



Constraints And Strategies To Utilization Of Information And Communication Technologies by Office Management And Technology Students In Rivers State

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ABSTRACT

The study examined the constraints and strategies to utilization of Information and Communication Technologies by Office Management and Technology Students in Rivers State. Descriptive survey research design was adopted. Two objectives, research questions and two null hypotheses guided the study. The population of the study comprised all 210 OMT students of 2018/2019 academic session in universities offering OMT programme in Rivers State. These universities are Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE). The entire population was studied because the population was of a manageable size. The instrument for data collection was a self-structured questionnaire developed by the researcher based on the insight gained from the review of related literature. The instrument was designed on a 4-point rating scale and validated by three experts. Data collected were analyzed using mean and standard deviation to answer research questions, and z-test to test the null hypotheses formulated. The study revealed that OMT students are faced with constraints to utilization of ICTs and that there are strategies in the utilization of ICTs by OMT students. It was therefore, recommended that administrators of OMT programmes should train and retrain teachers on ICTs in schools, government should employ competent and knowledgeable staff on ICTs. Also, government should ensure that schools are adequately equipped with the needed ICT facilities for effective teaching and learning.

Keywords: Office Management and Technology, Information and Communication Technologies, students, learning

INTRODUCTION

Rapid development in Information and Communication Technologies (ICTs) in recent years has resulted in significant changes in recent years in the way the world operates and communicates. This in turn has had an impact on education and training needs both in terms of the content and the delivery of educational and training services. There has been increasing pressure on decision makers to acquire new technologies. Simultaneously, forms of ICTs are multiplying with an increasing array of ICT options for decision makers to choose from when integrating ICT into education and training (Joshua, 2013). Faced with this situation, policy makers in many countries thought that to simply equip educational and training institutions with personal computers and train teachers in their use would prepare students for the demands of the 21st century.

Office Management and Technology Programme in Nigerian Institutions has been evolving and developing with the advancement in office work and technology. OMT is a nomenclature that has replaced secretarial studies, (NBTE 2004). This was as a result of an extensive review of secretarial studies curriculum in order to make its recipients to be ICT-complaint and fit appropriately in the world

of work, most especially, in the modern offices that are characterized by various types of state of the art technologies. OMT programme is designed to equip students with the competencies required to work in a modern office environment (E-world). Adolphus (2013) noted that the current OMT programme lays much emphasis on computer and computer related courses. Rouse (2015) asserted that ICT have become an integral part of education the world over. The author noted that, ICT is an umbrella term used to describe communication devices that are used for the gathering, processing and dissemination of information.

According to Unclesam (2015), ICTs are technologies used in conveying, manipulating and storage of data through electronic means. Techterms (2013) defined ICTs as technologies that provide access to information through communication. Examples are internet, wireless networks, cellphones and communication mediums. ICTs as described by James (2016) are information handling tools, a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. They include; radio, television, telephone, computers, satellite, wireless technology and the internet. The author noted that the above mentioned, are now able to work together and combine to form our networked world which is a massive infrastructure of interconnected telephone services, standardized computing hardware, the internet, radio and television which reaches into every corner of the globe. Young (2016) posited that, ICT is the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information. Nworgu (2014) sees ICT as a whole range of facilities involved in information processing and electronic communication to be handled with skills and expertise for effective attainment and realization of its potentials in education. Victoria (2013) envisaged that, ICT refers to harnessing electronic technology for information processing needs of business organizations using the computer and telecommunication equipment for storage, processing and dissemination of information.

Gilbert (2016) opined that, ICT means the acquisition, analysis, manipulation, storage, and distribution of information; the design and provision of equipment and software for these purposes. Nwaiwu (2016) remarked that ICT includes electronic information processing technology such as computers and internet; as well as fixed-line telecommunication, mobile phones and other wireless communication networks. According to Lambert (2015) viewed ICT as a systematic application of computers and other technologies to acquire, organize, process, store, retrieve and disseminate information to bring about effective exchange of information in communication. ICTs in education according to Adolphus is teaching and learning using ICTs. Adolphus further buttressed that, educational ICT tools are divided into categories namely: input source, output and others. The input source includes personal computers (PCs), tablets, application software, student response systems, visualizer or document camera. Output source refers to devices such as projector, interactive boards, monitors, display and television. Others include digital camera, digital recorders, switchers and other technologies.

