



ICT Skills Acquisition and Utilization Among Postgraduate Students in Universities in Kwara State, Nigeria

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ARTICLE INFO

Received: November 20, 2023

Revised: January 11, 2024

Accepted: January 15, 2024

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Keywords: ICT, Skills Utilization, Electronic Information Resources

ABSTRACT

This study investigates the ICT skills utilization among postgraduate students in Universities in Kwara State, Nigeria. The research design was a descriptive survey of the correlational type. A proportional random sampling technique was adopted to select 250 respondents from the 580 postgraduate students of the Faculties of Education of the selected Universities in Kwara State, Nigeria. The Instrument titled ICT Skills Acquisition and Utilization Questionnaire (ICTSAUQ) was used for data collection. The instruments were validated by experts in the Department of Educational Management and Counselling and found reliable with a reliability coefficient of 0.82. Three research questions were raised for the study and answered using descriptive statistics of mean and standard deviation. One research hypothesis formulated was tested using inferential statistics of Pearson Product Moment Correlation (PPMC) Statistics at a 0.05 level of significance. The findings of this study revealed that there is a significant relationship between the Acquisition of ICT skills and usage among postgraduate students in universities in Kwara State. Based on the findings the study recommends among other things that postgraduate students of Universities in Kwara states should undergo a compulsory ICT skill acquisition skill to aid their academic activities.

Introduction

Information and Communication Technology (ICT) has become an integral part of modern society, revolutionizing the way we communicate, work, and learn. In the educational sector, ICT plays a crucial role in enhancing teaching and learning experiences, enabling students to acquire essential digital skills for their future careers. This is particularly important for postgraduate students who are expected to be at the forefront of knowledge creation and innovation. The ability to make informed decisions is essential to human welfare (Bankole et al., 2015). It might be compared to other economic resources like labour and capital where higher investment results in higher production. According to Okiki (2011), information is the foundation upon which any society's survival depends. A variety of information and communication technology tools are available today for accessing

information. Journals, books, newspapers, and encyclopedias are examples of information sources that can be utilized for research, homework, and pleasure reading (Sonkar et al., 2014).

The evolution of information technology in the twentieth century has influenced students' use of ICT. Today, many students access information electronically via the Internet using desktop, laptop, palmtop and mobile phones. Electronic resources supply all the information that a library provides through a computer network. These include electronic books, electronic journals, bibliographic databases, library web pages articles from magazines, encyclopedias, pamphlets and other resources that are accessed on electronic devices (Fyneman et al., 2014). Adeleke and Emeahara (2016) went on to argue that this new global economy implies that schools must encourage learning to learn as knowledge becomes more dynamic rather than serving as mere venues for the transmission of a prescribed set of information from teacher to student over a set period. Researchers and students who use ICT have access to international information resources, particularly the Internet, for their academic work. Students in higher education use ICT for a variety of tasks, primarily academic ones, such as retrieving current literature for studies and exam preparation, completing class assignments, conducting research projects, and collaborating with peers and teachers online via e-mail or by reading blog posts (Adeniran, 2013).

Findings from this study would highlight the various skills and training that are needed by postgraduate students to make the best use of ICT. Postgraduate students will benefit from this study because it will enable them to develop the right attitude as well as help them update their skills in the use of ICT which will improve their academic excellence. The research questions were used in assessing the ICT skills among postgraduate students in Universities in Kwara State, Nigeria. Specifically, the study therefore seeks to: assess the ICT skills possessed by postgraduate students in Universities in Kwara State, Nigeria; ascertain the types of ICT used by Postgraduate students in Universities in Kwara State, Nigeria; determine the purpose of use of ICT by postgraduate students in Universities in Kwara State, Nigeria. The research hypothesis stated that there is no significant relationship between the ICT skills possessed and the use of Electronic Information Resources (EIRs) by postgraduate students in Universities in Kwara State, Nigeria.

