

Full Length Research

Information Communication Technology (ICT) Self-Efficacy and E-Resources Use by Students of Auch Polytechnic Auch, Auch Edo State Nigeria.

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This study examined Information Communication Technology (ICT) Self-Efficacy and E-Resources Use by Students of Auch Polytechnic. Two research questions were answered and one null hypothesis tested in the study. The population of the study comprised of 8279 students who had enrolled with the polytechnic library at Auch Polytechnic, Auch, for the 2022–2023 academic session. Taro Yemani's formula was used for sample size determination in the study. A sample size of four hundred (400) respondents was therefore used in the study. The instrument used for data collection was the questionnaire. The findings revealed that Auch polytechnic students possess a great extent of ICT Self-efficacy. This implies that the students of Auch polytechnic possess great extent of ICT Self-efficacy. Students of Auch polytechnic can use social tools for academic activities, comfortably carried out web navigation, download electronic materials for research, use e-mail to disseminate and receive information, have knowledge of basic computer hardware. It was discovered in the study that there is a significant relationship between ICT self-efficacy and e-resources use among students of Auch polytechnic. The study recommended the management of Auch polytechnic should ensure that the teaching of information literacy skills and ICT self-efficacy to students is promoted. This is to ensure that the high level of usage of e-resources by the polytechnic students is sustained.

Keywords: ICT, Self-efficacy, E- resources, Use, Students, Auch polytechnic.

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INTRODUCTION

Auchi Polytechnic library was built to aid educational aspirations and improve teaching, learning, and research at the polytechnic. The wave of changes brought on by the advent of information communication technology (ICT) on the scene of library services has given library information resources a new dimension. Technology use has given libraries' services a digital spin. In order to satisfy consumer demand for digital information, the construction of the digital library ensures control over various online information sources and ensures their accessibility. This attempt has increased the availability of digital content, adding thousands of online information sources to the library's growing collection of information sources. The students' self-efficacy with ICT may be related to how often they use the online resources from the polytechnic library. As a result, the current study's objective is to look at the e-resource using patterns and ICT (information and communication technology) self-efficacy of Auch Polytechnic students. The utilisation of online resources by students at Auch Polytechnic and their level of ICT self-efficacy will be evaluated using the study's findings. In order to encourage polytechnic students to use electronic resources in libraries, the study will also advise NBTE and polytechnic administration to strengthen the teaching of ICT and use of library as mandatory courses from ND1-HND11.

In today's information age, information particularly on the Internet is growing at an exponential rate. According to Anekwe and Uzoamaka (2018), globalisation and technological advancement have produced a new global economy that is driven by knowledge, information, and technology. This new global economy suggests that instead of serving as merely vehicles for the transmission of a predetermined set of information from lecturers to students over a predetermined amount of time, polytechnics must instead encourage learning to learn as knowledge becomes more dynamic. In Nigerian polytechnic communities, the introduction of electronic information resources (EIRs) has significantly changed how information is handled and managed (Adeleke & Emeahara, 2016). The utilisation of electronic information resources in the classroom provides a fresh tool that can replace some of the traditional approaches. Students must exhibit self-confidence in their abilities to use the computer-based resources if they are to effectively adopt and use the widely expanding electronic resources for educational reasons. This is due to the possibility that individuals may feel negatively about real or projected contacts with computers as the prominence of computers and the Internet increases. The best utilisation of computer-based resources is hampered by negative emotions such as fear, worry, animosity, and resilience, which manifest in both psychology and behaviour.

Self-efficacy with computers is a crucial component to take into account while using computer-based e-resources. A person who has high computer self-efficacy is more likely to use a computer more frequently and experience less computer anxiety (Champa, 2016). An individual's level of self-efficacy can be shown in their usage of computers; individuals who lack these qualities are inclined to avoid using them. Even if they do, they may view it as a challenging exercise. In contrast, even if computer skills aren't perfect, a person with high self-efficacy may be encouraged to continue using the computer because they feel capable of using it, leading to the development of personal skills through practise (Chen, 2017). These abilities include, but are not limited to, understanding of data input, file organization and management, describing fundamental computer operations, familiarity with computer software programs, and web navigation. Computer self-efficacy is the conviction that one can use a computer to accomplish a desired result. Computer self-efficacy is a strong predictor of whether or not students will use computer-based information resources, according to a large body of literature. In today's technological world, computer self-efficacy is a significant factor that affects how people use electronic resources (Pellas, 2014).