In line with the above assertion, Mbaeze (2017), affirmed that ICT can enable a global outreach for sharing of knowledge, materials and databases, quickly and cheaply over long geographically distances using online resources. The author added that, ICTs are generally accepted as a modern instrumental tool that allows the educators to modify the teaching methods they use in order to enhance the students' performance or better learning methods. Abraham (2017) explained that many educational institutions around the world are adopting ICT as a tool of teaching and learning as well as offering ICT related academic programmes because of integrating human society in information and communications. Furthermore, Abraham posited that ICT for education is more critical today than ever before, since its growing power and capabilities are triggering a chance in the available learning environment. Eric (2017), noted that, the integration of ICT in teaching and learning will impact upon OMT students the knowledge and skills required in the new work atmosphere that is increasingly becoming ICT based. Eric opined that, today, technologies has tried to eliminate the drudgery and fatigue associated with the handling and preparation of record countless times in order to get information for management decision on crucial administrative issues. Again, that ICTs are making it possible for offices to provide a variety functions and services that OMT students are to provide manually, can be provided now through the use of ICT which can do things better and faster.

Volman (2018) narrates that, effective use of ICT offers great learning environments and can transform the learning and teaching process so that students can deal with knowledge in an active, self-directed and constructive way. Volman added that ICTs should be used to develop students' skills for co-operation, communication, problem solving and lifelong learning. Emmanuel (2018), affirmed that students with competence in ICT will be able to serve as worthy citizens in their communities by comprehending how society operates in the current competitive knowledge economy era. The author asserts that, students who do not have skills in ICT are likely to face challenges with the increased workplace demand for computer literate employees.

However, Gbenga (2006) in Dorathy (2015), observed that most Nigeria tertiary institutions are already having computer study as part of academic programmes. Most of them are still theoretical in nature to impact meaningfully in the society. In agreement with Dorathy (2015), Stephen (2016) noted that Nigeria is unfortunately behind other developed nations in ICT use as it relates to educational delivery. The National Universities Commission (NUC) recently setup a visual learning website but its impact is yet to be felt. Infact ICT has had more impact on administrative services such as admission, registration, fee payment and purchasing than on the fundamentals of classroom teaching and learning. United Nations Educational Scientific Community Organization (2003) in Dorathy (2015) reported that the use of instructional technology in the higher institution teaching and learning process is still in its infancy in Nigeria. Gambari (2016) argued that, even though ICT has not revolutionalized the classroom yet, it is changing the learning experience of student with ease and limiting space constraints as well as providing easier access to information online, journal or e-books, students' portals etc in achievement that should not be down played.

According to Ngwu (2014), most ICTs equipment is not adequately available in tertiary institutions. This therefore means that, educators who are adequately trained and willing to impart the knowledge are blocked from doing so by the inadequate technological equipment and laboratory facilities. Ngwu added that inadequate school management of ICT initiative, inadequate administration and lack of educators readiness towards pedagogical skills for electronic and blended learning are barriers. Langat (2015) viewed shortage of infrastructure and resources, shortage of educators, lack of clear digital curriculum, poor timing and planning, communication barriers, high cost of implementation and moral issues as hindrance to the utilization of ICTs. Mahmood (2014), attributed lack of ICTs utilization in higher institutions to a number of factors which are, lack of exposure and expertise on the part of educators who are computer illiterate against modern students who are quick to self-educate and computer literate. Inadequate time to learn, acquire and apply technology appropriately and lack of professional training of the educators before use. Chijioke (2015) identified the following as factors militating against the utilization of ICTs in schools such as; lack of qualified educators, lack of electricity, inadequate computers, breakdown of computers, high cost of procurement of ICTs, burglary, obsolete computers and increase moral degradation.

Afsharl (2009) in Jacob (2015) identified and classified the factors affecting the use of ICTs in schools as non-manipulative and manipulative. The non-manipulative factors are those that cannot be influenced by the school, which includes; age, teacher experience, computer experience of the teacher, government policy, and non-availability of external support for the school. While the manipulative factors are those the school can influence which are; teacher's attitudes towards ICTs, teachers ICT skills, knowledge, school commitment towards implementation of ICTs and availability of ICT supports. George (2016) envisaged that, lack of all stakeholders' awareness of the importance of ICT in teaching and learning is a challenge. These stakeholders include teachers, parents, students and the community at large. George also noted that lack of ICT in schools, lack of professional development of lecturers in schools, lack of time to integrate ICTs into existing curriculum are some of the barriers to utilization of ICTs in school and advice that local software developers to work with institutions in developing software ideal for training.

