Utilization of Interactive Whiteboard Technology for Teaching Office Management and Technology (OMT) Courses in Rivers State Universities

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Abstract

This study examined the utilization of digital instructional technologies for teaching Office Management and Technology (OMT) courses in Rivers State Universities. The study adopted the descriptive survey design. The population of the study consisted of forty-seven (47) Office Management and Technology lecturers in the two state universities offering Business Education programme. Due to the manageable population, no sampling was done. The instrument used for data collection was a questionnaire developed by the researcher, which was validated by three research experts, two in Business Education and one in Measurement and Evaluation. The Cronbach Coefficient Alpha was used to determine the reliability of the instrument, which yielded a coefficient of 0.83 percent. Forty-onecopies of the questionnaire were retrieved and used for analysis. Mean and Standard Deviation were used to answer the research question, while t-test statistic was used to test the hypothesis at 0.05 level of significance. The finding of the study showed that Interactive Whiteboardwas utilized to a low extent in the teaching of OMT courses in Rivers State Universities. Based on the finding of the study, it was recommended that the managements of Rivers State Universities should provide training and retraining opportunities for lecturers teaching Office Management and Technology courses in interactive whiteboard technology to enhance use of this innovative teaching technology in classroom activities in Rivers State universities.

Keywords: Interactive Whiteboard, Technologies, Teaching, Office Management Technology Courses

Introduction

In recent years, institutions of higher learning across the globe have started to transform their learning strategies to incorporate more digital technology-focused methods. This approach became necessary because there was an urgent need to support teaching and learning environments that could enable both teachers and students to meet 21st-century classroom challenges. Thus, in line with this social transformation, the provision and utilization of digital technologies in such new personal, organizational, and educational environments have become very crucial. Digital instructional technology is any process in which a teacher or learner uses

digital equipment such as a computer (laptop, tablet, MP3 player, or console) to access digital tools such as learning platforms and virtual learning environments (VLES) and/or learning with digital technology resources to improve students' knowledge and skills (Baba, Iwoha& Alhassan, 2022). Nnajiofor and Ejikeme (2020) defined instructional technology as the system and network devices, instruments, methods, and techniques used to achieve a certain set of defined learning objectives. As a tool for presenting curriculum content and information to students, it has changed the way students access educational information and elaborate knowledge. Traditional classroom instruction lacks immediate learning environments, faster evaluations, and engagement. Digital learning tools and technology provide efficiencies unrivaled by traditional methods. Digital classrooms use electronic devices like smartphones, multimedia, and mobile phones to teach students. This strategy uses technology to fulfill the entire curriculum, allowing students to learn quickly and rapidly. Most curriculum is delivered online through interactive platforms, enhancing the educational landscape (Haleem, Javaid, Qadri, & Suman, 2022). According to Conklin, Boyd, and Chapel (2023), curriculum is the collection of lessons and academic content that are taught in a classroom (or in a course or program, while instruction is the act of teaching in the classroom. They further opined that the role of curriculum is to guide learning while that of instruction is to connect students to the curricular content, such that they do not only absorb it, but also comprehend it. Teaching styles therefore may differ from one teacher to another, because a highly committed and passionate teacher may combine several available resources to support instruction in the classroom to the benefit of the students.

Consequently, it has necessitated new skills because teaching and learning are no longer confined to the classroom alone. It has raised the demand for re-learning practical skills and academic knowledge aimed at re-designing teaching and learning methods to stimulate critical thinking, decision-making, teamwork, and confidence. Thus, according to Anderson (2020), the effective use of digital learning tools in classrooms may increase students' engagement, help teachers improve their lesson plans, facilitate personalized learning, and help students build essential 21st century skills. One of the digital learning platforms that could be utilized in teaching Office Management and Technology courses in Nigerian universities is the interactive whiteboard, which according to Study'n'Learn (2021) is a powerful tool that brings a new level of engagement and interactivity to classrooms. It enhances lessons, promotes collaboration, and provides access to digital resources. In addition, it can annotate, assess, and facilitate distance learning and have become an essential part of modern education, inspiring both teachers and students to learn and explore in exciting ways. According to Baharudin, Masnan, and Zain (2020), the use of the Interactive Whiteboard (IWB) technology is one of the most widely used ICT technology equipment in the classroom and the teaching of Office Management and Technology courses could immensely benefit from its use in classrooms. Office

Management and Technology Education is a subset of Business Education programme designed to prepare students who are interested in office careers, teaching profession and self-employment. The course is more practical than theoretical in nature. In the opinion of Ahmed, Badiru and Wasiu in Dauda and Mojisola (2023), Office Management and Technology education is all about the training and qualification, personal qualities and functions of the modern-day office worker in paperless office. Thus, to achieve the educational objectives of this programme, there is need to provide new instructional technologies which are e-learning tools that motivate student-centered and interactive learning environments.

