



APPLICATION OF MODERN INSTRUCTIONAL TECHNOLOGIES BY BUSINESS EDUCATION LECTURERS FOR TEACHING ACCOUNTING COURSES IN TERTIARY INSTITUTIONS IN RIVERS STATE

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Cite this article:

Ukata P. F., Agburuga V. (2024), Application of Modern Instructional Technologies by Business Education Lecturers for Teaching Accounting Courses in Tertiary Institutions in Rivers State. British Journal of Contemporary Education 4(1), 91-102. DOI: 10.52589/BJCE-NWC6SQSF

Manuscript History

Received: 27 Feb 2024

Accepted: 3 May 2024

Published: 14 Jun 2024

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ABSTRACT: *The development of technology that altered how people carry out daily duties and find solutions to their problems informed this study. One specific objective, research question and two null hypotheses guided the study. Descriptive survey research design was adopted. From the population of 99 lecturers, census survey sampling technique was adopted. A five-point response options questionnaire was used for data collection, and it was validated by three experts. The reliability of the instrument was established using Cronbach's alpha which yielded an alpha coefficient of 0.88. Mean was used to answer the research question, while one-way analysis of variance (ANOVA) and t-test were used to test the null hypothesis at 0.05 level of significance. Finding of the study shows that the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent. This implies that learners may not be able to acquire the needed multimedia skills to gain decent works and that the high rate of unemployment may continue. Among other things, it was recommended that accounting lecturers should embark on personal short and long term certificate programmes in the utilization of multimedia technologies to enable them acquire the needed skills in using multimedia technologies in teaching accounting courses.*

KEYWORDS: Application of modern instructional technologies, Business education lecturers, Teaching, Accounting courses, Tertiary institutions.



INTRODUCTION

The goal of teaching is to help others acquire certain abilities, mind-sets, concepts, or knowledge. In order to effect the desired behavioral change in the pupils, teaching also involves interactions between teachers and students that take place under the authority and responsibility of the teacher. The act of imparting knowledge or showing a student how to accomplish something is the teaching profession. It entails helping the learner acquire practical abilities, attitudes, information, concepts, and values in a structured or unstructured setting in order to help them become independent, socially acceptable adults who undergo generally permanent change (Ukata & Silas–Dikibo, 2019).

The learning coach (2018) stated that experience is what causes a person's knowledge or behavior to change relatively permanently, necessitating the use of new technology in teaching today. Three elements make up the definition: the change is long-term rather than short-term; it is centered on the learner's behavior or the contents and structure of knowledge stored in memory; the reason for the change is the learner's experience in the environment, which necessitates teaching using new technologies.

Around the globe, the development of technology has not stopped altering how people carry out daily duties and find solutions to their difficulties. The way that various economic sectors operate has been impacted by this. Vockley (2012) asserts that without integrating technology into every aspect of an organization's activities, no industry can compete in the modern era. Digital technologies have a significant impact on the education industry, particularly in terms of how teaching and learning are conducted as well as how educational research is conducted overall. From an early age, today's pupils are surrounded by a multitude of gadgets. "Digital natives" are people who have grown up in a world where technology is pervasive. They are a generation that has grown up speaking a language that is shaped by a variety of multimedia technologies, such as computers, the internet, instant messaging, social networking sites, and cell phones that enable instantaneous communication both locally and internationally.

According to Ukata and Kalagbor (2017), despite advancements in classroom technology and management over the years, both educators and learners have relied on traditional teaching methods and tools like counting sticks, beading, wooden rollers, and canes to demonstrate concepts on walls. They have also used instructional strategies like "talk and write," "listen and take notes," and "dictate and explain" to teach courses like accounting, ICTs, and entrepreneurial skills, among others, which seem incredibly inadequate and ineffective (Ukata, 2023; Ezenwafor & Ukata, 2022). The introduction of new technologies in teaching and learning has revolutionized the entire education system, according to Onyesom and Utoware, (2012).