Similarly, Eleanor (2017) stated the following as factors hindering the effective utilization of ICTs in higher institutions as; lack of funds for procurement of computers, poor network, insufficient training and retraining of lecturers on the new technologies, lack of maintenance skill, lack of maintenance of the existing technologies and upgrading, lack of requisite facilities, lack of government support and business

community. Okereke (2017) observed that, lack of manpower, shortage of technological facilities for learning, lack of knowledge and use of computer aided instruction has given rise to low level of e-learning awareness in most institutions in Nigeria. Stanley (2018) asserted that students who are not properly trained and equipped with the requisite ICTs skills would perform below expectation in the digitalized world of work. Also these will lead to incompetence on the part of students after graduation. Furthermore, Stanley advice that ICTs should be made part of the educational delivery of learning to be successfully useful and deliver the goods expected of it such as making OMT students global worker after graduation.

In agreement with Stanley (2018), Adolphus (2019) identified the following as strategies to utilization of ICTs in higher institutions such as; provision of free internet service in the schools for students, improving electricity generation in schools, upgrading of ICT facilities, employing qualified and knowledgeable staff in ICT, procurement of ICTs in schools, training and retraining of teachers in ICT, favourable institutional policies governing the application of ICTs should be formulated, enactment of institutional law to enforce maintenance of ICTs in schools, institutions and private sector partnership to invest in provision of ICTs, government should subsidize internet facilities for students for ICTs application, and provision of adequate security for ICT resources in the school etc.

Statement of the Problem

In Nigeria educational system, business environment and the world of work have undergone substantial revolution in their operations due to the phenomenal growth of Information and Communication Technologies. These changes cannot be ignored as a nation and individual(s) cannot attain the desired development in this technological age without making proper use of ICT. Undoubtedly, ICT can enable a global outreach for sharing of knowledge, materials, databases, quickly overlong geographically distance using online resources and enables the educators to modify the teaching methods they use in order to enhance the students' performance (Dorathy, 2015). It is uninteresting and common to see OMT students enroll in roadside computer centres to acquire ICT skills which ought to have been mastered in their various institutions. Eleanor (2016), observed that most OMT students face certain challenges with the use of ICTs, despite its obvious importance in the world of work and the society at large. These includes; lack of ICT facilities, poor training background, lack of funds for procurement of ICT equipment, high cost of ICT resources, poor network, power failure, poor level of ICT skills, lack of maintenance of existing ICT facilities and upgrading etc. Eleanor added that these challenges with ICT will put off a prospective OMT graduate from being employed. It is against this background that this study was carried out to ascertain the constraint and strategies to utilization of Information and Communication Technologies by OMT students in Rives State.

Purpose of the Study

The main purpose of the study was to ascertain the constraints and strategies to utilization of ICTs by OMT students in Rivers State. Specifically, the study sought to:

1. Identify the problems encountered by OMT students in the use of ICTs in Rivers State.
2. Determine the strategies in the use of ICTs by OMT students in Rivers State

Research Questions

The following search questions guided the study

1. What are the problems encountered by OMT students in the use of ICTs in Rivers State?
2. What are the strategies in the use of ICTs by OMT students in Rivers State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

1. There is no significant difference in the mean responses of Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE) OMT students on the problems encountered in the use of ICTs in Rivers State.
2. There is no significant different in the mean responses of Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE) OMT students on the strategies in the use of ICTs in Rivers State.

METHOD

The study adopted descriptive survey design. The study was carried out in Rivers State own Universities that offer OMT programme. The population of the study consisted of 210 final year OMT students of 2018/2019 academic session, 100 in Rivers State University (RSU) and 110 in Ignatius Ajuru University of Education (IAUE) in Rivers State. Due to the relatively manageable size of the population, the entire population was used for the study without sampling.

