

ASSESSMENT OF FACTORS INFLUENCING THE ACQUISITION OF DIGITAL COMPETENCE BY STUDENTS OF OFFICE TECHNOLOGY AND MANAGEMENT PROGRAMME FOR MAXIMUM PERFORMANCE IN SOUTH-SOUTH, NIGERIA

Dr. Ikelegbe, Samuel Emuhowho

*Department of Office Technology and Management
School of Information Communication Technology
Delta State Polytechnic, Ogwashi-Uku
ikelegbesamuel@yahoo.com*

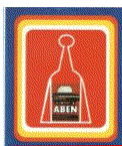
Abstract

The study investigates factors influencing students in the acquisition of digital competence in office technology and management programme for maximum performance in south-south, Nigeria. The purpose of the study was to determine the factors affecting students in the acquisition of digital competence in OTM programme. The study adopted a descriptive survey research design, two research questions and two hypothesis guided the study. The population of the study consists of 88 lecturers in office technology and management in eight polytechnics in south-south, Nigeria. A structured questionnaire was used to generate response from the respondents. The questionnaire was design on a four point rating scale. The instrument was validated by three experts while the internal consistency was tested using Cronbach Alpha method which yielded a coefficient of 0.83. Mean and standard deviation were used to analyze the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The data analysis revealed that insufficient technological tools, inappropriate knowledge of some OTM lecturers on technology and low teacher quality are among factors influencing students proper learning of digital technology. The study concluded that classroom factors such as inadequate technological equipment, inaccessibility technological tools etc. and lecturers use of intimidation, lecturers resistance against teaching at the assigned time are all factors that influence students of Office Technology and Management to acquire digital competencies. It was recommended among others that polytechnics should make available fund to retrain OTM lecturers on ICT area and that information communication and technologies (ICT's) equipment should be provided in their numbers to help in training students.

Keywords: Competence, digital competence, performance, office technology and management.

Introduction

Office technology and management (OTM) programme is concerned with training students to acquire skills, understanding, attitudes, work habits and competencies that are requisite to success in office management occupations. According to Iredia, Oboh and Umokoro in Ikelegbe (2021), the National Board for Technical Education basically design the OTM curriculum with the aim of producing graduates who would be able to effectively manage the electronic driven office and who



would be equipped with secretarial and office skills for employment in various field of endeavour. Umoru and Enonche (2021) posited that OTM programme is a skill, administrative and management programme of study aimed at preparing recipients for office jobs and/or to become self-employed. The teaching of this course according to the authors requires great skills and competencies needed to impart knowledge into the recipients.

Competence in any field indicates sufficient knowledge, attitude and skills that enable someone to act in a wide variety of situations. Competency is highly required in teaching OTM courses. Hornby in Ikelegbe (2020) define competency as a skill you need in a particular job or for a particular task. It is the knowledge, skill and behaviour that enable an employee to meet established performance criteria. Azih and Ama (2020) believe that competence is a person's ability, power, authority, skills, knowledge, attitude, to do what is needed. They added that competencies focus on personal image, attitudes, habits, behaviour, techniques of communication, problem solving, decision making, reliability, honesty, humility, resourcefulness, regularity and human relations formation.

The concept of digital competence has emerged concurrently with technological development and society has recognized the need for new competences. Development of technologies enables and constantly creates new activities and goals, and the important of digital competence is therefore constantly changing and must always be seen in relation to current technology and its application (Skov, 2016).

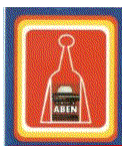
The above scenario has made it possible to re-think technology as having the ability to use digital technologies and has almost become a necessity, especially when applying for jobs.

Ilomaki, Kantosal and Lakkala (2011) stated that digital competence consists not only of digital skills but also social and emotional aspects for using and understanding digital device. The European Commission in 2006 defines digital competence as involving the confident and critical use of information society technologies for work, leisure and communication. Today, technology has become the norm in our everyday activities and no one or institutions that it has not affected positively.

