DIGITAL SKILLS AND TECHNOLOGIES FOR TEACHING OFFICE TECHNOLOGY AND MANAGEMENT IN PUBLIC UNIVERSITIES

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To cite this article (APA): Dasaolu, O. A. (2024). Digital skills and technologies for teaching office technology and management in Public Universities in South-West, Nigeria. *AAU Journal of Business Educators, 5* (1), 8-15

Abstract

This study investigates the levels of digital skills and technologies in teaching of Office Technology and Management (OTM) in Public Universities in South West, Nigeria. It also investigates the relationships between digital skills, digital technologies and teaching of OTM in Public Universities in South West, Nigeria. Using a descriptive survey research design, the study employed 119 lecturers (75 full-time and 44 part-time) from Public universities in South-West, Nigeria. A census sampling method was employed to retain the entire population as the sample. Data were collected using three instruments, namely: Digital Skills Questionnaire (r = .92), Digital Technologies Availability Questionnaire (r = .94), and Teaching of Office Technology and Management Questionnaire (r = .75). Research questions were analyzed using mean and standard deviation statistics, while the null hypotheses were tested with linear regression statistic at a significance level of .05. Findings revealed that there are significant relationships between digital skills, digital technologies availability and effective teaching of OTM. The study concluded that fostering digital skills acquisition, digital technology availability is crucial for improving effective teaching of OTM in Public Universities in South-West, Nigeria. The author recommended, among others, university management should endeavor to organize training workshops regularly for lecturers in order to improve their digital skills and ensure adequate supply of digital technologies for effective instructional delivery.

***Keywords**: Digital Skills Acquisition, Digital Technologies Availability, Public Universities, Office Technology and Management, Teaching Effectiveness.*

Introduction

Teaching is essential for imparting knowledge and achieving educational goals and aims, as meaningful learning cannot occur without it. It plays a crucial role in determining students' academic performance. Onyekuru and Ibegbunam (2019) defined teaching as demonstrating intellectual, social, and emotional stability, along with a love for students and a positive attitude towards the profession. Evans (2020) further describes it as the ability to motivate learners of all skill levels while incorporating learning objectives and evaluating effective learning styles. The impact of teaching is particularly significant in Office Technology and Management (OTM), where it surpasses other factors influencing student success. Effective teaching fosters not only academic growth but also personal development, critical thinking, and emotional support for students.

The training formerly known as secretarial education, as highlighted by Fafunwa (1993) and Dauda (2020), initially required Nigerians to seek education abroad until the 1970s. By the 1980s, local institutions like UNN and ABU began offering secretarial education (Osuala, 2004). Over time, OTM

education has integrated ICT advancements into its curriculum, reflecting global trends in business education. This evolution aims to promote personal and national development by expanding into various commercial and technological fields. According to Oyedele and Fadare (2018), OTM is an effective educational strategy that fosters self-employment, self-reliance, and paid work, leading to self-actualization. OTM focuses on developing the mental and physical skills necessary for individuals to thrive in society. Ajayi (2019) noted that modern OTM instructional delivery involves more interaction and utilizes digital skills and technologies to reach a broader audience beyond traditional classroom settings.

Digital skills encompass the ability to use devices like computers and smartphones for communication, information sharing, transactions, problem-solving, and online safety (Olaniyi, 2022). The term "digital skills" was initially focused on computers, the scope has expanded with the rise of the internet and mobile devices. Jenkins (2019) noted that these skills complement traditional literacy, enhancing foundational competencies. Proficiency in digital technology among OTM lecturers significantly improves classroom learning outcomes (Olaniyi, 2022). Digital technologies on the other hand refer to electronic or ICT-based resources that produce, store, or process data for instructional purposes (Crossdale & Nwosu, 2022).

