the instrument which yielded a coefficient of 0.71.

The experimental procedure included installing the zoom app, briefing the research assistants, training the research assistant for the experimental group, sensitization of the participants and administration of the pre-test. The teaching approaches were applied for four weeks after which the post test was administered to both the control group and the experimental group. After the post test, the items in the instrument were reshuffled so that the students would not recognize the instrument when it will be administered to them as delay post-test (retention test). The zoom classroom instructional resources was applied for the experimental group as the teacher provided learning materials for the students before the class via the learning management system (zoom). The class time was used for solving problems and other class activities. The research assistants were the actual lecturers of the course and the students have been taught by these lecturers before. The research questions were answered using mean and standard deviation. The hypotheses were tested with Analysis of Covariance (ANOVA) 0.05 level of significance.

Results

Table 1: Mean achievement scores and standard deviation of students' taught financial accounting using zoom classroom and conventional classroom approach.

Group	Pretest			Posttest		Mean Difference
	N	Mean	SD	Mean	SD	
Experimental (Zoom classroom)	21	36.90	3.097	42.33	2.869	5.43
Control (Conventional classroom)	23	34.48	2.447	36.43	2.591	1.95

Result in Table 1 shows that the mean differences of 5.43 and 1.95 for the experimental and control groups respectively shows that zoom

classroom instructional resources had positive effect on students' achievement in financial accounting.

Table 2 Analysis of Covariance on the mean achievement scores of financial accounting student taught using zoom classroom and conventional classroom approach.

Source	Type III Sum of Square	Df	Mean Square	F	Sig.	Decision
Corrected model	477.543 ^a	2	238.772	45.175	.000	Reject Ho
Intercept	100.827	1	100.827	19.076	.000	
Pretest	95.612	1	95.612	18.089	.000	
Groups	191.881	1	191.881	36.303	.000	
Error	216.707	41	5.286			
Total	68479.000	44				
Corrected total	694.250	43				

a. R Squared = .688 (Adjusted R Squared = .673)

Table 2 shows the F value of 36.30 and the P-value was .000. since the P-value is less than the level of significance (P-value < 0.05), the F-value 36.30 shows that there is a significance difference in the mean achievement scores of financial accounting students when taught using zoom classroom

instructional resources. Thus the null hypothesis which states that there is no significant difference in the mean achievement scores of financial accounting students taught using zoom classroom instructional resources is therefore rejected

Table 3: Mean retention scores and standard deviation of Students taught financial accounting using zoom classroom and conventional classroom approach.

Group	Posttest			Delay Posttest		Mean Difference
	N	Mean	SD	Mean	SD	
Experimental (Zoom classroom)	21	42.33	2.869	46.29	1.271	3.96
Control (Conventional classroom)	23	36.43	2.591	38.83	2.516	2.4

Result in Table 3 shows that the mean differences of 3.96 and 2.4 for the experimental and control groups respectively shows that zoom

classroom instructional resources had positive effect on students' retention in financial accounting.

Table 4: Analysis of Covariance on the mean retention scores of financial accounting students taught using zoom classroom and conventional classroom approach.

Source	Type III Sum of Square	Df	Mean Square	F	Sig.	Decision
Corrected model	655.227 ^a	2	327.614	105.59	.000	
Intercept	153.888	1	153.888	49.601	.000	Reject Ho
Posttest	44.386	1	44.386	14.306	.000	
Groups	135.385	1	135.385	43.637	.000	
Error	127.204	41	3.103			
Total	79833.000	44				
Corrected total	782.432	43				

a. R Squared = .837 (Adjusted R Squared = .829)

The result in Table 4 shows the F value of 43.64 and the P-value was .000. since the P-value is less than the level of significance (P-value < 0.05), the F-value 43.64 shows that there is a significance difference in the mean retention scores of financial accounting students when taught using zoom classroom instructional resources. Thus the null hypothesis which states that there is no significant difference in the mean retention scores of financial accounting students taught using zoom classroom instructional resources is therefore rejected

Discussion

The finding of the study shows that zoom classroom had a higher positive effect on the students' achievement scores than the conventional approach. The results of this study are in line with those of Okolo, Abah, Onechojo and Umoru (2022) who found out that zoom classroom had positive effects on the academic performance of student and useful to learn biology. Nnamni and Onumba (2023) who discovered that lecturing via online medium such as zoom facilitates greater achievement and interest than physical lecture method. The finding of the study showed that there was significant difference in the mean achievement score of financial accounting students taught using zoom classroom and conventional approach. The results of this study are in line with those of Ngaruiya Kinyua and Njagi (2022) also discovered that there is a significant difference in academic achievement students taught through zoom virtual learning platform. The results of this study also reveal that business education students taught financial accounting with zoom classroom had a higher mean gain on their retention scores than those taught with conventional classroom approach. Zoom instructional resources and students' academic

retentions in financial accounting, the findings reveal that business education students taught financial accounting with zoom classroom instructional resources had a higher posttest scores on their retention scores than those taught with conventional classroom approach. The finding is in line with Ajayi (2025) who revealed that there was a significant difference between the post-test performance of students in the experimental and the control groups. Another finding from Bupo and Ibeneme (2022) also discovered that business education students taught Financial Accounting with flipped classroom approach had a higher mean gain on their retention scores than those taught with conventional classroom approach. Eze, Ezenwafor and Obidile (2016) revealed that students who were taught financial accounting using problem-based teaching method (PBTM) achieved higher post-test scores than those taught using lecture teaching method (LTM) Also the study found that students taught financial accounting using PBTM retained more knowledge of the concepts than those taught using LTM. The results of the test of hypothesis showed that the p-value is less than the level of significance (p-value < 0.05). The ANCOVA result indicates that there is a statistically significant difference in the effect of the independent variable (Approach) on the dependent variable (retention scores- delayed post-test). The hypothesis is therefore rejected. This means that the retention scores of business education students taught financial accounting with zoom classroom instructional resources differ significantly from those who were taught with conventional approach.

Conclusion

Based on the finding of the study, it was concluded that zoom classroom can help improve



business education students' academic achievement and retention in financial accounting. The traditional/conventional approach of giving assignment without immediate feedback should be discouraged since it does not provide information to improve students' achievement and retention. It was further concluded that zoom classroom has significant positive effect on students' achievement and retention in Financial accounting.

Recommendations

Based on the findings of the study, the researchers recommended that

1. Accounting Educators should adopt the zoom classroom instructional resources in the teaching of financial accounting as it has a higher effect on students' academic achievement and retention.
2. University Management should provide internet service in the university campus so that students can have unhindered access to online materials placed on the platforms used for mobile learning instructional resources.

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