Onomiwoi (2020) stated that digital competence is the ability to not only understand and make use of digital technologies and systems, but to possess the confidence to use them creatively, critically and without assistance. This according to him is generally geared towards succeeding in the modern world at one's job, hobbies, or personal endeavours. This means that OTM students should be taught not only on the use of digital technologies but should include boosting their confidence and on how to be creative in handling and using technologies both in the office and for personal use.

According to Adedaji in Ojo (2018) students' performance is a major indices by which the effectiveness and success of any educational institution could be ascertained. There is a consensus among educationalist and researchers such as (Owoeye, 2000; Ajayi in Ojo 2018) that students poor performance is being experience daily. This means that something must be done to improve teaching and learning condition. Felintula (2014) in his views stated that in a typical classroom setting, a professional teacher must demonstrate excellence attitude in his teaching. This means that teachers must put forth an attitude that will help to transform the learners' positively in the three domains of learning i.e. cognitive, affective and psychomotor areas. A professional teacher should not only demonstrate sound attitude in teaching but must put forth an attitude that shows his/her intelligence with desirable traits. Teachers attitudes highly influence students interest in learning and this will help in acquisition of the desired digital competence for performance by students of Office Technology and Management.

In the opinion of Anusca (2013), digital competence is a transversal key competence which as such enables us to acquire other key competence (e.g. language, mathematics, learning to learn and cultural awareness). It is the 21st century skills which should be acquired by all citizens, to ensure their active participation in society and the economy. He noted that the European Union digital competence framework for citizens describes 21st century digital competences to use to



include using digital technologies in a confidence, critical, collaborative and creative way to achieve goals related to work, employability, learning, leisure, inclusion and participation in society.

The framework if adopted in imparting on students of OTM it will be beneficiary. The framework is broken down into five competence areas as follows:

1. Information. This includes: browsing; searching and filtering, evaluating, storing and retrieving.
2. Communication. Which includes: interacting through technologies, sharing information, engaging in online citizenship, digital collaboration, online etiquette, and managing your digital identity.
3. Content creation. This includes: developing content, integrating and re-elaborating copyright and licensing Programming
4. Safety and protection. This includes; protecting devices, protecting personal data, protecting health, Protecting the environment.
5. Problem Solving. Technical issues, expressing needs and identifying technological responses, innovating and creatively using technologies, identifying digital competence gaps.

According to Ezeani and Oludele (2021), managing the office for success in the 21st century involve efficient correspondence and document management, effective communication process, effective and efficient meeting management and functional record management. Office management of today is therefore dominated by sharing/filing documents, attending meetings and transmitting information among others. This suggest that ability to carry out assigned tasks digitally is necessary and is a required skills by employers as such OTM students should acquire digital skills before graduation and this should be the focus of lecturers teaching in Office Technology and Management programmes.

Statement of the Problem

Digital technologies are emerging daily and most of them are use in the contemporary office. These digital technologies require the desired competence to put them into use. This has place a burden on OTM programme to turn out graduates that will be capable to operate and use these technologies as they arrive, because organizations are likely to be interested in employing only those that can effectively manage the office functions digitally. It has been observe that most lecturers in OTM programme seem not to be effective in imparting knowledge and competencies on their students before graduating and this has affected students in job placement because digital skills to perform on the job are lacking. It is against this background that the study seeks to determine factors influencing OTM students in the acquisition of digital competencies for maximum performance.

Purpose of the Study

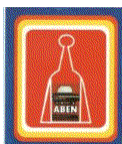
The main purpose of the study was to determine the factors influencing students in the acquisition of digital competence in OTM programme. The study specifically determined;

1. Classroom factors that influence students in the acquisition of digital competence in OTM programme for maximum performance.
2. Lecturers' attitude that influence students in the acquisition of digital competence in OTM programme for maximum performance.