The strategies employed by lecturers in OTM to achieve various learning objectives are referred to as teaching tactics. These include stimulating and structuring activities, modeling ideal behavior, allowing student input in establishing guidelines, and avoiding a pushy teaching style. While extensive research on OTM instructional delivery has produced varied findings, only a few landmark studies have had a significant impact. Notable works include Osuala's exploration of vocational education foundations in 2004 and descriptive surveys by Oyedele and Fadare (2018) on the impacts of new technologies, and Ajayi (2019) on the link between digital skills and student performance in OTM programmes. Despite these researches, there is a lack of empirical studies on that assesses the levels of digital skills and technologies and the extent to which they are related to the teaching of OTM in Public Universities in South West, Nigeria.

From the foregoing, it is worthy of note that the OTM programme must effectively prepare graduates for employment; however, many instructors lack the necessary digital technologies and skills, relying on outdated teaching methods. This situation is compounded by insufficient availability of digital technologies, which further hinders effective teaching and learning delivery and students' readiness for career progressions. This study aims to investigate the levels of digital skills and digital technologies and the extent to which they relate to the teaching of OTM in Public Universities in South West, Nigeria.

Statement of the Problem

The effectiveness of OTM programme is very important for preparing graduates to enter the workforce and reduce unemployment. In the 21st century, it is essential that instructors possess strong digital technology skills to effectively utilize various ICTs during teaching delivery. Unfortunately, many lecturers in Nigerian universities possess low levels of necessary expertise in digital technologies, leading to a reliance on traditional or manual teaching methods. This reliance on outdated instructional practices does not adequately equip students with the skills needed for modern office environments. The current state of OTM education is faced by numerous challenges, primarily originate from insufficient availability of digital technologies. This lack of resources may hinder effective instructional delivery and limits students' preparedness to utilize these technologies in their future careers. However, many OTM programmes have not developed the necessary digital infrastructure over the years. It is based on this situation that the author of this study investigates the levels of digital skills and digital technologies and the extent to which they relate to the teaching of OTM in Public Universities in South West, Nigeria.

Purpose of the Study

The central purpose of this study is to assess the levels of digital skills and technologies required for teaching OTM courses in Public Universities in South West, Nigeria. Specifically, the study aims to examine:

1. the levels of digital skills and teaching of OTM in Public Universities in South-West, Nigeria.
2. the levels of digital technologies and teaching of OTM in Public Universities in South-West, Nigeria.
3. the relationships between digital skills, digital technologies and teaching of OTM in Public Universities in South-West, Nigeria.

Research Questions

The following research questions guided this study.

Research Question 1: What are the levels of digital skills and teaching of OTM in Public Universities in South-West, Nigeria?

Research Question 2: What are the levels of digital technologies and teaching of OTM in Public Universities in South-West, Nigeria?

Research Hypotheses

The following null hypotheses guided this study.

Research Hypothesis 1: There is no significant relationships between digital skills and teaching of OTM in Public Universities in South-West, Nigeria.

Research Hypothesis 2: There is no significant relationships between digital technologies and teaching of OTM in Public Universities in South-West, Nigeria.

Methodology

Research Design

The study utilized a quantitative research design to investigate the levels of digital skills and digital technologies in teaching of OTM and the relationships between digital technologies and teaching of OTM in Public Universities in South-West, Nigeria, which are justified the effectiveness this research design in measuring such levels and associations, as supported by previous research.

Participants and Sampling Procedure

The population for this study consisted of 119 full-time and part-time lecturers in OTM in Public Universities. Due to the manageable size of the population, the study utilized the entire population without the need for employing sampling procedure.

Data Collection Instruments

The study used three structured research instruments, titled: Digital Skills Questionnaire, Digital Technologies Availability Questionnaire, and Teaching of Office Technology and Management Questionnaire which comprises of set of items to measure the variables of study. Lecturers of OTM rated themselves with on a 4-point rating scale, ranging from 4 = Strongly Agree to 1 = Strongly Disagree.

Instrument Validity and Reliability

The instrument was subjected to face, construct, criterion and content validity by three experts, two in OTM and one in Measurement and Evaluation. To ensure the internal consistencies of the items in the instruments, a test-retest reliability approach was conducted, yielding a coefficient alpha values of .92 for Digital Skills Acquisition, .94 for Digital Technologies Availability, .75 for Teaching of Office Technology and Management.

