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Office technology and management lecturers' self-assessment of Microsoft access proficiency for effective teaching in north-west Nigeria polytechnics

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Abstract

The study intended to investigate how Office Technology and Management lecturers assess their proficiency on Microsoft Access for effective teaching in North-West Nigeria Polytechnics. One research question and two null hypotheses guided the study. The population were 136 lecturers. The figures were sourced from OTM departments in all the Polytechnics of North-West Nigeria. No sample was drawn because the number was manageable. The questionnaire was used as the instrument for data collections. It was structured in two sections with five-point rating scale. The instrument was subjected to the validity test by expert. Cronbach alpha formular was used and obtained the reliability co-efficient value of 0.75. The researcher administered and retrieved the questionnaire to the respondents with the help of two assistants. The data analysis was done using mean and standard deviation to answer the research questions and ascertained the homogeneity of the respondents' opinions. The null hypotheses were tested at 0.05 level of significance with T-test. The finding showed that lecturers of OTM in North-west Nigerian Polytechnics were very proficient in teaching Microsoft Access applications. In conclusion, the lecturers were capable on teaching Microsoft Access applications. Gender and the type of institution have no influence on the lecturers' mean ratings of their proficiency for effective teaching of database management application (MS Access). It was recommended among others that, OTM lecturers should engage in self-development in learning other computer applications like dream weaver, One-note etc. to improve their skills.

Keywords: Effective Teaching, Proficiency, Microsoft Access, OTM lecturers

Introduction

The emergence of information technology today has transformed the stone age to a modern era. Each era has its own peculiarities that is being detected for adoption. In fact, office operational activities have been affected by this technological transformation, leading to the introduction Office Technology and Management which replaced the old secretarial studies. Office Technology and Management program was initiated from former Secretarial Studies, a discipline that is dominated by shorthand, typewriting, office practice, and secretarial duties (Ehidiamhen, 2014). In this modern world, businesses and government offices expanded, leading to the growing demand for skilled secretaries who could effectively work with technological tools to perform the functions of office secretaries.

According to Aliyu (2013), OTM is no longer limited to shorthand and typing. It has evolved into a multi-dimensional program which equip its trainee with diverse roles in office administration, management, and ICT-driven environments. All with a view to broaden the program, to integrate modern technologies such as computer applications, information administration, business communication, entrepreneurship, and office management. The goal is to produce graduates with both administrative competence and technological proficiency to meet the demands of contemporary offices. This could be achieved by the help of competent lecturers.

Office technology and management lecturers are people with adequate exposure of the necessary skills and competencies for effective delivery of courses relating to OTM. Nwana (2020) added that students' learning experiences largely depend on the lecturers' knowledge and skills. But from the view of Ibrahim (2017) students tend to appreciate lessons from instructors with diverse teaching methods. Ndah and Atah (2022) argue that, the ability of the OTM lecturers to deliver as expected depends on how the trainers motivate the learners thorough different tactics to develop interest in learning. This is to say that OTM lecturers should possess motivational capabilities, requisite skills and competencies in both ICT and management for effective teaching.

Proficiency is the ability of an individual to execute a task in accordance to the standard. Proficiency in teaching office technology and management courses is attained as result of

constant drill and practice. Knox (1980) defined proficiency as the capacity of an individual to perform a task in a satisfactory manner, if the individual is given the opportunity. For OTM lecturers to deliver as expected, Ms Access proficiency should be at their fingertips. Ezenwafor and Garba (2020) see database management proficiency as the capacity to perform responsibility in accordance with the prescribed criteria. Therefore, possession of requisite skills, knowledge and procedures could make the lecturers proficiently capable to provide adequate training to the students of OTM. Among which database management proficiency inclusive.

The integration of ICT into the OTM curriculum leads to desire for the students to be proficient in the use database management. As the subject is a critical component that ensures graduates are prepared for the modern office environment, there is no doubt for the lecturers to be competent and proficient in imparting the requisite skills of database management.

Okoro (2021) with database management being a core area, OTM curriculum is designed to produce state of the art graduates that are proficient in operating various office technologies. In this digital era, public and private places rely on data-driven decision-making and so the need to manage databases proficiently is crucial (Gokul, 2020). Hence, OTM lecturers should accumulate the essential abilities to communicate this knowledge effectively.

Katz (2020) highlighted that Database management as a pre-requisite in office work and its importance cannot be overstated. Unfortunately, empirical evidences revealed that the proficiency of OTM lecturers toward teaching database management is of significant concern, leading to lack of engagement and understanding by the students (Komolafe, 2017; Igbaria et al., 2018; Oluwagbemi, 2019; Ojo,2020).

Office Technology and Management (OTM) lecturers' exposure and competencies are the requisite to prepare their students with database management operational techniques to meet the challenges of modern workplaces. Azih (2016) classified critical competencies of database creation such as table design, query generation, and report generation. These abilities are essential for teachers to provide down-to earth training that will align student experiences with industry requirements. In support of Azih, Ishola and Amoda (2022) added that, proficiency in working with like table design tools, forms design. The author added that query wizard and report wizard underscored the lecturers' ability to effectively couch students for employability and readiness to work in the modern office.