Research Questions

The following research questions guided the study:

1. What are the classroom factors that influence students in the acquisition of digital competence in OTM programme for maximum performance?
2. What are the lecturers' attitudes that influence students in the acquisition of digital competence in OTM programme for maximum performance?



Research Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean response of male and female OTM lecturers on classroom factors that influence students in the acquisition of digital competence in OTM programme for maximum performance.
2. There is no significant difference between male and female lecturers' attitudes that influence students in the acquisition of digital competence in OTM programme for maximum performance.

Methods

The study adopted a descriptive survey research design. The population of the study comprised of 88 lecturers in Office Technology and Management department in eight polytechnics in South-South, Nigeria. This comprised of 48 females and 40 males. The entire population was studied. A structured questionnaire titled: Factors Influencing the Acquisition of Digital Competencies Questionnaire (FIADCQ) with two sections was used to carry out the study.

The questionnaire was designed on a four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) that weighted 4,3,2 and 1 respectively. The instrument was face validated by three experts from the Department of Business Education, Ebonyi State University, Abakaliki. The internal consistency of the instrument was tested using Cronbach Alpha method which yielded a coefficient of 0.83. The administration and collection of the instrument was done by the researcher and two research assistants. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. A mean score of 2.50 was the benchmark for acceptance while mean score below 2.50 was rejected. For the hypotheses testing, if the calculated t-value is less than the critical value, the calculated value was accepted where the calculated t-value is equal to or greater than the critical value, the hypothesis is rejected.

Results

Research Question 1: What are the classroom factors that influence students in the acquisition of digital competence in OTM programme for maximum performance?

Table 1: Mean ratings and standard deviation of respondents on classroom factors that affect students in the acquisition of digital competence.

S/N	Classroom factors that influence students	Mean	S.D.	Remarks
1.	Inadequate technological equipment	2.88	0.50	Agree
2.	Inaccessibility of technological tools	2.93	0.55	Agree
3.	Absence of self-development to use ICT tools	2.61	0.69	Agree
4.	Lack of digital technology teaching approach	2.55	0.71	Agree
5.	Inadequacy of assessment	2.43	0.70	Disagree
6.	Lack of lecture planning	2.48	0.75	Disagree
7.	Inability of lecturers to interact appropriately with students	2.63	0.70	Agree
8.	Students inability to assimilate	2.78	0.71	Agree
9.	Excessive workload impede on lecturers ability in the classroom	2.92	0.81	Agree
10.	Absence of electricity for effective powering of machines/equipment for training of students	2.89	0.88	Agree
Grand Mean and Standard Deviation		2.51	0.70	Agree

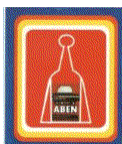


Table 1 above shows that items 1,2,3,4,7,8,9 and 10 with mean scores of 2.88, 2.93, 2.61, 2.55, 2.63, 2.78, 2.92 and 2.89 respectively were rated agreed while items 5 and 6 with mean scores of 2.43 and 2.48 were rated disagreed. From the responses, with a grand mean and standard deviation of 2.51 and 0.70 respectively, it could be concluded that classroom factors listed on the table except item 4 and 5 inhibit OTM students' acquisition of digital competence.

Research Question 2: What are the lecturers' attitudes that affect students in the acquisition of digital competence in OTM programme for maximum performance?

Table 2: Mean ratings and standard deviation of respondents on lecturers' attitudes that affect students in acquisition of digital competence

S/N	Lecturers attitude that influence students	Mean	S.D.	Remarks
1.	Lecturers use of intimidation	2.83	0.84	Agree
2.	Lecturers resistance against teaching at the assigned time	2.65	0.64	Agree
3.	Negative teacher attitude produce anxiety that affect students learning	2.91	0.86	Agree
4.	Lecturers absenteeism affect students because the syllabus is not covered	3.15	1.14	Agree
5.	Absence of good rapport between a teacher and students affect performance	2.67	0.71	Agree
6.	Students perform poorly under a lecturer who abuses them on every slight issue	3.16	1.16	Agree
7.	Performance of students will be poor if the lecturer does not show deep interest in imparting competency on them	3.01	1.12	Agree
8.	Low teacher quality affects students' performance	2.55	0.95	Agree
Grand Mean and Standard Deviation		2.87	0.93	Agree