Modern Instructional Technologies and Its Application

Information technology (IT) and information and communication technology (ICT) are older terms that refer to the use of IT and ICT for information access, gathering, manipulation, availability, and communication (Jegbefume, Utebor & Kifordu, 2014). These terms are the origin of modern instructional technology or technologies. Using contemporary technology in the classroom can help teachers and students progress professionally and professionally. These days, modern technologies are those educational resources (hardware and software) that can process, store, print, retrieve, communicate, connect, transmit, transform, access, disseminate,



and inform teachers, students, and the general public more quickly and accurately (Ukata & Onuekwa, 2020). The following technology tools are accessible for use in the teaching and learning of Business Education courses: interactive CDs, e-mail, cell phones, the internet, intranets, extranets, computers, radios, YouTube, PowerPoint, video conferencing, and teleconferencing.

The following are also ways accounting courses may make use of contemporary instructional technologies like: course management system, SMS (text message), podcast, four blogs, and five. Digital portfolio (6). Manage and gather research with Zotero (7). Participatory Authorization (8). Social Networking Resources and (9). Tools for marking books. The following benefits of these new technologies for lecturers include improved classroom management, more time spent on learning, increased efficiency and effectiveness of teachers, faster data availability, engaging and inspiring lectures, and increased efficiency and effectiveness of lecturers. According to Ukata and Kalagbor (2017), lecturers of Business Education can profit from the usage of contemporary technologies in the following areas of their course content: Word processing, spreadsheets, databases, calendar scheduling, PowerPoint presentations, publishing and website upkeep, typing and keyboarding, and automated accounting

Business Education

A vital component of vocational education is Business Education, which aims to provide students with the necessary modern technology skills and competencies to enable them to participate in society. In order to prepare students to become both employers and employees, Business Education places a strong emphasis on developing students' skills in a variety of fields and options, including accounting, office technology and management, management information systems, management, marketing, digital marketing, entrepreneurship, cooperative studies, insurance, and accounting. It also emphasizes the use of multimedia technologies (Oyerinde, Onajite & Aina, 2020).

Modern Instructional Technology and Multimedia technologies

Multimedia technology and modern instructional technologies are the same. In order to integrate video, animation, music, graphics, and text resources so that information may be accessed interactively with any information processing device, a creative mix of computer hardware and software is used (Ugochukwu, Kabiru, Okafor, Chukwuma & Amoo, 2019). Accordingly, the delivery of educational services free from conventional obstacles is now feasible thanks to the use of instructional resources like e-learning (Ukata & Ochie, 2021; Ukata & Wechie, 2020). According to Egbiri (2012), lecturers, instructors, and students are limited in their abilities if they lack sufficient knowledge of ICT, particularly multimedia systems. A broad range of computer-based teaching and learning tools, programmes, and resources that enhance or complement the educational process can be categorized as multimedia utilization (Ukata & Nmehielle, 2023; Nwangwu, 2018). The use of multiple digital media types, including text, images, sound, and video, in a cohesive, multi-sensory interactive application or presentation by a teacher to share knowledge with students or an audience is known as multimedia utilization, according to Oshinaike and Adekunmisi (2012).



Teaching Accounting in Business Education

Teaching accounting courses such as accounting I, II, and III, as well as accounting theory, taxation 1, business finance, management accounting, I and II, advance financial accounting 1, public sector accounting, auditing and investigation 1, auditing and investigation 11, international accounting, and financial management in Business Education, among other things, call for new technologies (hardware and software) with excellent skills and competencies. According to Nwaukwa (2015), the majority of business teachers lacked the computer skills necessary to successfully incorporate new technologies into their classroom, which is a prerequisite for implementing ICT-based curricula. Additionally, Fadare (2014) noted issues and lamented that business teachers in postsecondary institutions are not using computers for instructional delivery to the fullest extent possible because they lack modern instructional competencies and new technology skills.

This may be the result of the failure to adopt cooperative instructional delivery. The study's content was restricted to the use of multimedia technology in accounting classes offered as a Business Education option, and its geographic coverage was restricted to all government-run postsecondary institutions in Rivers State that provide accounting courses as a Business Education option.