The idea of self-efficacy was popularized by Bandura (1977), who asserted that success requires both the necessary skills and the self-assurance to put those skills to use. The term "self-efficacy" refers to the conviction that one can complete a task successfully. Consequently, self-efficacy can be characterized as a fundamental belief that drives someone to complete a task based on a positive self-evaluation. To put it another way, individuals with low self-efficacy, even when capable of finishing a task, attribute it to their competence rather than seeing it as "laborious effort" or a struggle, which makes the activity unpleasant and increases their propensity to avoid fulfilling such obligations. On the other hand, people with high levels of self-efficacy have the confidence and drive to engage in similar activity because they believe they have the ability to succeed. This is crucial because searching in the electronic world necessitates an understanding of how databases are organized and calls for the searcher to type commands into a computer. Due to the dependence of e-resources on technology, computer self-efficacy is also required.

A person is more likely to use a computer more frequently and experience less computer anxiety if they perceive their computer self-efficacy to be high. Individuals can also demonstrate their level of self-efficacy in their use of computers; those who lack these qualities are likely to avoid using them. Students who are proficient with computers are more likely than other students to experiment with new hardware, software, or databases. Therefore, it can be assumed that students who have high computer self-efficacy would be more likely to utilize e-resources than students who have low computer self-efficacy, as the latter may lack the confidence or be reluctant to use computer-based resources (Bandura, 1977).

Statement of the Problem

The polytechnic system in Nigeria is evolving as new technology is integrated into the teaching, learning, and research processes. To assist the Auchi Polytechnic in achieving its goals, the library is charged with providing information sources in a variety of print, electronic, and non-print formats. While having access to electronic resources in the library has many benefits, one of them is the ability for users to search multiple files at once. Another benefit is that it makes it simple and quick to find the most recent information at the right time and place. It has numerous drawbacks due to the fact that it is computer-based and relies on information literacy for searching, retrieval, and use. Despite the significant expenditure made by polytechnic management to assure their availability, literature has shown that electronic information resources are severely underutilised. In Nigerian polytechnics, significant investments are being made to acquire e-resources (Shaibu & Mohammed, 2017). This raises the question of how widely these resources are used and how satisfied users are with them. This study aims to look at the students at Auchi Polytechnic's self-efficacy with regard to information and communication technology as well as their use of online resources.

OBJECTIVES

1. find out the extent of ICT Self-efficacy of students of Auchi polytechnic,
2. determine the extent of use of e-resources by students of Auchi polytechnic,
3. ascertain the relationship between ICT Self-efficacy and e-resources use by students of Auchi polytechnic

Research Questions

1. What is the extent of ICT Self-efficacy of students of Auchi polytechnic?
2. What is the extent of use e-resources by students of Auchi polytechnic?

Hypothesis

The study was guided by this null hypothesis:

H01. There is no significant relationship between ICT self-efficacy and e-resources use among students of Auchi polytechnic

Literature Review

The utilization of information resources within libraries serves diverse intentions that align with the aims of establishing an academic institution. Consequently, the school library contributes to the realization of the higher education objectives by fostering an environment conducive to the cultivation of an informed society. As the adage suggests, charitable efforts should commence within one's own domain, thus the concept of an information literate society, as advocated here, can be specifically tailored to encompass the students and the academic institution itself. The information resources encompass a wide array of print and non-print materials, without being limited to these exclusive options (Onye, 2016). The Auchi Polytechnic library is widely recognized as the intellectual core of the academic community, playing a crucial role in providing an environment conducive to the attainment of higher education objectives for the staff, students, and the entire school community. The absence of the library's informational resources would deprive teaching, learning, research, and other purposes of the necessary support they require. From the perspectives of both students and faculty, the library holds great significance in terms of academic performance (Popoola & Haliso, 2009).