Table 2 indicates that respondents were unanimous in their responses to all the constructs in the table above. This was evident as all the mean scores are above 2.50 which is the fixed decision value. The grand mean and standard deviation of 2.87 and 0.93 respectively indicates that items listed for the study on lecturers' attitudes affect students in acquisition of digital competence.

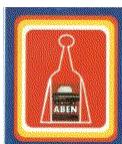
Test of Hypotheses

Ho1: There is no significant difference between the mean response of male and female OTM lecturers on classroom factors that affect students in the acquisition of digital competence in OTM programme for maximum performance.

Table 3: Summary of t-test analysis on the mean response of male and female OTM lecturers on classroom factors that affect students in acquisition of digital competence.

Variables	N	Mean	SD	df	@	t-cal.	t-crit.	Decision
Males	40	3.02	0.73	86	0.05	0.25	1.96	Not Significant
Females	48	3.06	0.78					

Table 3 shows that at 86 degree of freedom, with a calculated t-value of 0.25 which is less than the critical value of 1.96 at 0.05 level of significance, the hypothesis is accepted. This means there was no significant difference between the mean response of male and female OTM lecturers on



classroom factors that affect students in the acquisition of digital competence in OTM programme for maximum performance.

Ho 2: There is no significant difference between male and female lecturers on the attitude of lecturers that affect students in the acquisition of digital competence in OTM programme for maximum performance.

Table 3: Summary of t-test analysis on the mean responses of male and female Lecturers' on the attitudes of lecturers that influence students in the acquisition of digital competence in OTM programme for maximum performance

Variables	N	Mean	SD	df	@	t-cal.	t-crit.	Decision
Males	40	3.08	0.66	86	0.05	0.16	1.96	Not Significant
Females	48	3.01	0.72					

Data in table 4 shows that at 86 degree of freedom, with a calculated t-value of 0.16 which is less than the critical table value of 1.96 at 0.05 level of significance, the hypothesis is accepted. This means that there is no significant difference on the perceive attitudes of lecturers' that affect students in the acquisition of digital competence in OTM programme for maximum performance.

Discussion of Findings

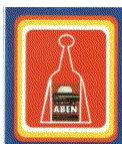
Findings on the first research question shows that respondents are of the views that a number of factors contributes to non-acquisition of digital competence in the classroom, these include inadequate technological equipment, inaccessibility of available technological tools, absence of self-development to use ICT tools by lecturers, lack of digital technology teaching approach by lecturers, lack of lecture planning, inability of lecturers to interact appropriately with students, students inability to assimilate, excessive workload and absence of electricity for effective powering of machines and equipment for training of students. These findings are in agreement with Usman (2021) who reported that lecturers' level of usage of ICT facilities for teaching is low. Also, Mac-lkemenjima (2015) pointed out that generally, the use of ICTs facilities in schools has suffered a number of setbacks which include inadequate ICT facilities.

Findings in respect of research question two indicated that respondents believe that lecturers attitude that impede on students acquisition of digital competencies include use of intimidation, lecturers resistance against teaching at the assigned time, negative teacher attitude that produce anxiety that affect students learning, absenteeism, absence of good rapport between a teacher and students, others are that students perform poorly under a lecturer who abuses students on every slight issue, absence of deep interest on imparting competencies on students and low teacher quality which is itself a problem to the teaching profession.

These findings are in line with the study of Arinkwandu, Okoro and Ozoemenam (2016) who found in a study on attitudinal competencies required for the motivation of beginners in shorthand that certain elements constitute teachers attitudes which facilitate a caring and supporting classroom environment. Also, Umoru and Enonche (2021) on a study concluded that attitudinal and classroom competencies of lecturers are germane to student's future direction and performance.

