Impact of electronic resources use on academic performance of Undergraduates in Nigeria

Olajide Olabode
Federal University Oye-Ekiti, Nigeria

Abstract

The purpose of this study is to explore the impact of usage of e-resources on the academic performance of the undergraduates of Federal University Oye-Ekiti, (FUOYE), Nigeria. This research is a survey. The population for this study includes the final year students of faculties of Social Science, Humanities and Science, Federal University Oye-Ekiti, Nigeria, of the 2015/2016 academic session. 150 students were chosen by simple random sampling. The data collected were analyzed quantitatively with the use of Statistical Package for Social Science (SPSS). Figures and tables were used to present the results of the findings. From the total of 150 copies of questionnaires distributed, 144 copies, representing 96%, were filled and returned. Results indicated that use of electronic resources had a positive impact on students' academic performance. Based on the findings of this study, it is recommended that more emphasis should be laid on the acquisition of electronic resources so as to give room for wider and multiple access to information resources in order to meet the information needs of diverse users.

Keywords: e- resources, e-books, e-journals, academic performance, Federal University Oye-Ekiti (FUOYE)

Introduction

Electronic resources consist of information resources provided in electronic formats such as CD-ROMs, databases, e-books, e-journals, Online databases, Online Public Access Catalogues, and another computer –based electronic networks. Electronic resources are now major resources in every university library and it has significantly transformed information handling and management in academic environments (Bankole, Ajiboye & Otunla, 2015). As one of the modern phenomena of the information age, electronic resources have caused a rapid progress in educational media since the early 1990s. The emergence of concepts such as electronic books, virtual library, and e-library has

continued to gain popularity in an academic environment. E-books and e-learning entrance into the field of education indicates the development of education and creation of the possibility to learn for everyone, anywhere and anytime (Biranvand & Khasseh, 2014). This may be due to the fact that readers of electronic books are able to find a certain topic in an electronic book much easier and effective than in a printed one (Gibson & Gibb, 2011).

Landouni and Diaz (2003) believed that electronic textbooks are educational tools prepared in an electronic way, to assist in teaching and learning. In fact, electronic learning provides easier and wider access

to information for education as it makes coordination and collaboration between experts and students and shows more rate of success compared to the conventional method as well. However, it should be noted that such a use of modern media in the field of education requires financial support, skilled workforce, and change in roles. In the past, electronic books had the similar or more prices compared to printed ones.

Academic performance, in this regard, is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. It refers to how students deal with their studies and how they cope with or accomplish different tasks given to them by their teachers. It is the ability to study and remember facts and being able to communicate knowledge verbally or down on paper (Sivathaasan & Velnampy, 2013). Therefore, the present research tries to investigate the use of electronic resources and its impact on undergraduate students' academic performance in Federal University Oye-Ekiti, Nigeria.

Electronic resources open up opportunities for learning because they enable learners to access, extend, transform and share ideas and information easily. Recently, universities and librarians have been increasing the numbers of electronic resources in their collection, as electronic books are becoming essential components in university library collections (Wu & Chen, 2011). To address the issue of effectiveness of using electronic resources, there is need to survey the impact of usage of electronic resources on the academic performance of students. This study, therefore, seeks to survey the impact of usage of electronic resources on the

academic performance of undergraduate students of Federal University Oye-Ekiti, Nigeria.

Objectives of the study

The main objective of the study is to survey the utilization of electronic resources and academic performance of undergraduate students. Specifically, the study seeks to

- Assess the level of computer proficiency of undergraduate students of FUOYE

- Ascertain students' level of utilization of e-resources.

- Find out the purpose of use of electronic resources

- Find out students' perception on the use of electronic resources.

- Investigate the impact of electronic resources on students' academic performance.

Literature review

Some studies on the use of electronic information and academic performance reveal that the academic community has accepted that electronic information sources have an impact on their work, (Day & Bartle, 1998). So, there is a relationship between electronic information sources and academic work. On the other hand, William et al (2012) concluded that usage of e-device was not associated with academic performance ($p = 0.70$), when second and third-year pharmacy students were combined. Academic performance was not impacted among third-year pharmacy students ($p =$

0.86), but second-year students performed better academically if they refrained from using e-devices during class (mean grade = 88.5% vs. 83.3%; p=0.019). Self-efficacy and use of electronic information jointly predict and contribute significantly to the academic performance of students (Adeyinka, et al., 2007).