The introduction of information communication technology (ICT) into the field of library services has sparked a wave of innovations that have given library information resources a fresh perspective. Library services now have a digital sensibility thanks to the incorporation of technology. Library information resources now have a new dimension thanks to the wave of developments brought on by the introduction of information communication technology (ICT) into the scene of library services. The use of technology has given library services a digital twist. The creation of the digital library controls these online resources and makes sure they are accessible to anyone who desire digital knowledge.

As a result of this endeavour, digital content has risen, contributing to the expansion of the library's information resources by adding hundreds of online sources. Libraries today offer students entire access to innovation that supports teaching-learning and research by providing statistical tools for data analysis, training, and various online support systems. University libraries' information resources are expanding and diversifying at an exponential rate. In order to enable the innovation of reshaping library practises, this innovation was best described as retooling library information resources (Smith, 2016). The utilisation of electronic resources is essential because they give users access to current, convenient, and timely information. Students generally have positive opinions of these tools and find them helpful for their academic pursuits. The sudden use of electronic resources in educational institutions can be attributed to the changes that information technology growth has brought about. These technologies are now more prevalent in university libraries than ever before as a result of various aspects of the current educational landscape. Ukachi (2013) listed a number of factors encouraging libraries to subscribe to the new technology, including "rapid growth in student enrollment, growth in non-traditional students (e.g. mature and part-time students), inflation in the cost of printed materials, rising numbers of academic publications, shrinking library budgets, and changes in teaching methods.

According to Ukachi (2013), e-resources, which are primarily utilised to promote academic achievement and research, continue to play a significant role in academic libraries. While it is not practical to search numerous files at once using printed collections, electronic resources make it possible. The use of e-resources by researchers has a substantial impact on scholarly communication and knowledge transfer at universities. Students are motivated by e-resources

because they have the option to transfer, acquire, download, process, and share information on any topic of interest. E-resources, as emphasized by Ukachi, can be accessed online by any user at any time while conveniently sitting at home or the office using networks or authentication procedures. E-resources, according to Noreh (2009), are easy to use and they simplify research by allowing for a faster search for information because search engines are used rather than human searches.

Students that are successful in the computer age typically have both strong technical skills and attitudes. Learning to use a computer and having a positive attitude towards computers, as well as having high computer self-efficacy and lower levels of computer anxiety, may be influenced. Dange (2010) emphasized that some of the key skills students need to have in order to exploit the expanding variety of electronic information resources include familiarity with computers, competence with productivity software, communication skills, and internet proficiency. Cooper-Gaiter (2015) emphasized that a student's computer and Internet usage prior to entering higher education could be a significant indicator of whether or not they will use a library's electronic resources. The availability of ICT tools in the majority of academic libraries in Nigeria, according to Abubakar and Adetimirin (2015), may help undergraduate students who are computer literate get the information they require in the libraries. Attitudes towards computer technology are linked to computer self-efficacy. Since e-resources are accessed through computers, an undergraduate's level of comfort with using a computer can also predict how much they will use those resources. Students should be studied as a user group since they are more likely to make substantial contributions (Sam et al., 2005). Polytechnic libraries must consequently provide appropriate information in print and electronic formats in order to meet the research needs of undergraduate students.

METHODOLOGY

A survey research design was used for the investigation. The population of this study consisted of 8279 students who had enrolled with the polytechnic library at Auchi Polytechnic, Auchi, for the 2022–2023 academic session. Taro Yemani's formula was used for sample size determination in the study. A sample size of four hundred (400) respondents was therefore used in the study. Only the students who visit the library throughout the study period will be considered as the study target population. For the purpose of the study, a proportionate stratified random sampling technique was used to ensure that every stratum that made up the population was represented. This means that respondents from all departments, levels, sexes, and other categories will be represented in this study. The questionnaire was the research tool employed in this study. The data obtained from the administration of the questionnaire were analysed using Mean, and Standard Deviations (SD) to answer research questions while chi-square was used to test the hypothesis. The criterion mean of 3.00 was used as decision rule in the study.