Conclusion

The study therefore conclude that classroom factors such as inadequate technological equipment, inaccessibility technological tools etc. and lecturers use of intimidation, lecturers resistance against teaching at the assigned time are all factors that influence students of Office Technology and Management to acquire digital competencies.



Recommendations

Based on the findings and conclusion of the study, the following recommendations were suggested.

1. Polytechnics and other institutions that mount programme in Office Technology and Management should provide modern technological equipment, especially computers connected with internet and other gadgets that would assist lecturers to train students adequately.
2. Lecturers in Office Technology and Management should show attitude of kindness and make themselves available to students. This will help in motivating students in learning and will bring about acquisition of digital skills.
3. OTM lecturers should endeavour to attend further training on the areas they lack digital skills, this will enable them to have the abilities to handle the present technological era especially in the e-classroom of today and this will impact on the students and will equally aid them in handling the contemporary e-office of today.

References

- Anusca, F. (2013). Digital competence framework: A framework for developing and understanding digital competence in Europe: European Commission. JRC Scientific and Policy Reports.
- Azih, N. & Ama, F.N. (2020). Identification of higher level competencies required in technologically driven offices. *Journal of the Association of Business Educators of Nigeria*. 7(1), 472-482.
- Arikwandu, S.O., Okoro, F. & Ozoemenam, N. (2016). Attitudinal competencies required for the motivation of beginners in shorthand as perceived by OTM students of Federal Polytechnic, Bauchi: *Nigerian Journal of Business Education*, 3(2), 296-306.
- Ezeani, N.S. & Oludele, L.Y. (2021). Digital competencies as correlation of secretarial personnel efficiency in Osun State Polytechnic, Iree. *Conference Proceedings, Association of Business Educators of Nigeria*. 8(1), 248-253.
- Fehintola, J.O. (2014). Teachers' characteristics as correlate of students academic performance among secondary school students in Saki-West Local Government Area of Oyo State. *Journal of Education and Social Research*. 4(6), 459-468.
- Ikelegbe, S. (2020). Perception of entrepreneurs' of competencies required by office technology and management graduates for entrepreneurial development in Delta State. *Conference Proceedings, Association of Business Educators of Nigeria*. 7(1), 698-706.
- Ilomaki, Kantosalio, A., & Lakkala, M. (2011). What is digital competence? In linked portal, Brussels. European schoolnet. <http://linked.en.org/web/guest/in-depths>
- Mac-Ikemenjima, D. (2015). Education in Nigeria: challenges and prospects. Presented at the 8th UN ICT Task Force Meeting, Dublin, Ireland, from 13-15, April 2015.
- Onomiwoi, K.S. (2020). ICT learning space and competencies. *European Journal of Education*. 40, 180-197.
- Ojo, O.J. (2018). Teachers' professional attitudes and students academic performance in secondary schools in Ilorin Metropolis of Kwara State. *E-journal of Education Policy*. [Http://nan-edu/COE/ejournal/](http://nan-edu/COE/ejournal/)
- Owoeye, J.S. (2000). The effect of interaction of location, facilities and class size on academic achievement of secondary school students in Ekiti, Nigeria. Unpublished Ph.D Thesis, University of Ibadan, Ibadan.
- Skov, A. (2016). What is digital competence? Center for digital channels. <https://digital-competence/front/what-is-digital-competence/>
- Umoru, T.A. & Enonche, A. (2021). Students' perceptions of the attitudinal and classroom competencies needed by lecturers for motivating beginners in Office Technology and Management. *Conference proceedings, Association of Business Educators of Nigeria*.
- Usman H.N. (2021). Level of usage of information and communication technology and online database facilities by business education lecturers for teaching and research. *Conference proceedings, Association of Business Educator of Nigeria*. 8(1), 322-334.