Two research questions and two hypotheses guided the study. The instrument for data collection was a structured questionnaire titled: “Questionnaire on the constraints and strategies to utilization of Information and Communication Technologies by Office Management and Technology student (QCSUICTOMTS)”. The instrument has two parts. Part “A” focused on the respondents’ personal data, while part “B” contains two clusters, B1 and B2 with 20 items covering the research questions. The questionnaire was structured on a 4-point rating scale of Strongly Agree (SA); Agree (A); Disagree (D), and Strongly Disagree (SD) respectively. The validity of the instrument was established by two experience Business Educators from the Department of Business Education and one expert in measurement and evaluation from the Department of Educational Foundation, all from Faculty of Education of the Rivers State University.

For the purpose of establishing the internal consistency of the instrument, Pearson Product Moment Correlation Coefficient was used. The reliability coefficient obtained was 0.78. Copies of the questionnaire were distributed by the researcher with the help of two research assistants. All the 210 copies of the questionnaire administered were retrieved. The data collected were analyzed using mean and standard deviation to answer the research questions while a z-test was used to test the null hypotheses at 0.05 level of significance. A mean rating of equal to or greater than 2.50 would be considered as agree while a mean less than 2.50 would be considered disagree. A hypothesis will be accepted if the calculated value of z is less than the critical value of z(1.960) while it will be rejected if calculated value of z is greater than critical value of z(1.960) at significant level of 0.05.

RESULTS

Research Question 1: *What are the problems encountered by OMT students in the use of ICTs in Rivers State?*

Table 1: Mean and Standard Deviation of Students of RSU and IAUE on the Problems Encountered by OMT Students in the Use of ICTs (N = 210)

S/No	Problems encountered by OMT students in using ICTs	\bar{X}	SD	Remarks
1.	Lack of ICT facilities in the school	3.85	0.51	Agree
2.	Poor knowledge of ICT facilities	3.37	0.67	Agree
3.	Poor training background	3.73	0.58	Agree
4.	High cost of ICT facilities	3.73	0.32	Agree
5.	Lack of funds for procurement of ICTs	3.55	0.58	Agree
6.	Poor network	3.61	0.63	Agree
7.	Inconsistent power supply	3.16	0.52	Agree
8.	Limited access to internet in schools	3.55	0.64	Agree
9.	Lack of maintenance of existing ICTs and upgrading	3.58	0.55	Agree
10	Absent of government support	3.82	0.54	Agree
Grand Mean and S.D		3.59	0.55	Agree

Source: Field Survey, 2019

The data in table 1 shows that the respondents agree to all the listed items. This agreement was very evident as all the mean scores are well above the fixed decision value of 2.50. The standard deviation ranged from 0.32 to 0.67 which indicated low variability in the respondent responses. This was also

signified by the aggregate mean and standard deviation of 3.59 and 0.55 respectively. The implication is that all the respondents agree on the problems encountered by OMT students in using ICTs.

Research Question 2: *What are the Strategies in the use of ICTs by OMT students in Rivers State?*

Table 2: Mean and Standard Deviation of Students of RSU and IAUE on the Strategies in the Use of ICTs by OMT Student (N = 210)

S/No	Strategies in using ICTs by OMT students	\bar{X}	SD	Remarks
11.	Procurement of ICT facilities in schools	3.62	0.49	Agree
12.	Frequent power supply in schools	3.50	0.71	Agree
13.	Adequate training and retraining of teachers on ICTs	3.76	0.54	Agree
14.	Maintenance of ICT facilities	3.53	0.65	Agree
15.	Upgrading of ICT facilities	3.52	0.75	Agree
16.	Provision of free internet service in schools	3.40	0.55	Agree
17.	Employing qualified and knowledgeable staff on ICTs	3.80	0.52	Agree
18.	Provision of security for ICT facilities in the schools	3.41	0.64	Agree
19.	Students must be motivated to learn	3.41	0.39	Agree
20.	Government financial support for procurement of ICTs	3.87	0.46	Agree
Grand Mean and SD		3.58	0.60	Agree

Source: Field Survey, 2019

The data in table 2 shows that the respondents agree to all the listed items. This agreement was very evident as all the mean scores are well above the fixed decision value of 2.50. The standard deviation ranged from 0.46 to 0.75 which indicated low variability in the respondent responses. This was also signified by the aggregate mean and standard deviation of 3.58 and 0.60 respectively. The implication is that all the respondents agree on the strategies in the use of ICTs by OMT students.

Testing of Hypotheses

The following hypotheses were tested at significance level of 0.05.

Hypothesis 1: There is no significance difference in the mean responses of Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE) OMT students on the problems encountered in the use of ICTs in Rivers State.