RESULTS

Table1. Returned Rate of the Questionnaire

School of the Respondents	No of Questionnaire Administered	No. of Questionnaire Returned Completed	%	No of Questionnaire Loss and Uncompleted	%
Information and communication Technology	72	67	17.7	5	1.3
Applied science	81	55	14.5	5	1.3
Business studies	96	92	24.3	4	1.0
Engineering technology	69	65	17.2	4	1.0
Environmental studies	51	48	12.7	3	0.8
Art and Design	31	28	7.4	3	0.8
Total	400	355	93.8	24	6.2

Source: Field study, 2024

Table1 shows the returned rates of the questionnaire administered to the respondents. It is obvious from the table above that the total of 400 copies of the questionnaire were administered and 355(93.8%) was returned completed. This study recorded a high returned rate. This high returned rate was achieved because the researchers personally administered and retrieved the questionnaire with the help of some research Assistants.

Table 2: Gender Distribution of the Respondents

Gender	No. of Respondents	Percentage
Male	155	43.7
Female	200	56.3
Total	355	100

Source: Field survey, 2024.

Table 2 reveals the gender distribution of the respondents with female 200 (56.3%) and male 155 (43.7%). This is an indication that there were more females' students' than males in the library during the period of the study.

Table 3: Level of the Respondents

Level of the Respondents	No. of Respondents	Percentage
ND1	56	15.8
ND11	102	28.7
HND1	46	13.0
HND11	151	42.5
Total	355	100

Source: Field survey, 2024

Table 3 shows the Level of the respondents. HND11 have the highest number of respondents with 151 (42.5%), followed by N D11 with 102 (28.7%), the next is ND1 with 56(15.8%), while HND1 came last with 46 (13.0%). This study clearly revealed that a majority of the majority of the respondents are final year students who came to library to read and source for materials for their project reports.

Table 4: Extent of ICT Self-Efficacy of Students of Auchu Polytechnic

	Very Great Extent	Great Extent	Moderate Extent	Small Extent	No Extent	Mean	Rank
I can use word processing	91	150	68	34	12	2.88	6
I can use spreadsheets	8	26	51	176	94	2.09	7
I have knowledge of basic computer hardware	56	102	74	91	32	3.17	5
I can comfortably carried out web navigation	86	96	78	64	31	3.40	2
I can use e-mail to disseminate and receive information	68	99	73	67	48	3.20	4
I can download electronic materials for my research	66	88	94	72	35	3.22	3
I can use social tools for my academic activities	98	102	67	55	33	3.50	1
Grand Mean						3.07	
Criterion Mean						3.00	

Source: Field survey, 2024

Table 4 shows that grand mean of 3.07 is greater than the criterion mean of 3.00. This means that the Auchu polytechnic students possess a great extent of ICT Self-efficacy. This implies that the students of Auchu polytechnic possess great extent of ICT Self-efficacy. Students of Auchu polytechnic can use social tools for academic activities, comfortably carried out web navigation,. Download electronic materials for research, use e-mail to disseminate and receive information, have knowledge of basic computer hardware.

Table 5: extent of use of e-resources by students of Auchi polytechnic

	Very Great Extent	Great Extent	Moderate Extent	Small Extent	No Extent	Mean	Rank
To prepare for examination	150	99	68	12	25	3.94	1
For effective study	78	55	51	76	95	2.85	5
I have knowledge of basic computer hardware	104	110	88	23	30	3.66	2
For my assignment	87	100	78	60	30	3.41	4
For my research work	102	80	83	61	29	3.46	3
For information seeking	26	31	65	72	161	2.12	6
Grand Mean						3.07	
Criterion Mean						3.00	

Source: Field survey, 2024

Table 5 shows that grand mean of 3.24 is greater than the criterion mean of 3.00. This means great extent of use of e-resources by Auchi polytechnic students. That is, this means that the Auchi polytechnic students possess a great extent of e-resources use. The students used e-resources to prepare for examination, for assignment, for information seeking and for research work

Test of Hypotheses

To test the hypotheses the chi-square (χ^2) method will be applied which is represented as

$$\chi^2 = \sum \frac{(O_1 - E_1)^2}{E_1}$$

Where O_1 = Observed Frequency
 E_1 = Expected Frequency
 \sum = Summation of all Items

Hypothesis

H_0 . There is no significant relationship between ICT self-efficacy and e-resources use among students of Auchi polytechnic.