At present, with inadequate infrastructure, large class sizes, obsolete equipment, a shortage of qualified personnel, a lack of technologically skilled teachers, gross underfunding, and general neglect in public tertiary institutions in Nigeria, it is difficult to intensively achieve the goals and objectives of quality education and training, especially in Office Management and Technology with the old instructional strategies in place. Thus, universities are concerned and under pressure to use digital instructional technologies in teaching skill-based courses. Thus, according to Omariba, Gitau and Ayot (2016), instructional technologies are crucial in teaching students in the 21st century, transforming the curriculum and teaching process. They enhance content mastery, provide comprehensive information in various formats, and provide teachers with varied presentation methods. Properly designed learning materials, inspired by technology, add value to teaching situations with limited contact hours, academic standards, and the development of digital-age skills for 21st-century learners. Teaching of Office Management and Technology (OMT) courses at Rivers State universities continue to mostly rely on traditional teaching methods, despite the swift progress of digital instructional technologies, which have revolutionized global educational practices. This neglects the potential advantages of digital instructional technology. Digital instructional technologies like Interactive Whiteboard, can improve students' engagement, deepen understanding, and build applicable skills. This difference in teaching methods may make it more difficult for OMT students to master essential knowledge and skills which the course is designed to equip them with upon graduation. This will eventually lower their employability andproductivity. It is unknown, nevertheless, how often these technologies are being used in teaching OMT courses at Rivers State universities. To enhance OMT programs' teaching and learning experiences, this study intends to examine the current level of digital instructional technology utilization in OMT courses in Rivers State universities and suggest areas for improvement.With the antecedents, to what extent has the digital instructional technologies been utilized in teaching Office Management and Technology (OMT) courses in Rivers State Universities?

The main purpose of the study was to examine the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT)

courses in Rivers State Universities. The specific objective of the study is to examine the extent of utilization of Interactive Whiteboard in the teaching of Office Management and Technology (OMT) courses in Rivers State Universities. The research question that guided this study was: To what extent is Interactive Whiteboard utilized in teaching Office Management and Technology (OMT) courses in Rivers State Universities? The null hypothesis that was formulated and tested at 0.05 significance level was: There is no significant difference in the mean response scores of Business Education lecturers on the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT) courses in Rivers State Universities.

The Substitution-Augmentation-Modification-Redefinition (SAMR) framework, developed by Puentedura (2014), helps teachers evaluate and understand technology integration in teaching practices. It consists of four dimensions: Substitution, Augmentation, Modification, and Redefinition. Substitution and Augmentation enhance learning, while Modification and Redefinition transform learning. The framework helps teachers evaluate and understand technology's role in teaching.

Methodology

The research design adopted for this study was a descriptive research design, which established the significant difference between Business Education lecturers' extent of utilization of digital instructional technologies for teaching Office Management and Technology (OMT) courses in Rivers State Universities. The population of the study comprised 47 lecturers of Office Management and Technology (OMT) courses at Rivers State universities. A breakdown of the population shows that there are 30 lecturers in Rivers State University and 17 lecturers in Ignatius Ajuru University of Education, Port Harcourt respectively. The choice of the population is since the two universities offer Office Management and Technology education at both graduate and post-graduate programs. The total population was used as the sample because the number was considered manageable. Therefore, no sampling was carried out. The research instrument used for the study was a questionnaire. The researcher developed a self-structured questionnaire titled: Utilization of Interactive Whiteboard Technology in the Teaching of Office Management and Technology (OMT) Courses in Rivers State Universities (IDITTOMTCRSU).

The research instrument was validated by three experts which comprised two in Business Education and one in Measurement and Evaluation, all in the Faculty of Education, Rivers State University, Port-Harcourt. The research instrument was reviewed and restructured by the validators for clarity, relevance, and appropriateness for the study. All the corrections and inputs from the experts were used to modify the research instruments. The questionnaire adopted a 5-point rating scale of Very High Extent (VHE – 5points), High Extent (HE – 4points), Moderate Extent (ME - 3points), Low Extent (LE – 2points) and Very Low Extent (VLE- 1point). To establish reliability of the instrument, the Cronbach Alpha was used, which yielded 0.83 percent score. This showed that the instrument was reliable for this study.