It is suffice to state that OTM lecturers' inability to demonstrate required knowledge and skills to teach database management will not only affect their worthiness, but hamper the students' expectation of performing proficiently the functions of secretaries in the modern offices as stipulated in the curriculum contents. Ezenwafor and Garba (2020) discovered that lecturers of OTM programme in the Nigerian polytechnics required further training in database management in order to meet labour demand.

The gap in OTM curriculum do not adequately prioritize database management skills (Tony-Okem, 2021). The resultant effect is the absence of opportunities to build the expected proficiency during training. To effectively teach Ms Access, otherwise known as database management application, the instructor has to be conversant in the use of tools such as visual basic, SharePoint, table analyzer and relationship tab options. The alignment of OTM curriculum with ICT base courses signifies the importance of the students to comply with modern office activities (Nwaiwu & Nwokorie, 2019).

Studies indicate that many OTM lecturers possess limited competencies in the use of database management. For instance, Ezenwafor and Garba (2020) found that lecturers in North Central Nigeria required further training in computer applications to meet curriculum demands. Similarly, the lecturers in Anambra and Enugu states exhibited low proficiency in telecommunication and media competencies, which are integral to effective database instruction (Emeasoba and Ezenwafor 2014) Therefore, the proficiency of OTM lecturers in teaching database management is crucial for producing graduates capable of meeting the demands of the modern workplace.

The content scope for the study is Ms Access proficiency as it influences teaching effectiveness. The respondents' variables are OTM lecturers in North-West Nigeria Polytechnics. Since the respondents will rate themselves. It is likely that gender could influence their ratings. On the contrary, it is possible that State Polytechnics lectures could assess their proficiency better than the Federal Polytechnics lectures. Therefore, it is on the basis of the above varying factors, that the researcher deems it vital to ascertain the OTM lecturers' self-rating of their proficiency level for effective teaching of Microsoft Access.

Statement of the Problem.

Office Technology and Management programmed is a computer-based curriculum content design to comply with the nomenclature of office Information system. According to the National Board for Technical Education (NBTE, 2004) curriculum contents, the OTM product should fit into the world with computer competences and skills to effectively work after graduation.

However, from the observations of employers, secretaries' proficiency regarding Ms access application is worrisome. This made the employers to suspect the OTM lectures exposure on computer applications and specifically

database management system for effective teaching. Ezenwafor and Garba (2020) maintained that there is the need for OTM lecturers to be proficient in database management system because students can be trained to solve simple programming. Additionally, Nnaji (2022), emphasised that NBTE curriculum has created the demands of the lecturers that could teach students in the polytechnics and that is the reason for adding Ms access into the OTM curriculum.

It seems there is a gap between the employers' expectations and the lecturers' proficiency in teaching Microsoft Access to proficiently equip students for modern office work. The resultant effect to this, is that the curriculum objectives could not be realized which could translate to graduating half-backed secretaries. It is against this background that empirical evidence is required in order to determine the lecturers self-rating of office technology and management lecturers' proficiency for effective teaching of Microsoft access in North-west Nigerian Polytechnics.

Research question.

The following research question guided the study.

1) How OTM lecturers in the North-West Nigerian polytechnics rate their proficiency on Microsoft Access application?

Null hypotheses

The following hypotheses were tested at 0.05 level of significance.

1) OTM lecturers in North-West Nigerian Polytechnics do not differ significantly in their mean self-rating of their proficiency in Microsoft Access application as a result of their gender.
2) OTM lecturers in state and federal in North-West Nigerian Polytechnics do not differ significantly in their mean self-rating of their proficiency in Microsoft Access application.

Method

The study adopted a descriptive survey research design. The area was North-west Nigeria that comprised of seven states. The population of the study was 136 lecturers sourced from Heads of Departments of OTM in all the polytechnics offering OTM programmes. The entire population constituted the sample. Instrument for data collection was a structured questionnaire titled "OTM lecturers' Proficiency on Microsoft access applications questionnaire" (OLPOMAAQ). It has section A and B. Section A contains two items on the demographic data of the respondents while Section B contain 16 items respectively with a 5-point Likert type rating scale of very proficient (VP) with 5 points; Proficient (P) with 4 points; fairly proficient (FP) with 3 points; barely proficient (BP) with 2 points and not proficient (NP) with 1 point. The instrument was validated by three experts as follows; two lecturers in the field of office technology and management and one expert in the field of measurement and evaluation from FCE Kano. The reliability of the instrument was ascertained with Cronbach alpha which yielded a reliability Co-efficient value of 0.75 the researcher personally administered the instrument with the help of assistants who work in the polytechnics. Out of 136 copies of the instrument distributed, 127 (representing 93%) were retrieved and analysed. The analysis was done with mean and standard deviation to answer the research question and determine the homogeneity of the respondents' mean rating. Decision on the research question was based on the grand mean score relative to the real limit of numbers on the five-point scale. The inferential statistic of t-test was used to test the null hypotheses at 0.05 level of significance. A null hypothesis was not rejected when the t-calculated is less than the t-critical and rejected when the t-calculated is greater than the t- critical.