Research Methods

This study adopted a descriptive survey of correlational type. The population of the study consisted of 580 postgraduate students of faculties of education from selected

Universities in Kwara State, Nigeria. The samples of 250 postgraduate students were used for this study. A proportional random sampling technique was adopted to select an unequal number of respondents from each sampled University because of the differences in their admissions enrolments. The instrument that was used for data collection in this study was a questionnaire titled: titled ICT Skills Utilization Questionnaire (ICTSUQ). The questionnaire was divided into two parts: part 'A' was for collection of demographic data and part 'B' was also divided into sub-sections contained level of ICT skills possessed by postgraduate students for the respondents to choose from a 4-point modified Likert rating scale of Highly Skills (HS) = 4 points; Moderate Skills (MS) = 3 points; Low Skills (LS) = 2 points; No Skills (NS) = 1 point, sub-section 'ii' contained types of ICT used by the postgraduate students for the respondents to choose from Always Use (AU) = 4 points; Occasionally Use (OU) = 3 points; Rarely Use (RU) = 2 points; Never Use (NU) = 1 point, sub-section 'iii' contained purpose of ICT usage by postgraduate students for the respondents to choose from Strongly Agreed (SA) = 4 points; Agreed (A) = 3 points; Disagreed (D) = 2 points; Strongly Disagreed (SD) = 1 point, sub-section 'v' contained influence of ICT skills on postgraduate students for the respondents to choose from Strongly Agreed (SA) = 4 points; Agreed (A) = 3 points; Disagreed (D) = 2 points; Strongly Disagreed (SD) = 1 point. The analysis implies that the mean ratings of any item that was greater than 2.50 and above were accepted as the benchmark while any item below 2.50 was rejected for research question one while the average mean of below 2.5 and above 2.5 was used in determining the level of ICT skills utilization for low and high respectively.

The instrument was subjected to face and content validity by three experts in the Department of Educational Management and Counselling. A test-retest method was used to obtain the reliability of the instrument. Its reliability was ascertained in a pilot study carried out in a college of education other than the sampled schools in the main study using Cronbach Alpha that yielded 0.72, indicating that the instrument was reliable for data collection. The 20 copies of the questionnaire were administered to the respondents by the researcher and three trained research assistants. The respondents were given just one day to respond to the items after which the researcher retrieved all completed copies of the questionnaire. All the copies of the questionnaire retrieved were used for data analysis. The information gathered from the field was collated and analyzed using the mean rating to answer the research questions while the Pearson Product Moment Correlation (PPMC) statistics were employed to test the research hypothesis at a 0.05 level of significance.

Finding

Research Question 1: What ICT skills do the postgraduate students in Universities in Kwara State, Nigeria possess?

Table 1. *Types of ICT skills commonly used among postgraduate students in Universities in Kwara State*

S/N	ICT SKILLS	HS (%)	MS (%)	LS (%)	NS (%)
1	General computer operations	35	30	20	15
2	Power Points Presentation Skills	30	30	20	20
3	Internet applications	35	30	20	15
4	Database Management Systems	35	30	25	10
5	Networking and Data Analysis	35	30	25	10

A careful look at Table 1 reveals that while 35 percent of the respondents are highly skilled in general computer operations among postgraduate students, 30 percent of the respondents are moderately skilled, 20 per cent of the respondents are low-skilled and 15 per cent have no skills in general computer operations. Table 1 also shows that 30 percent of the respondents are highly skilled in the use of PowerPoint presentations, 30 percent are moderately skilled, 20 percent are low-skilled and 20 percent have no skills in the use of PowerPoint presentations. Also, as shown in Table 1, 35 percent of the respondents are highly skilled in the application of the Internet, 30 percent are moderately skilled, 20 percent are low skilled and 15 percent have no skills in the application of the Internet.

Furthermore, 35 percent of the respondents are highly skilled in Networking and Data Analysis, 30 percent are moderately skilled, 25 percent are low-skilled and 10 percent have no skills in Database Management Systems. Table 1 shows that 35 percent are highly skilled in Networking and Data Analysis, 30 percent are moderately skilled, 25 percent are low-skilled and 10 per cent have no skills in Networking and Data Analysis.

Research Question 2: To what frequency do the postgraduate students in Universities in Kwara State utilize ICT Skills?

