October 2022

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ABSTRACT

The study focused on computer skills as correlates of use of online information resources by Library and Information Science undergraduates of University of Benin, Edo State. The study was guided by three research questions and two null hypotheses. A correlation research design was adopted for study. A census study technique was adopted to cover the entire population of 273 Library and Information Science undergraduates of University of Benin, Edo State. A rating scale titled "Students' Computer Skills and Use of Online Information Resources" (SCSUOIR) was used as data collection instrument. The data collected were analyzed using mean and standard deviation to answer research question one, while Pearson (r) statistics was used to answer research questions two and three. The hypotheses were tested using t-test statistics of simple linear correlation at 0.05 level of significance. Findings showed that: the students use online information resources to a high extent; there is a positive relationship between students' operational skills and their use of online information resources; and there is a positively very low extent of relationship between students' strategic retrieval skills and their use of online information resources. It was therefore, recommended among others that since the use of online information resources is highly influenced by the LIS undergraduates' level of computer skills (operational and strategic skills), the university library management should be organizing regular training for students on the acquisition of these skills.

Keywords: Computer, Skills, Online Resources, Operational, Strategic, Utilization, Undergraduates.

Introduction

Information is essential for human existence, and can come from different sources such as: personal experiences, books, articles, expert opinions, encyclopedias, and the Web. The type of information needed may change depending on its application. Information has always been disseminated through different ways such as oral, songs, writing and graphics on different media such as clay, stones, wax, tree, papyrus, paper, audio visuals and the most recent which is electronic format or online resoruces.

Information resources are not only domiciled in the library but abound everywhere via internet connectivity. Such information bearing materials which are made available online via the use of internet are called online information resources. Online information resources refer to the information materials in digital format and made available online through Information and Communication Technology. Students leverage on the use of technology to access online information resources. Akanwa and Udo-Anyanwu (2017) opine that information resources in the library have evolved to include electronic information resources such as: e-books, e-journals, preprints, e-thesis or dissertation among others and students are expected to use these information resources to gain knowledge of subjects or courses taught in the university. It is the view of Okello-Obura (2010) that for students to utilize the growing range of electronic resources they must acquire and practice the skills necessary to exploit them.

One of the web laws as propounded by Noruzi (2014) is to conserve users' time online, it becomes expedient for the users to acquire requisite computer skills needed to get the needed information materials and librarians should take responsibility for same. Effective online searching requires ongoing advanced instruction, not a one-time, twenty-minute introductory lesson. Van Deursen and Van Dijk (2009) identified these skills as; operational internet skills, formal internet skills, informal internet skills and strategic internet skills. Internet Search skills is the ability to use computer and other gadgets to copy, paste, manipulate post and upload information (operational); and compose a database understandable search question with appropriate words, signs and punctuations to get specific resources needed (strategic). These skills are needed to get relevant information resources online, hence the need to acquire them by Library and Information Science students.

The establishment of university libraries guarantees the meeting of diverse information needs of the academic community which comprises of students (undergraduates and postgraduates), lecturers, administrators, and staff. Undergraduates are mainly the users of the university library. An undergraduate is a student who is enrolled in a tertiary institution that has not graduated yet. Olorunfemi and Ipadeola (2021) opine that library users are very essential in any university library; users are the most important component in any library environment because the mission of every academic library is to provide excellent services to the users.

It is based on this background that this study on computer skills as correlates of use of online information resources by library and information science undergraduate students of University of Benin, Edo State was carried out.