Conducting a research on 600 students of management information system, Rozel and Gardner (2000) suggested that use of electronic resources has a direct and meaningful effect on students' academic progress. Through a research, Sen (2005) explored the effect of electronic resources on students' academic progress. Findings revealed that students' computer skills efficiency has a positive and meaningful effect on perceived usefulness. Letchumanan and Tarmizi (2011) studied the rate of use of electronic books among students of mathematics in one of the Malaysian universities and concluded that most of the respondents have similar reading habits. Factors such as easy access, reduction of physical reference to library and variety of learning methods have caused students to tend to use electronic books.

In a research by Thanuskodi (2012), the majority of users are aware of the availability of e-resources. The result reveals that 47.78 % of respondents wanted to access only electronic version whereas only 32.78% users wanted to read the printed journals but 19.44% respondents wanted to use both electronic and printed version. The majority of the respondents 76.66% used e-resources for writing papers. The analysis reveals that many of the respondents searched e-resources through linking facility available on the library website. Moreover, many of the respondents are unaware and have not used OPAC, On-line thesis/dissertations, abstracts/indexes, on-line databases, which are very relevant for their study and research. Bashorun, Tunji, and Adisa (2011) revealed by research that frequency of use of electronic resources by academic staff of the University of Ilorin was low. Reasons were a lack of time. Because of the time required to focus on teaching; lack of awareness of electronic resources provided by the library; power outage, ineffective communication channels, slow network and inadequate searching skills.

More recently, Hwang et al. (2014) examined the usage patterns and perceptions toward e-books in South Korea. They uncovered the role of the library to be very important, as most users learn about and access e-book through the websites of university libraries, not through search engines as Google. Moreover, they found that users with higher education more easily recognize and have better experiences with e-book services. Using a web-based survey, Wilson et al (2014) explored the extent to which e-books meet the needs of medical academics of the University of New South Wales in the performance of their academic tasks, results indicated that e-book usage by medical academics was relatively low; however, most of them predicted that they would be using e-books within the next five years. Research tasks dominated the use of e-books, and 71 percent agreed that e-books helped improve their overall productivity.

In conclusion, a large number of research have been conducted to investigate the level of usage of electronic resources by students in universities; but what distinguishes the present research from the

other similar ones is that this investigates the impact of electronic resources on undergraduate students' academic performance in Federal University Oye-Ekiti, Nigeria.

Methodology

This research is descriptive in nature. The statistical population includes the final year students of faculties of Social Science, Humanities and Science in Federal University Oye-Ekiti, Nigeria, in 2015/2016 academic session. One hundred and fifty (150) students were randomly selected which gave each person in the sampling frame an equal chance of being included in the sample. To evaluate the usage of e-resources and academic performance, a survey instrument in the form of the self-administered questionnaire was developed for the purpose of eliciting data for the study. The data collected were analyzed quantitatively with the use of Statistical Package for Social Science (SPSS).

Findings and discussion

Table 1: Demographic characteristics of the respondents

Table 1 reveals demographic characteristics of the respondents

S/N	Specific Characteristics	Frequency	Percentage (%)
1	Gender of Respondents		
	• Male	76	52.8
	• Female	68	47.2
	Total	144	100
2	Faculty of Respondents		
	• Humanities	22	15.3
	• Social Sciences	48	33.3
	• Sciences	74	51.4
	Total	144	100
3	Age of the respondents		
	• 15 – 19	30	20.8
	• 20 – 24	96	66.7
	• 25 – 29	16	11.1
	• 30 – 34	2	1.4
	• 35 and above	0	0.0
	Total	**144**	**100**

Table 1 revealed that male respondents were more in number 76 (52.8%) than female respondents 68 (47.2%). The majority of the respondents were in the Faculty of Science with 74 (51.4%), followed by Faculty of Social Sciences 48 (33.3%), while Faculty of Humanities had the least number of respondents 22 (15.3%).

Table 1 also revealed that respondents within the age bracket 20-24 years were in the majority with 96 (66.7%) followed by those with ages bracket 15-19 years which is 30 (20.8%), 25-29 years which is 16 (11.1%), while the students within ages 30-34 were in the least with 2 (1.4%).

Table 2: Students computer proficiency

Table 2 shows respondents self-rating computer proficiency.