Data Analysis

The IBM-SPSS version 22.0 was used to analyze the data collected from the respondents (that is, OTM lecturers). Linear regression analysis was performed to test the null hypotheses at 0.05 level of significance. Decision criteria is based on when a coefficient probability or r-value is equal to or lesser than 0.05 it implied a significant relationship. Similarly, when a coefficient probability or r-value is greater than 0.05 it implied a non-significant relationship.

Result

Research Question 1: What are the levels of digital skills and teaching of OTM in Public Universities in South West, Nigeria?

Table 1: Mean and Standard Deviation on the Levels of Digital Skills and Teaching of OTM in Public Universities in South West, Nigeria.

Variables	N	Minimum	Maximum	M	SD
Digital skills	118	38.00	62.00	62.12	7.12
Teaching of OTM	118	16.00	56.00	51.20	6.22

Table 1 revealed the mean and standard deviation of digital skills and teaching of OTM of respondents in Public Universities in South-West, Nigeria. The Table showed that the respondents have mean score of 62.12 with standard deviation of 7.12 in digital skills and 51.20 mean score with standard deviation of 6.22 in teaching of OTM in Public Universities in South-West, Nigeria.

Research Question 2: What are the levels of digital technologies and teaching of OTM in Public Universities in South West, Nigeria?

Table 2: Mean and Standard Deviation on the Levels of Digital Technologies and Teaching of OTM in Public Universities in South West, Nigeria.

Variables	N	Minimum	Maximum	M	SD
Digital Technologies	118	37.00	62.00	61.52	7.03
Teaching of OTM	118	16.00	56.00	51.20	6.22

Table 2 revealed the mean and standard deviation of digital technologies availability and teaching of OTM of respondents in Public Universities in South-West, Nigeria. The Table showed that the respondents have mean score of 61.52 with standard deviation of 7.03 in digital technologies availability and 51.20 mean score with standard deviation of 6.22 in teaching of OTM in Public Universities in South-West, Nigeria.

Testing of Hypotheses

Research Hypothesis 1: There is no significant relationships between digital skills and teaching of OTM in Public Universities in South West, Nigeria.

Table 3: Summary of Regression Analysis on the Relationships Between Digital Skills and Teaching of OTM in Public Universities in South West, Nigeria.

Table 1: Model Summary

Model	R	R^2	Adj. R^2	SE
1	.740[a]	.547	.543	3.73799

ANOVA

Model		SS	df	MS	F	Sig.
1	Regression	1956.171	1	1956.171	140.001	.000[b]
	Residual	1620.820	116	13.973		
	Total	3576.992	117			

Note. SS = Sum of Square, df = degree of freedom, MS = Mean Square.

Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.045	3.898		4.629	.000
	Digital Skills	.719	.061	.740	11.832	.000

Table 3 presents the result of the relationships between digital skills and teaching of OTM in Public Universities in South West, Nigeria. Based on the analysis and the result generated, a coefficient magnitude of (β = 740; t = 11.832, p < .05), since p-value is less 0.05, this means that there is a significant relationship between digital skills and teaching of OTM in Public Universities in South West, Nigeria. Hence, the higher the digital skills possessed by the lecturer the higher the effective teaching of OTM in Public Universities in South-West, Nigeria. Therefore, the null hypothesis one is rejected.

Research Hypothesis 2: There is no significant relationships between digital technologies and teaching of OTM in Public Universities in South West, Nigeria.

Table 4: Summary of Regression Analysis on the Relationships Between Digital Technologies and Teaching of OTM in Public Universities in South West, Nigeria.

Model	R	R^2	Adjusted R^2	SE
1	.657[a]	.431	.426	4.18778

ANOVA

Model		SS	Df	MS	F	Sig.
1	Regression	1542.640	1	1542.640	87.962	.000[b]
	Residual	2034.352	116	17.538		
	Total	3576.992	117			

Note. SS = Sum of Square, df = degree of freedom, MS = Mean Square.