Statement of the Problem

It has become a tedious process owing to the continued growth of information resources that today, students prefer the use of online resources which abound on the Internet for easy access and use. New technology now tends to give room for students to get their works done online anywhere and anytime. Many students have desires to source information online because of convenience. However, it is very certain that in Nigerian universities today, many students find it difficult to navigate through the Internet to retrieve the required online information resources for their studies (Agba, Kingongo-Bukanya & Nyumba, 2014). The inability of these students to access e-book, e-journals, CD-ROM databases, library mobile collection, databases for e-books and e-journals, online public access catalogue (OPAC), online encyclopedia, online newspapers, online magazines, etc. to write their classroom assignments, seminar papers, term papers as well as their projects is worrisome. Another worrisome situation is that most students are not all that computer literate and as such are not familiar with the appropriate search terms and strategies recognized by the Internet database. This lack of computer skills has become an obstacle to students' desire to retrieve the required information that they may need for their academic activities. No wonder students now contract online search to experts, and business centre owners and this has become a serious concern. Students need to be acquainted with the ways of searching, retrieving and evaluating online information resources. Otherwise, all the information networks

capturing the whole global information will be of no use for those who are not able to successfully access, search, and retrieve the needed information.

It is therefore, against this backdrop that this research was undertaken to ascertain students' computer skills and their use of online information resources.

Research Questions

This study answered the following research questions:

1. To what extent do students of Library and Information Science use online information resources?

2. What is the coefficient of relationship between the students' operational skills and the extent of use of online information resources?

3. What is the coefficient of relationship between the students' strategic skills and the extent of use of online information resources?

Research Hypotheses

The following null hypotheses were formulated for the study and tested at 0.05 level of significance.

Ho_1: There is no significant relationship between LIS students' operational skills and the extent of use of online information resources.

Ho_2: There is no significant relationship between LIS students' strategic skills and the extent of use of online information resources.

Literature Review

Information resources are defined as materials, means, avenues or packs through which information can be received or sourced (Ogba, 2013). For the purpose of this research, information resources are information bearing materials and medium used to preserve and communicate information to its users. When such are provided in digital forms and made available through computer vide a connection, locally or on the internet, it is called online information resources. Okello-Obura (2010) opined that online information resources include contents that are born digital and those that have been digitized. They include library mobile collection and databases for e-books and e-journals, online public access catalogue, CD-ROM databases, still pictures, moving images, sound recordings, e-maps, online dictionary, online encyclopedia etc. Owing to

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information explosion and the emergence of new technologies, information needed by students are now, majorly found online through internet connectivity These technologies have brought an alternative to facilitate access to scholarly information from around the world which enhances learning.

The skill for acquiring information is important perhaps even more critical, to the use of information. It is regrettable to note that students find it difficult to locate or identify the needed information resources in the library, hence, their claim that the library within the institution did not have needed materials. This experience is the same in other academic libraries base on the searchers conversation with colleague working in tertiary institutions. Equally, they cannot access needed information online due to poor search skills. It explains reasons for mutilation, stealing and vandalism of the library materials in spite of the huge resources committed to building a sound library collection to support research and learning (Okon, Etuk & Akpan, 2014). Hence, the proliferation of private searchers and business centers in higher institutions, who help students browse for money.

Acquiring search skills for online information resources can be challenging for students. This difficulty may explain why there is probably low usage of online information resources for academic purposes by undergraduates in Nigeria despite the increase in provision of online resources in Nigerian and across the world. Advances in Information and Communication Technology (ICT) over the years have made retrieval and use of electronic information resources easy for users (Quadri, 2013). Challenges to the use of online resources have been identified by various authors as: as poor information technology infrastructure development (Omeluzor, 2015); large mass of irrelevant information, the need to filter the results from search, download delay, failure to find information, inadequate or lack of search skills, high cost of access, inaccessibility of some electronic resources and difficulties in navigating through electronic resources (Omosekejimi, Eghworo & Ogo, 2015); and slow downloading and blockage of websites (Sohail & Ahmad, 2017) among others

Operational skill is an ability to use and manipulate information on computer effectively without any hitch. Such skills according to Allison (2005) include the use of mouse, use of keyboard, use and create shortcuts, navigate the webpage, copy and paste,

download information from database, save the information materials into storage devices such as flash drive and compact disk and make information saved available anywhere by saving it on cloud storage or through email attachment etc. In retrieving the information from the internet, operational skills are very essential. Ugwuanyi (2013) pointed out that operational skills still remain the underpinning elements of computer and measures the extent of online information use among library students. Four distinct areas of skills and expertise such as an ability to independently operate personal computer system, an ability to use software (such as Word, Power Point, Spread sheet,) for preparing and presenting work, an ability to use the internet and its various features as communication device, and an ability to access and use online information from world wide web (www) were seen as attributes of an ICT literate individual.