Table 3: z-test Analysis of RSU and IAUE OMT Students on the Problem Encountered in the Use of ICTs in Rivers State

Respondent	N	\bar{X}	S.D	DF	L/sign	z-Cal	z-Crit	Remarks
RSU	110	3.61	0.55	208	0.05	0.04	1.960	Accepted
IAUE	100	3.57	0.55					

Source: Research Data, 2019

The data in table 3 indicates that the z-calculated value of 0.04 at 208 degree of freedom, and 0.05 level of significance is less than the critical value of z at 1.960. The null hypothesis is therefore accepted. This means that the respondents do not differ significantly in their mean rating on the problems encountered by OMT students in the use of ICTs in Rivers State.

Hypothesis 2: There is no significant difference in the mean responses of Rivers State University (RSU) and Ignatius Ajuru University of Education (IAUE) OMT students on the strategies in the use of ICT in Rivers State.

Table 4: z-test Analysis of RSU and IAUE OMT Students on the Strategies in the Use of ICTs in Rivers State

Respondent	N	\bar{X}	SD	DF	L/sign	z-Cal	z-Crit	Remarks
RSU	110	3.58	0.60	208	0.05	0.09	1.960	Accepted
IAUE	100	3.57	0.60					

Source: Research Data, 2019

As presented in table 4, it shows that the z-calculated value of 0.09 at 208 degree of freedom, and 0.05 level of significance is less than the critical value of z at 1.960. The null hypothesis is therefore accepted. This means that the respondents do not differ significantly in their mean rating on the strategies in the use of ICTs by OMT students in Rivers State.

DISCUSSION OF FINDINGS

Problems encountered by Office Management and Technology students in the use of ICTs

The result of research question 1 identified the problems encountered by OMT students in the use of the ICTs in Rivers State to include lack of ICT facilities, poor knowledge of ICT facilities, poor training background, high cost of ICT facilities, lack of funds for procurement of ICTs, poor network, inconsistent power supply limited access to internet in schools, lack of maintenance of existing ICTs and upgrading and absent of government support. These above results support the findings of the study carried by Langat (2015), who posited that shortage of infrastructure and resources, shortage of educators, lack of clear digital curriculum, poor timing and planning, communication barriers and high cost of ICT equipment are hindrance to utilization of ICTs in schools.

Hypothesis 1 indicated that z-calculated of 0.04 is less than the critical z of 1.960 at 0.05 level of significance. The null hypothesis is therefore accepted. This suggest that there is no significant difference in the mean rating of RSU and IAUE OMT students on the problem encountered in the use of ICTs in Rivers State.

Strategies in the use of ICTs by Office Management and Technology students

The result of research question 2 identified the following as strategies in the use of ICTs by OMT students in Rivers State to include Procurement of ICT facilities in schools, frequent power supply, adequate training and retaining of teachers on ICTs, maintenance of ICT facilities, upgrading of ICT facilities, provision of free internet service in schools, employing qualified and knowledgeable staff on ICTs, provision of security for ICT facilities in the schools, students must be motivated to learn and government financial support for procurement of ICTs. The above results supports the findings of the study conducted by Okeke (2016), who noted that these strategies could be used to improve the utilization of ICTs and promote learning as most students continue learning with or without the lecturers.

Hypothesis 2 also indicated that the z-calculated of 0.09 is less than the critical z of 1.960 at 0.05 level of significance. The null hypothesis is therefore accepted. This suggests that there is no significant difference in the mean rating of RSU and IAUE OMT students on the strategies in the use of ICTs in Rivers State.

CONCLUSION

Based on the results of the findings and test of hypotheses, it is important to conclude that OMT students are faced with challenges of utilization of ICTs and they agree on the strategies in the use of ICTs in Rivers State. This was discovered in the course of examining the constraints and strategies to utilization of Information and Communication Technologies by Office Management and Technology students in Rivers State.

RECOMMENDATIONS

1. Government should employ competent and knowledgeable staff on ICTs.
2. Administrators of OMT programmes should train and retrain teachers on ICTs in schools.
3. Administrators of OMT programmes and government should provide functional generating plant to ensure stable electric power supply to avoid disruption of lesson
4. Administrators of OMT programmes and government should ensure that schools are adequately equipped with the needed ICT facilities for effective teaching and learning
5. There should be installation of internet facilities to make the schools e-environment.

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