Regression

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.940	4.182		5.964	.000
	Digital tools availability	.604	.064	.657	9.379	.000

Table 4 presents the result of the relationships between digital technologies and teaching of OTM in Public Universities in South West, Nigeria. Based on the analysis and the result generated, a coefficient magnitude of (β = .657; t = 9.379, p < .05), since p-value is less 0.05, this means that digital technologies availability has a significant relationship between digital technologies and teaching of OTM in Public Universities in South West, Nigeria. Hence, the higher the digital technologies availability, the higher the effective teaching of OTM in Public Universities in South-West, Nigeria.

Therefore, the null hypothesis one is rejected.

Discussion

Data from research hypothesis 1 reveals that there is a significant relationship between digital skills and teaching of OTM in Public Universities in South West, Nigeria. Hence, the higher the digital skills possessed by the lecturer the higher the effective teaching of OTM in Public Universities in South-West, Nigeria. This finding supports the assertion of Kurt and Doğan (2020) that teachers possess digital literacy skills that will enable them to conduct their lessons in a virtual environment. Aslan (2021) added that if teachers have high digital literacy skills and digital pedagogical competence, they be capable to organize the teaching environment by taking digital technologies into account. To also support this finding, Emeasoba, Akudolu and Agbo (2022) found that there is high extent use of mobile phone and internet and low extent use of smart board in teaching and learning of Business Education. The study carried out by Yünkül and Güneş (2022) also revealed a favorable correlation among teacher candidates' attitudes toward the teaching profession, their academic motivation, and their levels of digital literacy skills acquisition.

Data from research hypothesis 2 reveals that digital technologies availability has a significant relationship between digital technologies and teaching of OTM in Public Universities in South West, Nigeria. Hence, the higher the digital technologies availability, the higher the effective teaching of OTM in Public Universities in South-West, Nigeria. This finding supports the assertion of Kurt and Doğan (2020) that teachers must have integrate digital technologies into learning-teaching processes. Martins et al. (2023) also found that there are advantages of digital technologies in enhancing teachinglearning process of students with Specific Needs, not being so evident with regard to Technologies as a decisive factor in the process of inclusion of these students. Castro and Lucas (2022) opined that there are several advantages associated with the use of digital technologies in teachers' practice: the diversification of learning tools, better management of classes and of the school itself. Some scholars and researchers (e.g. Belusso & Peruchin, 2018; Diaz & Lee, 2020; Castro & Lucas, 2022) empirically found that, for most teachers, digital technologies facilitate teaching and learning, make children more motivated and are resources that help pedagogical intervention, in line with several studies.

Conclusion

Based on the results of this study, it was concluded that digital skills acquisition and digital technologies availability contribute significantly to the effective teaching of OTM. This showed that digital skills acquisition and digital technologies availability have relative and combined influence on the effective teaching of OTM in Public Universities in South-West, Nigeria. However, with the contemporary changes in the mode of instructional delivery, it becomes imperative for teachers' and/or lecturers' to constantly adopt new methods in the teaching of OTM. Therefore, after investigating digital skills acquisition and digital technologies availability as factors influencing the effective teaching of OTM in Public Universities, the study concludes that digital skills acquisition and digital technologies availability are highly relevant in actualizing the goals and objectives of OTM education in Nigeria.

Recommendations

The following recommendations were made.

1. The Nigerian Government in collaboration with the National Universities Commission (NUC) should endeavor to ensure that digital technologies are regularly provided and constantly available for teaching and learning in OTM programmes in Public Universities.
2. The Nigerian government should endeavor to partner with private organizations to supply tertiary institutions with advanced ICT facilities like electronic and interactive whiteboards to improve instructional delivery in OTM.
3. Existing ICT facilities and equipment should be effectively used for teaching and research in OTM to maximize the benefits of available resources.
4. OTM lecturers should endeavor to continually update their knowledge and skills in using

digital tools to enhance OTM course instruction.

5. Both lecturers and students should endeavor to use available ICT gadgets for OTM teaching and learning, with regular assessments to determine essential ICT tools needed for OTM education.

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