The Study Moderator Variables

Educational achievement or certification and institution ownership are the moderating variables in this study. A lecturer's level of education at the time of the investigation serves as a moderating factor in their educational qualification. The following qualifications may be applicable: Doctor of Philosophy (PhD), Bachelor of Science (BSc), Bachelor of Education (B.Ed.), Master of Science (MSc), and Higher National Diploma (HND). The federal and state governments own the institutions. The state universities are Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE), while the federal institutions are University of Port Harcourt (UNIPORT) and Federal College of Education (Technical) Omoku (FCET-Omoku). These are the only universities under government control that offer a Business Education Course as an accounting elective. Since these factors are probably going to have an impact on "application of modern instructional technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers state," the researchers chose to employ them. Because they have conducted more research, a lecturer with a doctorate in philosophy (PhD) might outperform a lecturer with a master's or bachelor's degree in science when it comes to using contemporary instructional tools to teach accounting courses. Because of financing or for other reasons, lecturers at federal institutions may use current instructional tools more frequently than those at state tertiary schools. According to Taiwo and Ade-Ajayi (2015), instructors' educational backgrounds can have a significant impact on what is thought to be a good teaching and learning environment. The idea that a teacher's educational background might affect their comprehension of the subject matter, tool selection, application of effective teaching tactics, and classroom management abilities is furthered by Ukata and Udeh (2022).

According to Top Education Degrees (2020), lecturers' levels of new technical competences for helping students build employability skills are significantly influenced by the ownership of the institution. This is due to the possibility that federal institutions offer greater staff development programmes, worker-friendly policies, aids, laboratories, incentive programmes,



remuneration packages, and worker-friendly policies than state institutions. They are therefore interesting variables.

Justification for the Study

The topic, "application of modern instructional technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers state" was chosen because, while there are literatures that are related to this study, no study that is exactly this in terms of its scope and contents and the same moderated factors has been specifically studied before. As a result, this study is unique among others and forges a new direction in the corpus of knowledge.

Statement of the Problem

In order to help students obtain the skills they need to become gainfully employed and lower unemployment rates, lecturers offering accounting courses as a Business Education choice today must have a high level of proficiency with contemporary instructional technologies. Due to a lack of application of contemporary instructional technologies, the majority of lecturers in Business Education accounting appear to have failed to impart these abilities to accounting students, which has led to a high percentage of unemployment due to a lack of skills and competences. This may be the cause of Nwaukwa (2015) complained that most business lecturers lacked the computer skills necessary to successfully incorporate new technology into their lessons and deploy ICT-based curricula. Furthermore, Fadare (2014) noted issues and lamented the fact that business instructors in higher education are not effectively using computers to conduct teaching because they lack contemporary instructional competencies and new technology skills.

This could be the result of the lack of adoption of cooperative learning environments. The presumption here is that lecturers in accounting had very poor, if any, multimedia abilities and competences when it came to using new technologies to teach accounting courses. The study "application of modern instructional technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers state" was therefore justified.

Purpose of this Study

The purpose of this study was to determine application of modern instructional technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers state. The specific objective of this study is to find out the extent of application of multimedia technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers State.

Research Question

The following research question guided the researchers from the perception of Business Education lecturers:

1. What is the extent of application of multimedia technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers State?

Hypotheses

Two (2) null hypotheses were tested at 0.05 level of significance:

1. Business education lecturers do not differ in their mean ratings on the extent of application of multimedia technologies for teaching accounting courses based on education attainment (BSc/B.Ed./HND/MSc/M.Ed./PhD).
2. There is no difference in their mean ratings of Business Education lecturers on the extent of application of multimedia technologies for teaching accounting courses based on institution ownership (federal and state).