Table 2. *Frequency of Usage of ICT Skills among Postgraduate Students in University in Kwara State*

S/N	Frequency of usage	Daily Basis	Once a Week	Twice a week	Monthly basis
1	World Wide Web (www)	40	35	15	10
2	Electronic Mail	35	30	20	15
3	E-books	35	30	20	15
4	E-news	40	35	15	10
5	CD-ROM	40	35	15	10

An intent look at Table 2 shows that 40 percent of the respondents use World Wide Web (www) daily, 35 percent use it once a week, 15 percent use it twice a week and 10 percent use it every month. 35% of the respondents use Electronic Mail daily, 30 percent use it once a week, 20 percent use it twice a week and 15 percent use it every month. Also, Table 2 shows that 35 percent of the respondents use E-books daily, 30 percent use them once a week, 20 percent use them twice a week and 15 use them every month. Furthermore, Table 2 also showed that 40 percent of the respondents use E-news daily, 35 percent use it once a week, 15 percent use it twice a week and 10 percent use it every month. Also, Table 2 revealed that 40 percent of the respondents always use CD-ROM daily, 35 percent use it once a week, 15 percent use it twice a week and 10 percent use it every month.

Research Question 3: Why do the postgraduate students of Universities in Kwara State use ICT

Table 3. *Reasons for the utilization of ICT among postgraduate students of Universities in Kwara State.*

S/N	Purpose of ICT Usage	SA %	A %	D %	SD %
1	Research Publications	40	35	15	10
2	Online Dissertations	35	30	20	15
3	Assignments and Classwork	35	30	20	15
4	E-journals and E-books	40	35	15	10
5	Online Reviewing and Publications	40	35	15	10

Table 3 reveals that 40 percent of the respondents strongly agreed on the usage of ICT for research publications, 35 percent agreed with this statement, 15 percent disagreed and 10 percent strongly disagreed with this statement. Table 3 also shows that 35 percent of the respondents opined on the usage of ICT for online dissertations, 30 percent agreed on this statement, 20 percent disagreed and 15 percent strongly disagreed on this statement. In addition, Table 3 shows that 35 percent strongly agreed on the usage of ICT for assignments and classwork purposes, 30 percent agreed with this statement, 20 percent disagreed and 15 percent strongly disagreed with this statement. Furthermore, Table 3 shows that 40 percent strongly agreed on the usage of ICT for E-journals and E-books, 35 percent agreed with this statement, 15 percent disagreed and 10 percent strongly disagreed with this statement. Moreover, the column in Table 3 reveals that 40 percent strongly agreed on the usage of ICT for online reviewing and publications, 35 percent agreed with this statement, 15 percent disagreed and 10 percent strongly disagreed with this statement.

Research Hypothesis

Ho₁ -There is no significant relationship between the ICT skills possessed and the use of Electronic Information Resources (EIRs) by postgraduate students in Universities in Kwara State, Nigeria.

Table 4. Summary of Pearson Product Moment Correlation Coefficient between ICT Skills Possession and Postgraduate students use Electronic Information Resources (EIRs) in universities in Kwara State, Nigeria.

Variables	N	Mean	SD	Df	r-cal	Sig.	Remark
ICT Skills Possession	126	33.41	1.25				
				124	2.21	0.03	Rejected
Use of Electronic Information Resources	126	52.35	1.79				

*Significant at $P < 0.05$

The result in Table 4 shows the r-cal of 2.21 with a p-value of 0.03 obtained at a 0.05 level of significance. Since the p-value of 0.03 is less than the 0.05 level of significance, the null hypothesis is rejected and thus, there is a significant relationship between ICT Skills possession and Postgraduate student's use of Electronic Information Resources (EIRs) in universities in Kwara State, Nigeria. This means that postgraduate students utilized the skills acquired for surfing the net, sending and retrieving mail electronically, reading news online and retrieving journals and other forms of electronic materials online which has allowed users to stay off the library and access e-resources from diverse ends thereby enhancing the academic activities in school.

Conclusion

Utilization of ICT skills among postgraduate students in Universities in Kwara State is of paramount importance for their academic and professional development. The findings of this study indicate that while there is a relatively high level of ICT skills among postgraduate students, there is still room for improvement in terms of their utilization. ICT skills are essential in enhancing research capabilities, data analysis, and communication among postgraduate students. However, some challenges hinder the effective utilization of these skills, such as limited access to ICT infrastructure, inadequate training, and lack of awareness of available ICT resources. In conclusion, by addressing the challenges and implementing the suggested recommendations, universities can empower postgraduate students to harness the full potential of ICT in their research, learning, and future careers. This, in turn, will contribute to the advancement of knowledge, innovation, and socio-economic development in Kwara State.

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