H_1 . There is a significant relationship between ICT self-efficacy and e-resources use among students of Auchi polytechnic

Table 6: Calculate for Observed Frequency

	VGE	GE	ME	SE	NE	Total
ICT Self-Efficacy	394	547	505	675	364	2485
E-Resources	547	475	433	304	370	2129
Total	941	1022	938	979	734	4614

Source: Field Survey (2024)

Computation of Chi-Square (χ^2) Table

O_1	E_1	$O_1 - E_1$	$(O_1 - E_1)^2$	$(O_1 - E_1)^2$
				E_1
394	507	-113	12.8	25.2
547	550	-3	9	0.0
505	505	0	0	0
675	527	148	21904	41.6
364	395	-31	961	2.4
547	434	113	12.8	29.4
475	472	3	9	0.0
433	433	0	0	0
304	452	-148	21904	48.5
370	339	31	961	2.8
				$\chi^2 = 149.9$

Degree of Freedom (DF)

$$(c - 1)(r - 1)$$

$$(2 - 1)(5 - 1)$$

$$1 \times 4 = 4$$

$$Df=4$$

Level of significance= 0.05

Table value= 28.9

Decision Rule

If the calculated value is higher than the table value, accept (H_1) and reject (H_0). Otherwise, accept (H_0) and reject (H_1).

Decision: The calculated value of chi-square (χ^2) 149.9 is greater than the table value of 28.9. Therefore, reject (H_0) and accept (H_1) which states that there is a significant relationship between ICT self-efficacy and e-resources use among students of Auchi polytechnic.

Discussion of findings

The study revealed Auchi polytechnic students possess a great extent of ICT Self-efficacy. This implies that the students of Auchi polytechnic possess great extent of ICT Self-efficacy. Students of Auchi polytechnic can use social tools for academic activities, comfortably carried out web navigation, download electronic materials for research, use e-mail to disseminate and receive information, have knowledge of basic computer hardware. The finding agrees with Cooper-Gaiter (2015) who emphasized that a student's computer and Internet self-efficacy could be a significant indicator of whether or not they will use a library's electronic resources.

The study revealed that Auchi polytechnic students possess a great extent of e-resources use. The students used e-resources to prepare for examination, for assignment, for information seeking and for research work. This finding is in congruence with According to Ukachi (2013), e-resources, which are primarily utilised to promote academic achievement and research, continue to play a significant role in academic libraries. While it is not practical to search numerous files at once using printed collections, electronic resources make it possible. The use of e-resources by students has a substantial impact on scholarly communication and knowledge transfer at polytechnics.

It was discovered in the study that there is a significant relationship between ICT self-efficacy and e-resources use among students of Auchi polytechnic. This finding corroborates Pellas, (2014) who posited that in today's technological world, computer self-efficacy is a significant factor that affects how people use electronic resources. Computer self-efficacy is the conviction that one can use a computer to accomplish a desired result. Computer self-efficacy is a strong predictor of whether or not students will use computer-based information resources.

CONCLUSION

The use of electronic resources has been greatly aided by recent developments in information and communication technology in the world of exponentially expanding knowledge. Students favoured electronic materials due of their accessibility and user-friendliness. By giving students access to up-to-date information, the use of electronic resources enhances their academic performance. The findings show that there is a significant relationship between ICT self-efficacy and e-resources use among students of Auchu polytechnic. Students of Auchu polytechnic can use social tools for academic activities, can comfortably carry out web navigation, can download electronic materials for research, can use e-mail to disseminate and receive information and I have knowledge of basic computer hardware. Their utilisation of electronic resources is significantly influenced by their ICT self-efficacy. It was discovered that among Auchu Polytechnic students, using electronic resources is positively correlated with having a high degree of ICT self-efficacy.

RECOMMENDATIONS

1. Based on the study findings about the great extent of e-resource usage, Auchu Polytechnic's management should make sure that regular subscriptions to e-resources with sufficient ICT tools are made because this will motivate students to continuously use e-resources to enhance their academic performance.
2. The management of Auchu polytechnic should ensure that the teaching of information literacy skills and ICT self-efficacy to students is promoted. This is to ensure that the high level of usage of e-resources by the polytechnic students is sustained.
3. In order to become highly skilled in the various facets of information literacy and ICT skills, Auchu Polytechnic students should be encouraged to regularly participate in information literacy and computer skills training. This will ensure the students' continued and more efficient use of e-resources.

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