Results

Table 1: Respondents' mean rating of their proficiency on Ms access activities

S/N	Items	$\bar{X}$	SD	Remarks
1	Teach how to create data with datasheet view	4.57	0.64	Very proficient
2	Demonstrate how to create record with design view	4.34	0.58	Proficient
3	Work with table templates	4.63	0.68	Very proficient
4	Guide students how to create form with design view	4.71	0.63	Very proficient
5	Show how to create form with form wizard	4.44	0.72	Proficient
6	Demonstrate how to create report in design view	4.55	0.77	Very proficient
7	Display how to create report in report wizard	4.62	0.69	Very proficient
8	Manipulate query wizard	4.56	0.59	Very proficient
9	Create query with design view	4.48	0.72	Proficient
10	Make students to identify qualities of DBMS	4.74	0.57	Very proficient
11	Lead students to get data from Hyper Text Markup Language document	4.67	0.65	Very proficient
12	Show how to create database e-mail	4.73	0.69	Very proficient
13	Engage student to know how to migrate data into share point site	4.55	0.70	Very proficient

14	Engage students to create migrate data into Structural Query Language server	4.73	0.62	Very proficient
15.	Relate data from different fields	4.67	0.55	Very proficient
16.	Show how to sort data to maintain security	4.67	0.59	Very proficient
	Grand mean	**4.60**		**Very proficient**

Source: Questionnaire administered, 2025

The data presented in Table 1 show that 13 items related to database management are rated to a very proficient level by the respondents, having the item mean of rating from 4.74 to 4.55. Three items with mean of 4.34, 4.44 and 4.72 are rated proficient by the lecturers. The total mean of 4.60 is obtained. The Standard deviations are spread homogenously as per the respondents' response. This reveal that lecturers of OTM in the polytechnics of North-West Nigeria are very proficient in database management system.

Table 2: Summary of t-test analysis of male and female lecturers mean ratings of proficiency on database management system activities.

Gender	N	Mean	SD	Df	Std Error	t-cal	L/S	t-crit	Decision
Male	86	3.47	3.47	125	0.39	1.18	0.05	1.96	Not rejected
Female	41	3.01	3.19						

The t-test findings in Table 2 show that the calculated t-value (t-cal) of 1.18 is less than the critical t-value (t-tab) of 1.96 at 125 degrees of freedom. This finding indicates that there is no statistically significant disparity at 0.05 level of significance in the mean ratings of male and female OTM lecturers' responses concerning their proficiency in database management system.

Table 3: Summary of t-test analysis of federal and state lecturers mean ratings of proficiency on database management system activities.

Institution	N	Mean	SD	Df	Std Error	t-cal	L/S	t-crit	Decision
State	76	2.67	2.17	125	0.39	0.59	0.05	1.96	Not rejected
Federal	51	2.44	2.11						

The results from the t-test in Table 3 show that the calculated t-value (t-cal) of 0.59 is less than the crucial t-value (t-tab) of 1.96 at 125 degrees of freedom and at 0.05 level of significance. The data suggests no significant disparity in the mean ratings on database management system proficiency level among OTM lecturers in state polytechnics and their counter part from federal polytechnics in North-west Nigeria.

Discussion

The finding showed that OTM lecturers in Polytechnics in North-West Nigeria were very proficient in teaching database management system. The finding of this study is in consonance with the opinion posed by Ishola and Amonda (2022) who reported a positive transition of OTM lecturers' ability in teaching Database management course as compared to the previous years. The finding also collaborates with that of Ademiluye and Emude (2019) who detected that lecturers in the South-West Nigeria were competent in the use of Microsoft Access (Database Management system).

However, this finding contradicts that of Azih (2016) which found out that OTM lecturers in the Nigerian polytechnics do not have the requisite training exposure to effectively cover the contents of database management in the curriculum.

The result of this study also found no significant difference among OTM lecturers in North-West Nigeria Polytechnics in their mean self- rating of their proficiency in database management as a result of their gender and the institution they belong. The result of this finding confirmed that of Ademiluye and Emude (2019) who identified no significant difference between the mean ratings of OTM teachers in Ogun and Osun States on Microsoft Access competencies needed for computer aided instructions. This translates that gender has no influence on the respondent responses. Again, institution of affiliation by the lecturers did not influence the self-ratings of their proficiency on database management.

Conclusion

The study concluded that OTM lecturers in North-west Nigerian Polytechnics were proficient in teaching Microsoft Access applications. The tested hypotheses revealed that gender and the type of institution have no influence on the lecturers' mean ratings of their proficiency for effective teaching of database management application (Ms access).

Recommendations

On the basis of the findings and conclusion, the following recommendations are made.

1) OTM lecturers should engage in self-development in learning other computer applications like dream weaver, one note etc to improve their skills.
2) The management of the institutions covered in this study should continue to engage and train OTM lecturers so as to keep being proficient in teaching computer applications relative to OTM courses.
3) The future researchers should conduct another survey on word processing, excel and desktop publishing to explore silent issues that need to be addressed.

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