Methodology

Descriptive survey research design was adopted for the topic. Survey research design was deemed appropriate since it sought to obtain the views of Business Education lecturers on the topic. The population of the study was 99 lecturers; 57 from the Federal College of Education (Technical), Omoku, 21 from the Rivers State University and 12 from the Ignatius Ajuru University of Education. Below is the displayed population of the study using exploded pie in 3 D, including their percentages:

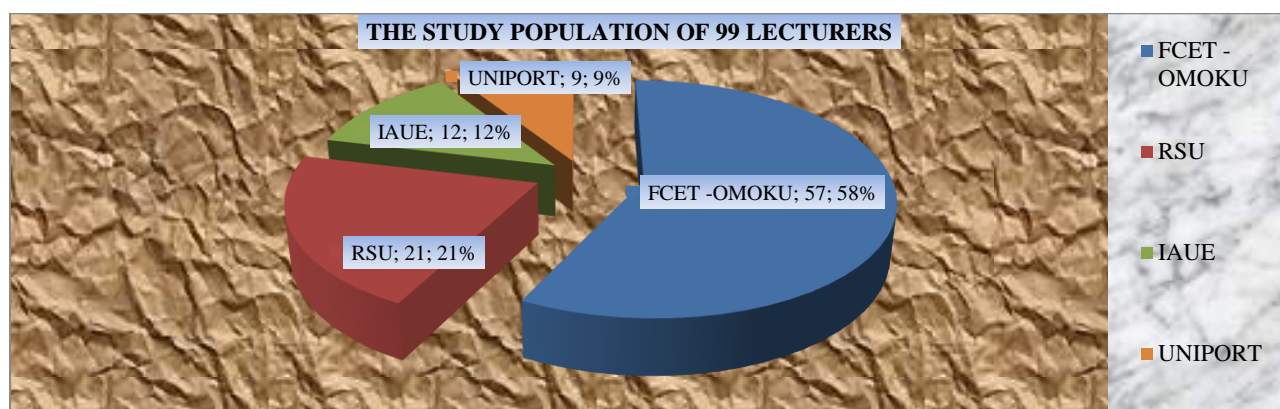


Figure 1.1: Population of 99 for the study (Researchers` Creation, 2024)

The sample size was 99 using census sampling technique. This reason for using the entire sample size and sampling technique was because the number was manageable. The instrument for data collection was a self-developed questionnaire based on the reviewed related literature and research question posed. The instrument was titled “Application of Modern Instructional Technologies by Business Education Lecturers for Teaching Accounting Courses (AMIT-BELTAC)”, with five point rating scale of the following options: Very High Extend (5), 4.50 - 5.00, High Extend (4), 3.50-4.49, Moderate Extend (3), 2.50-3.49, Low Level (2), 1.50-2.49 and Very Low Extend (1), 0.50-1.49. The face and content validity of the instrument was established using the opinions of three experts from the Department of Business Education of Rivers State University and Ignatius Ajuru University of Education. The questionnaire was trial-tested using 10 Business Education Accounting lecturers of University of Uyo. Data collected was analyzed using Cronbach Alpha which yielded a Coefficient value of .88. The high reliability value indicated that the instrument was reliable for the study. The researchers personally administered copies of the questionnaire to the respondents in their schools with the help of three research assistants.



The research assistants were adequately briefed on the modalities for administration and collection of the questionnaires. On the spot completion and time gap of one week were used for those who could and could not fill the questionnaire immediately. Out of 99 copies of the questionnaire distributed, 85 were correctly filled, retrieved, and used for data analysis. Mean rating and standard deviation were used to analyze data from research questions and determine the homogeneity and heterogeneity of respondents' views. The inferential statistics of Analysis of Variance (one-way ANOVA) was used to test the null hypothesis 1, while, t-test was used to test null hypothesis 2. The justification for adopting Analysis of Variance (One-way ANOVA) was because the null hypothesis 1 has one categorical independent variable with three levels, Independent Sample t-test was used to test null hypothesis 2 because it contained one categorical independent variable and two levels. The decision rule on the questionnaire items in respect of the research question was based on mean ratings of each item relative to real limits of numbers. A null hypothesis was accepted when the calculated significant (Sig.) value, (p- value) was greater than or equal to (\geq) the alpha value of 0.05. Otherwise, the null hypothesis was not rejected. The data analysis was carried out using Statistical Package for Social Sciences (SPSS) version 25

RESULT PRESENTATION, ANALYSIS AND DISCUSSION

Research Question 1: What is the extent of application of multimedia technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers State?