On the relationship between computer operational skills and the use of online information use, Odede and Odede (2016) revealed in a research conducted on undergraduates' computer skills and the use of online information resources that, computer operation skills enhance library students use of online information resources as well as being confident in using online information resources due to their level of computer skills respectively. The study also revealed that undergraduate students are computer literate. Also the findings revealed that majority of the participants frequently make use of online resources.

In a research conducted by Urhiewhu and Omah, (2016), it was submitted that there is a low level of skillfulness in the use of ICT among students of the University of Port Harcourt library, Rivers State. There was also a low level of electronic resource experience amongst students of the University of Port Harcourt library. ICT literacy skills generally are the familiarity with mobile phones, computers, the internet and other ICTs; the ability to use ICT features and applications and the ability to use ICTs to work individually or in teams (Ugwuanyi, 2013). In fact, it involves the awareness of technologies and application of their relevance, use of technology for information and knowledge encompassing skills or abilities to access, retrieve, store, manage, integrate, evaluate, create and communicate information and knowledge and participate in networks via the internet.

Strategic skill is the ability to structure search question using the appropriate rules such as word, signs and punctuations to make an understandable phrase that is easily recognized by the database and search engine to get precise result from numerous online resources. Strategic retrieval skill is significant in information retrieval as it assists in the improvement of search skills and online information resources utilization (Ekenna & Mabawonku, 2013). Adding more keywords can help you narrow down your results and get very specific pages, but many simple search engines may not interpret those words, or the relationships between them, as you might want. When using three or more keywords it is often best to use engine that will allow you to use Boolean logic operators to define the relationship between the words. These are: AND, OR, NOT, NEAR, Parenthesis ( ).

Library students need to map out strategies to ascertain the process that would best retrieve the exact information needed for their goal. Knowing what to do and when to do it is fundamental to a successful information search. Ama (2004) explained that some search strategies such as, Boolean logic, truncation and proximity features are useful for retrieval of information. Search techniques are used to search for information, author or title search from Online Public Catalogue (OPAC), search engines (Google, Yahoo, Ask, Bing, Alta Vista and Google Scholar for online search, etc. Students' improvement in strategic search skills could speed up the whole information search process and equally contribute to a more effective and comprehensive search and enhance utilization of online information resources (Chu & Law, 2008).

In this age of information society, students are expected to know how to use the library and the available tools to retrieve any required information and to be able to carry out research work with minimal assistance. Sadly though, this has not been the case as many students lack the requisite skills and knowledge to be able to use the library and the available tools to retrieve information, left alone being able to carry out research work. This is because many students especially in Nigeria do not have the information literacy skills needed to perform this exercise (Okon, Etuk & Akpan, 2014).

Library students need search skills for two purposes: for personal use and as demanded of them of librarianship profession. Clark (2013) submitted that, in an age of information abundance, learning to effectively search is one of the most important skills

most teachers are not teaching. They assume students know how to conduct a search, and set them free on the internet to find information. They assume that students have the skills to critically think their way through the searching and the web. Sadly, this is not the case and every day we are losing the information literacy battle because we often forget to teach these crucial searching skills in our schools.

Research Methodology

The study adopted linear correlation research design in order to explain the relationship that exists between the independent variable (computer skills) and the dependent variable, (utilization). The population of this study was 273 which consisted of all 100 to 400 level undergraduates of Library and Information Science, University of Benin, Nigeria. A census study technique was adopted to cover all two hundred and seventy three (273) Library and Information Science undergraduates. The instrument adopted for data collection in this research is rating scale designed by the researchers. The data collected were analyzed using mean and standard deviation to answer research question one, while Pearson (r) statistics was used to answer the remaining research questions. The hypotheses were tested using t-test statistics of simple linear correlation at 0.05 level of significance.

Data Analyses and Results

Research Question One: To what extent do students of Library and Information Science use online information resources?