Rating	Frequency	Percentage %
Excellent	20	13.9
Very good	64	44.4
Good	60	41.7
Average	0	0.0
Poor	0	0.0
Total	**144**	**100**

To be able to use electronic resources effectively, students should have adequate computer skills. The self-rating computer proficiency by the participants in Table 2 indicates that majority of the respondents perceived themselves to be very good in using a computer, 60 (44.4%) perceived themselves to be good, while 20 (13.9%) perceived themselves to be excellent in computer usage. From the table, all the participants are computer literate.

Table 3: Frequency of use of electronic resources

Table 3 presents the frequency of use of e-resources

Frequency	Frequency	Percentage (%)
Daily	100	69.4
Weekly	18	12.5
Monthly	2	1.4
Occasionally	24	16.7
Total	**144**	**100**

The majority of the respondents 100, representing (69.4%) used the electronic resources daily, 18 (12.5%) used the electronic resources weekly, 2 (1.4%) used the electronic resources monthly, while 24 (16.7%) used the electronic resources occasionally for one reason or the other.

Table 4: Purpose of using the electronic resources

Table 4 presents the purpose of respondents' use of e-resources

Purpose	Frequency	Percentage (%)
Assignment	76	52.8
Reading magazines/ newspapers	60	41.7
Examination	90	62.5
Research	52	36.1
Leisure and recreation	36	25
Others, Please specify ……..……………………… ………	4	2.8

NOTE: Some Respondents chose more than one option

In relation to the purpose for which the respondents used the electronic resources, Table 4 revealed that majority of the respondents 90 (62.5%) used the electronic resources for examination purpose followed by 76 (52.8%) who used the electronic resources for assignment. Sixty, representing (41.7%) read electronic magazines/ newspapers, 52 (36.1%) used the electronic resources for research, while 36 (25%) claimed to ever use the electronic resources for leisure and recreation. Only 4 respondents, representing (2.8%) claimed they used the electronic resources to gather more information and facts relevant to their need

Table 5: Type of Electronic resources used

Electronic Resources Type	Frequency	Percentage (%)
Electronic lecture notes	66	45.8
Electronic journal	52	36.1
Electronic books	82	56.9
Electronic databases	65	45.1
Electronic newspapers/magazines	86	59.7

Search engines e.g. Google	118	81.9
Electronic conference proceedings	4	2.8
MIT open courseware	20	13.9
Science direct	32	22.2
NUC Virtual library of Nigeria	40	27.7
Khan Academy	36	25

NOTE: Some Respondents chose more than one option

On the type of electronic resources respondents use, Table 5 revealed that majority of the respondents118 (81.9%) used search engines e.g. Google to search for their information needs, followed by 86 (59.7%) who read electronic newspapers/magazines, 82 (56.9%) used Electronic books, 66 (45.8%) used electronic databases, 65 (45.1%) used electronic lecture notes, 52 (36.1%) electronic journal, 40 (27.7%) used NUC Virtual library of Nigeria, 32 (22.2%) used Science direct, 36 (25%) used Khan Academy, 20 (13%) used MIT open courseware, while only 4 representing (2.8%) ever used electronic conference proceedings

Table 6: Students' perception of electronic resources of FUOYE Library

Rating	Frequency	Percentage %
Excellent	12	8.3
Very good	50	34.7
Good	52	36.1
Average	24	16.7
Poor	6	4.2
Total	**144**	**100**

On the perception of students on electronic resources in FUOYE Library, the majority of the respondents 52 (36.1%) rated the electronic resources well. The combinations of those that rated excellent, very good and good are 114 (79.1%) were satisfied with the electronic resources. Twenty-four (16.7%) rated the electronic resources as average. Only 6 (4.2%) rated the electronic resources to be poor.

Table 7: Impact of electronic resources on students' academic performance

Rating	Frequency	Percentage %
Strongly agreed	48	33.3
Agreed	70	48.6
Undecided	24	16.7
Disagree	2	1.4

Strongly disagree	00	0.0
Total	**144**	**100**

In relation to the impact of electronic resources on students' academic performance, Table 7 revealed that majority of the respondents 70 (48.6%) agreed that electronic resources had a positive impact on students' academic performance. The combination of those who strongly agreed and agreed is 118 (81.9%). Twenty-four (16.7%) were undecided, while only 2 (1.4%) disagreed that electronic resources had a positive impact on students' academic performance.