Table 1: Respondents' mean ratings on the extend of application of multimedia technologies by Business Education lecturers for teaching accounting courses

SN	Application of Multimedia technologies for Teaching Accounting Courses	\bar{X}	SD	N = 85 Remarks
1	Instructional CDs/DVDs for teaching Introduction to Financial Accounting I	1.04	.05	Very Low Extend
2	Web Cameras for Introduction To Financial Accounting II	1.03	.04	Very Low Extend
3	Video tape recorder for teaching Accounting Theory	1.02	.05	Very Low Extend
4	Course management system software for teaching Cost and Management Accounting I	1.03	.05	Very Low Extend
5	Podcast for teaching Cost and Management Accounting II	1.05	.04	Very Low Extend
6	E-portfolio for teaching Management Accounting I	1.09	.05	Very Low Extend
7	Laptop/Desktop Computer for teaching Management Accounting II	1.06	.04	Very Low Extend
8	Zotero for teaching Advanced Financial Accounting I	1.08	.05	Very Low Extend
9	Multimedia Projector for teaching Auditing and Investigation	1.02	.03	Very Low Extend
10	Interactive Whiteboard (Smartboard/Starboard) for teaching Taxation	1.04	.05	Very Low Extend



11	Multimedia Instructional CD/DVDs for teaching Public Sector Accounting	1.02	.04	Very Low Extend
12	Internet Facilities (Modem, LAN, Wireless) for teaching Auditing and Investigation I	1.02	.04	Very Low Extend
13	Video (or YouTube) for teaching Advanced Financial Accounting II	1.04	.05	Very Low Extend
14	Audio (or Podcast) for teaching International Accounting and Financial Management	1.03	.04	Very Low Extend
16	Animation for teaching Auditing and Investigation I	1.02	.05	Very Low Extend
17	Presentation Software (PowerPoint)	1.06	.04	Very Low Extend
18	E-Learning Platform (Moodle, WebCT, etc.) Auditing and Investigation II	1.05	.05	Very Low Extend
Aggregate Mean		0.98		Very Low Extend

Table 1 shows that all the 18 listed items have mean scores ranging within 1.00 to 1.08. This means a very low level. The aggregate mean was 0.99, meaning a very low extent as well. This means that the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent. The standard deviations for the 18 listed items ranged within 0.03 to 0.05 which shows that respondents were homogeneous in their views that the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent.

Testing of Null Hypothesis

Hypothesis 1

Business education lecturers do not differ in their mean ratings on the extent of application of multimedia technologies for teaching accounting courses based on education attainment (BSc/B.Ed/HND/MSc/MEd./PhD).

Table 2: Summary of ANOVA on the extent of application of multimedia technologies for teaching accounting courses based on education attainment

Sources of Variance	Sum of Squares	Df	Mean Square	F-cal.	Sig. (P-value)	Decision
Between Groups	6.882	17	4.641	5.733	.074 Significant	H ₀₁ Accepted
Within Groups	66.880	68	3.248			
Total	84.062	85				

Data on Table 2 shows a calculated F-value of 5.73 with a significant (sig.) p-value of 0.07 which is greater than the alpha value of 0.05 ($0.07 > 0.05$) at degrees of 17 and 68. Therefore, the null hypothesis (H₀₁) was accepted. This means that Business Education lecturers do not differ in their mean ratings on the extent of application of multimedia technologies for teaching accounting courses based on education attainment.



Hypothesis 2

There is no difference in their mean ratings of Business Education lecturers on the extent of application of multimedia technologies for teaching accounting courses based on institution ownership (federal and state).