Table 1: Extent Undergraduates' Use of Online Information Resources

n	$\bar{X}$	S	μ
273	45.180	6.846	37.50

Table 1 shows that the observed and expected mean rating score on the extent library and information science students use online information resources are 45.180 and 37.50 respectively. In comparison the observed mean, which was rated by 273 library and information students in the university studied, is greater than the expected mean. On the other hand, the standard deviation is 6.840, which is large, indicating that the students use online information resources to a high extent.

Research Question Two: What is the coefficient of relationship between the students' operational skills and the extent of use of online information resources?

Table 2: Students' Operational Skills and the Extent of Use of Online Information Resources

n	r	r^2
273	0.947	0.8968

Table 2 shows that the coefficient of correlation between the students' operational skills and the extent of use of online information resources is 0.947. This coefficient is positive showing that as students' operational skills increase, their extent of use of online information resources also increases. The coefficient of correlation is also within the range $0.81 \leq r \leq 1.00$ for very high extent of relationship. This shows that there is a positively very high extent of relationship between students' operational skills and their extent of use of online information resources. The coefficient of determination between students' operational skills and their extent of use of online information resources is 0.8968. This indicates that 89.68% of variations in the extent of students' use of online information resources is explained by the variations in the students' operational skills.

Research Question Three: What is the coefficient of relationship between the students' strategic skills and the extent of use of online information resources?

Table 3: Students' Strategic Skills and the Extent of Use of Online Information Resources

n	r	r^2
273	0.170	0.0289

Table 3 shows that the coefficient of correlation between the students' strategic skills and their extent of use of online information resources is 0.170. That the coefficient is positive indicates that as students' strategic skills increase, their extent of use of online information resources also increases. The coefficient of correlation is also within the range $0.01 \leq r \leq 0.20$ for very low extent of relationship. This shows that there is a positively very low extent of relationship between students' strategic skills and their extent of use of online information resources. The coefficient of determination

between students' strategic skills and their extent of use of online information resources is 0.0289. This indicates that 2.89% of variations in the extent of students' use of online information resources is explained by the variations in the students' strategic skills. This left a whopping 97.11% of the variations in the extent of students' use of online information resources unexplained and due to other factors or sampling error.

Testing of Hypotheses

Hypothesis One: There is no significant relationship between LIS students' operational skills and the extent of use of online information resources.

Table 4: Calculated and Critical t-Values for Testing the Significance or Otherwise of the Coefficient of Correlation

tcal	df	p	α	t_{crit}	Decision
48.530	271	0.000	0.05	1.960	H_{02} is rejected

Results of data analysis presented in Table 4 shows that the coefficient of correlation between students' operational skills and their extent of use of online information resources is significant. Therefore the null hypothesis two which states that there is no significant relationship between LIS students' operational skills and the extent of use of online information resources is rejected. This is because, the calculated t-value of 48.530 is greater than the critical or tabulated t-value of 1.960 ($t_{Cal} > t_{Crit}$). Also, the p-value of 0.000 is less than the significant or probability value of 0.05. Therefore, the researcher concludes that there is significant relationship between library and information students' operational skills and their extent of use of online information resources.

Hypothesis Two: There is no significant relationship between LIS students' Strategic skills and the extent of use of online information resources.

Table 5: Calculated and Critical t-Values for Testing the Significance or Otherwise of the Coefficient of Correlation

t_{cal}	df	p	α	t_{crit}	Decision
2.840	271	0.000	0.05	1.960	H_{04} is rejected

Results of data analysis presented in Table 5 shows that the coefficient of correlation between students' strategic skills and their extent of use of online information resources is significant, so the null hypothesis four is rejected. This is because, the calculated t-value of 2.840 is greater than the critical or tabulated t-value of 1.960 ($that\ is\ t_{Cal} > t_{Crit}$). Also, the p-value of 0.000 is less than the significant or probability value of 0.05. Therefore, the researcher concludes that there is significant relationship between library and information students' strategic skills and their extent of use of online information resources.