Results

Table 1: Mean response on the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT) courses in Rivers State Universities (n = 41

S/N	STATEMENTS	$\bar{x}$	S.D	Remark
1	Using interactive whiteboard assists to create dynamic and interactive lessons for Office Management and Technology (OMT) courses	1.85	.82	LE
2	Interactive Whiteboard is used to integrate multimedia resources into OMT lessons	1.80	.71	LE
3	I use it to promote collaboration and interaction among OMT students	2.34	.79	LE
4	It is used to annotate and highlight important information in OMT lessons	1.95	.80	LE
5	It is used to analyze texts, diagrams and graphs in OMT lessons	2.14	.76	LE
6	It is used to promote critical thinking among students during lessons	2.26	.70	LE
7	It is used to gain access to educational resources like databases, websites and libraries	2.04	.58	LE
8	Assessment tools like quizzes and games are easily accessible using it	2.07	.72	LE
9	It is used to generate immediate feedback on students' performance	2.34	.72	LE
10	It is used to deliver lessons to remote students by sharing screens during lessons	2.07	.60	LE
	Grand Mean and Std. Deviation	**2.08**	**0.72**	LE

The data collected, organized and analyzed revolved around the one research question and the one hypothesis formulated to guide the study. The research question was answered using Mean and Standard Deviation, while the null hypothesis was tested at 0.05 level of significance with t-test statistic. The decision rule was that any obtained mean score equal to or above 3.0 was accepted, while any obtained mean score equal to or below 2.99 was rejected. The null hypothesis was accepted when the critical (r-critical) value was greater than the calculated (r-calculated) value; otherwise, it was rejected.

Research Question: To what extent is Interactive Whiteboard utilized in teaching Office Management and Technology (OMT) courses in Rivers State Universities

Hypothesis Testing

There is no significant difference in the mean response scores of Business Education lecturers of Rivers State University and Ignatius Ajuru University of Education on the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT) courses in Rivers State Universities.

Result in Table 1 shows that there was low utilization of interactive whiteboard in the teaching of Office Management and Technology (OMT) courses in Rivers State Universities with all the item mean scores below 3.00, the grand mean score was 2.08 and standard deviation 0.72 respectively.

Table 2: Computation of significant difference in the mean response scores of Business Education lecturers of Rivers State University and Ignatius Ajuru University of Education on the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT) courses in Rivers State Universities.

Respondents	N	$\bar{x}$	SD	t-cal.	t. crit.	Df	α	Decision
RSU	24	2.07	0,72					
				0.18	1.684	39	0.05	Accepted
IAUE	17	2.11	0.70					

Source: Field Result (2025)

The data in Table 2 showed the t-calculated value of 0.18 at 39 degree of freedom and 0.05 level of significance, with the t-critical value of 1.684. The null hypothesis was upheld because t-critical is greater than the t-calculated. This implies that there is no significant difference in the mean response scores of business education lecturers of Rivers State University and Ignatius Ajuru University of Education lecturers on the extent of utilization of Interactive Whiteboard in the teaching of Office Management and Technology (OMT) courses in Rivers State Universities.

Discussion of Finding

Finding of the study revealed that the extent of utilization of Interactive Whiteboard in the teaching of Office Management and Technology (OMT) courses in Rivers State Universities is low. The result shows that there is no significant difference in the mean ratings of Rivers State University and Ignatius Ajuru University of Education lecturers on utilization of Interactive Whiteboard in the teaching of Office Management and Technology (OMT) courses in Rivers State Universities. The low utilization of interactive whiteboard technology in teaching Office Management and Technology courses in the two universities does not agree with the assertion of Baharudin, Masnan, and Zain (2020) that the use of the Interactive Whiteboard (IWB) technology is one of the most widely used ICT technology equipment in the classroom. The low utilization level could be related to non-awareness, inadequate skills and unavailability of the Interactive Whiteboard technologies for teaching OMT courses in these universities.

Conclusion

The research examined the extent of utilization of Interactive Whiteboard in teaching Office Management and Technology (OMT) courses in Rivers State Universities. By using a descriptive research design and questionnaire as the research instrument, the researcher was able to gather data which was analyzed to provide answers to the research questions and hypotheses formulated to guide the research. Finding revealed that the utilization of interactive whiteboard technology was very low in the surveyed universities. The effective utilization of interactive whiteboard technology in teaching Office Management and Technology courses in Rivers State Universities would enhance student engagement and participation in the learning process, thereby improving academic performance.

Recommendation

Based on the finding and conclusion drawn from the study, it was recommended that the managements of Rivers State Universities should provide

training and retraining opportunities for lecturers teaching Office Management and Technology courses in interactive whiteboard technology to enhance utilization of these innovative teaching technology in classroom activities.

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