Table 3: Summary of ANOVA on Business Education lecturers extend the application of multimedia technologies for teaching accounting courses based on institution ownership

Sources of Variation	N	\bar{X}	SD	Df	t-value	p-value (Sig.(2-tailed))	Decision
State	68	3.70	.66	83	.62	.51 Significant	H ₀₂ Accepted
Federal	17	3.90	.56				

Data on Table 3 shows a calculated t-value of 0.62 with a significant (sig.) p-value of 0.51 which is greater than the alpha value of 0.05 ($0.51 > 0.05$) at degrees of 83. Therefore, the null hypothesis (H₀₂) was accepted. This means that there is no difference in the mean ratings of Business Education lecturers on the extent of application of multimedia technologies for teaching accounting courses based on institution ownership.

DISCUSSION OF FINDINGS

Findings of the study in Table 1 showed that the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent. Finding of this study concurs with the assertion of Ukata and Udeh (2022) who postulated that the level of utilization of multimedia technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers State was at a very low level. The study also agrees with the views of Nwaukwa (2015) who lamented that the majority of business teachers lacked computer skills required to integrate new technologies for successful instructional delivery as required for implementing ICT-based curriculum. Also, the findings of the study agree with Fadare (2014) who identified the problems and bewailed that business teachers in tertiary institutions are not adequately utilizing computers for instructional delivery due to their lack of new technology skills and modern instructional competencies. The fact that all the (18) listed levels of utilization of multimedia technologies by Business Education lecturers for teaching accounting courses indicated a very low extent at the aggregate level. It shows that the application of multimedia technologies by Business Education lecturers for teaching accounting courses in tertiary institutions in Rivers State was at a very low extent. This implies that learners may not be able to acquire the needed multimedia skills to gain decent works and that the high rate of unemployment may continue.

The findings from the null hypothesis one disclosed that Business Education lecturers do not differ in their mean ratings on the extent of application of multimedia technologies for teaching accounting courses based on education attainment. This findings disagrees with Taiwo and Ade-Ajayi (2015) who revealed that teachers' educational attainment can have great influence on perceived factors affecting effective teaching and learning. Taiwo and Ade-Ajayi (2015) further advanced that educational attainment of teachers can have influence on their understanding of the subject matter, selection of tools, use of appropriate instructional strategies and classroom management skills applied in teaching. This seems to be on the



contrary since the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent. The findings from the null hypothesis two as well indicated that there is no difference in the mean ratings of Business Education lecturers on the extent of application of multimedia technologies for teaching accounting courses based on institution ownership.

This findings as well differ with Top Education Degrees (2020) who averred that institution ownership plays a major role on lecturers' level of new technological competencies for developing employability skills among students. This is because federal institutions may provide better salary packages, better teaching environments, aids, laboratories, motivation, worker-friendly policies, compensation and staff development programmes than state institutions. In this case, it appears different since the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent and the lecturers were homogeneous in their views.

CONCLUSION

From the data presented, discussed with the findings, it was concluded that the application of multimedia technologies by Business Education lecturers for teaching accounting courses was at a very low extent. This implies that learners may not be able to acquire the needed multimedia skills to gain decent works and that the high rate of unemployment may continue. Also, Business Education lecturers did not differ in their application of multimedia technologies for teaching accounting courses based on educational attainment and institutional ownership. This was because lecturers were homogeneous in their views that application of multimedia technologies teaching accounting courses was at a very low extent.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Business Education lecturers teaching accounting courses should embark on personal short and long term certificate programmes in the utilization of multimedia technologies in teaching accounting courses.
2. Heads of Department and Management of tertiary institutions should organize training and retraining programmes, conferences, workshops and scholarships programmes on the utilization of multimedia technologies in teaching accounting courses.
3. States and federal governments should ensure that there are good policies and adequate implementation, conducive teaching and learning environment, and funding of utilization of multimedia technologies. More so, adequate hardware, software facilities, laboratories, standard offices and welfare packages should be provided to support teaching and learning utilization of multimedia technologies in teaching accounting courses for learners to acquire decent employment.



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