Discussion of Findings

The discussion of findings of this study is organized under the following headings:

Extent of Use of Online Information Resources by Students

The first objective of this study was to establish the extent of utilization of online information resources by students. The finding of the study showed that the observed and expected mean rating scores on the extent library and information science students use online information resources are 45.180 and 37.50 respectively indicating that the observed mean is greater than the expected mean.

The finding of this study however, does not agree with the assertions by Okon, Etuk and Akpan (2014) that noticeable numbers of students lack the requisite skills and knowledge to search for online information resources most especially in Nigeria. Hence, the proliferation of private searchers and business centers in higher institutions, who help students browse for money. Supporting this, Quadri (2013) lamented that acquiring information search skills for online information resources can be challenging for students. This according to the author may explain why there is probably low usage of online information resources for academic purposes by undergraduates in Nigeria despite the increase in provision of online resources in Nigerian and across the world. This finding however, has shown that there is a growing interest among library and information science students to use online information resources.

Operational Skills and the Students' Use Of Online Information Resources

Result of the data analysis indicated that there is a positive relationship between operational skills and the students' use of online information resources. This can be seen from the result of correlation coefficient which is 0.81. One can therefore state that having operational skills such as being able to use mouse and the keyboard, copying and retrieving information from a storage device such as flash drive and disk as well as being able to convert information from one format to another (e.g. word to pdf) among others could enhance the students' use of online information resources in the university studied.

This study has lent credence to the finding by Ugwuanyi (2013) that operational skills for librarians are relative measures of their capacity to make appropriate use of computer for their work and to independently function in a web-based on-line learning environment. This pointed out that operational skills still remain the underpinning elements of computer and can determine the extent of online information use among library students. The findings by Odede and Odede (2016) are also in consonance with the outcome of this study. The authors are of the opinion that, computer operational skills enhance library students' use of online information resources and enable them become confident in using online information resources due to their level of computer skills.

Strategic Retrieval Skills and the Students' Use Of Online Information Resources

The final objective was to determine the relationship between strategic retrieval skills and students' use of online information resources in the University of Benin, Edo State, Nigeria. The finding of this study has revealed that there is a positively very low extent of relationship between students' strategic skills and their extent of use of online information resources. This can be seen from the result of correlation coefficient which is 0.170. That the coefficient is positive indicates that, as students' strategic skills increase, their extent of use of online information resources also increases. It was therefore, deduced from this finding that knowing how to use Boolean operators, truncation search technique to search for information, author or title search from online catalogue (OPAC), search engines (Google, Yahoo, Ask, Bing, Alta Vista and Google Scholar for online search, etc. would determine to a very high extent the use of online

information resources by library and information science students of university of Benin, Edo State.

This finding corroborates the finding by Ekenna and Mabawonku, (2013) that strategic retrieval skill is significant in information retrieval as it assists in the improvement of search skills and online information resources utilization. The result of this study also agrees with the finding by Chu and Law (2008) who stated that students' improvement in strategic search skills could speed up the whole information search process and equally contribute to a more effective and comprehensive search and enhance utilization of online information resources.

Recommendations

Based on the findings, the researchers make the following recommendations to improve the situation:

1) Although the extent of use of online information resources among LIS undergraduates is significantly high, there is need for the university library management to create awareness of some available online information resources that are not being utilized by the students.

2) The university library management should be organizing regular training for students on the acquisition of operational skills such as use of mouse and keyboard, webpage navigation and how to download information from database.

3) The outcome of the study on strategic retrieval skills and LIS undergraduates' use of online information resources showed a positively very low extent of relationship between the two variables. In this regard, LIS students should be taught how to identify the best strategies that would enable them ascertain the process required to effectively retrieve the exact online information needed for their use.

Conclusion

The acquisition of computer skills among users of online information facilities and resources has been considered more essential now than ever due to the application of technology to library routine operations. This study therefore examined the influence of these skills on the use of online information resources by library and information science

undergraduates of University of Benin, Edo State. It was concluded that the level of acquisition of computer skills such as operational search and strategic skills could, to an extent determine the degree of use of any online information resources by users.

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