Conclusion and recommendations

The study revealed that the majority of the respondents used electronic resources daily for various purposes such as assignment, examination, research, reading newspapers/magazines, etc. It was also revealed in the study that majority of the respondents were computer literate. The respondents used different types of electronic resources such as NUC virtual library, electronic databases, search engines like Google, science direct, electronic newspapers/magazines, etc for their information needs. The majority of the respondents perceived electronic resources in FUOYE Library to be very good. As the respondents agreed that utilization of electronic resources had a positive impact on the students' academic performance. This may be due to the advantages of electronic resources such as easy search, simple use, saving ability, and use of electronic ink in order to display the material on the screen (Gibson & Gibb, 2011).

Based on the findings of this study, more emphasis should be laid on the acquisition of electronic resources so as to give room for wider and multiple access to information resources in order to meet the information needs of diverse users.

References

Adeyinka, T., Tella, A., Ayeni, C.O. and Omoba, R.O. (2007). Predictors of Academic Performance: Self-Efficacy and use of Electronic Information. *University of Dar Es Salaam Library Journal*, 9 (1): 69-83.

Bankole, O. M., Ajiboye, B. O. and Otunla, A. O. (2015). Use of Electronic Information Resources by Undergraduate Students of Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. *International Library of Digital Library Services*.

Bashorun, M., Tunji, I. A. and Adisa, M.Y. (2011). User perception of electronic resources in the University of Ilorin, Nigeria (UNILORIN). *Journal of Emerging Trends in Computing and Information Sciences*, 2(11): 554- 562.

Biranvand, Ali and Khasseh, Ali Akbar, (2014). E-book Reading and its Impact on Academic Status of Students at Payame Noor University, Iran. *Library*

Philosophy and Practice (e-journal). Paper 1170. Retrieved on 28/01/2016 from http://digitalcommons.unl.edu/libphilprac/1170

Day, J. and Bartle, C. (1998). The Internet as an electronic information service: its impact on academic staff in higher education [online]. Retrieved on 28/01/2016 from http://www.intute.ac.uk/socialsciences/archive/iriss/papers/paper06.htm

Gibson, C. and Gibb, F.(2011). An evaluation of second generation e-book readers. *The Electronic Library*, 29(3), 303-19.

Hwang, J. Y, Kim, J., Lee, J., and Kim, J. H. (2014). Usage patterns and perception toward e-books: experiences from academic libraries in South Korea. *Electronic Library*, 32 (4).

Landoni, M. and Diaz, P. (2003). E-education: design and evaluation for teaching and learning. *Journal of Digital Information*, 3(4).

Letchumanan, M., and Tarmizi, R. A. (2011). E-book utilization among mathematics students of University Putra Malaysia(UPM). *Library Hi Tech*, 29(1), 109- 121.

Miynard, S., Mcknight, C. (2006). Electronic books for children in UK public
perception toward e-books: experiences from academic libraries in South Korea. *Electronic Library*, 32 (4).

Rozell , E.J and Gardner, W.L.(2000). Cognitive, Motivation and affective Processes: associated with Computer – related Performance: a path analysis. *Computers in Human behavior*, 16, 192-222.

Sen, S. (2005). The effect of technology acceptance on post-secondary African-American student's achievement in mathematics: A path analytic Inquiry. Doctoral Dissertation, College of Education, University of Central Florida, Orlando, Florida.

Sivathaasan, N. and Velnampy, T. (2013). Use of Electronic Information Resources and Academic Performance of University Teachers: A case study. *European Journal of Business and Management*. 5 (14) 46-52

Thanuskodi, S. (2012). Use of Online Public Access Catalogue at Annamalai University Library. *International Journal of Information Science*, 2(6): 70-74.

William A. P. et al. (2012). Impact of electronic device use in class on Pharmacy Students' Academic Performance [online]. Retrieved on 28/01/2016 Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3508481/

Wilson, C. S., D'Ambra, J., and Drunnond, R. (2014). Exploring the fit of e-books to the needs of medical academics in Australia. *Electronic Library*, 32 (3), 403-422.

Wu, M. and Chen, S. C. (2011). Graduate students' usage of and attitudes towards e-books: experiences from Taiwan Programme. *Electronic Library and Information Systems*. 45, 294-347

About the author:

Olabode Olajide, CLN is a Senior Librarian and head of Virtual Library unit, Federal University Oye-Ekiti, Ekiti State, Nigeria. He can be reached at olabode.olajide@fuoye.edu.ng