



Colleges of Education Science Students Awareness of E-Books in Sciences for Learning in Kaduna State Nigeria

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Abstract

E-Books are available electronic learning materials that give users the benefits to; retain, reuse, revise, remix, and redistribute for teaching, learning, and research purposes. Over reliance on hardcopy handout, inadequate e-library facilities, and inadequate exposure to electronic resources among others are factors militating against efficient use of e-books. Hence, this study investigated the Colleges of education science students awareness, of e-books in for learning in Kaduna State Nigeria. Specifically, the study: determined COE science students awareness of e-books for learning, A descriptive research design of the survey type was adopted for the study. One research questions was used in-line with the purpose of the study, 398 respondents were randomly sampled from two colleges of education in Kaduna State. Frequency and percentage were used to answer the research question, Findings of the study revealed that College of education students were aware of e-books for learning and it was recommended that, orientation program should be organized for students in th school on how to download e-books.

Keywords: E-Books, Science, learning,, Awareness.

Introduction

Science is a process as well as knowledge. Children learn science by being involved not only with its content, but also with its methodology. The effective science facility accommodates both Science study requires a variety of

unique instructional materials in addition to those materials common to all of education. A science facility must have space to accommodate this variety in combination with hands-on instructional strategies. Science instructional areas have spatial and material needs that are different from those considered in designing a general use classroom. National, state, and local efforts, public and private, are underway to improve science education. A major goal for education in the 21st century is to create scientifically literate citizens, who are able to think critically, make sense of complex data, and solve problems. Currently, it is observed that the objectives for improving scientific literacy are not achieved. Science enrollment is relatively low, achievement in certain grade level is declining and teachers' morale is low.. The number of colleges schools has more than tripled between 2004 and 2014 to serve different underserved communities and so has the number of enrollees. Despite these successes, there have been a number of challenges, including the following; Poor performance in secondary education examinations, with most students getting marginal pass of Division IV or failing completely, acute shortages of teachers, especially in the Sciences and Mathematics, with many students not able to do these subjects at all, acute shortages of Science and Mathematics teachers, inequalities in learning environments among different schools resulting in inequalities of learning outcomes Knowledge of science and technology is therefore a requirement in all countries and all people globally due to the many challenges that are facing them. These challenges include emergences of new drug resistant diseases, effects of genetic experimentation and engineering, ecological impact of modern technology, dangers of nuclear war and explosions and global warming among others (Alsop & Hicks, 2001). Information and Communication Technology is a term notable for the use, re-use, processing, storing, accessing, gathering, manipulating and presenting or communicating of information from one person to another. ICT is applied in all branches of human knowledge as it offers better solutions to greater heights in all institutions. The field of education has been influenced by the infiltrating impact of information and communication technology (ICT). Information is a dynamic and unending asset that influences all disciplines and all works of life. The advent of the computer in the 1950s has brought radical changes in all spheres of life in the way in which information is gathered, stored, organized, processed and expended. Information and Communication Technologies are technologies used for collecting, storing, editing and spreading of information in various forms and structures (Issa, Daramola, Aladesusi, & Udoh, 2017). The term ICT is an umbrella term that incorporates any communication device or application, encompassing: radio, television, mobile phones, computer, and network hardware and software, satellite

systems and so on, as well as the different administrations and applications related to ICT, such as information storage gathering (Mondal & Mete, 2012).

Technology as communication equipment and software required to organize, study, strategize and provide support to manage information systems dependent on computer software as well as hardware. These technologies can be utilized to offer anticipated results with little error or flawless, steady, reliable and interactive in the learning process (Alasela, Ogunlade, Obielodan, & Nasiru, 2017). It can also be described as all devices, networking components, applications and systems that are combined which enables individuals and organizations to interact in the digital world (Margaret & Pratt, 2017). Furthermore, ICT is a collection of technologies used for collecting, storing, processing, communicating and delivery of information associated with the teaching and learning processes (Ogunlade & Anaza, 2017).

Information and Communication Technologies connected to the internet gives its user a wide range of information to pick from. Moreover, ICT has turned the world into a global village, with a consistently expanding access to a wide array of information and knowledge, similarly making it feasible for sharing of written, audio and visual information in real-time in many parts of the world (Usang, et al, 2018). ICT is winding up progressively significant in our daily lives and in our educational system. There is a growing demand for educational institutions to use ICT facilities to enhance the skills and knowledge the students need for the 21st century (UNESCO , 2012).

The introduction of ICT into schools and in the learning process was driven by global forces that are beyond the school-based decision making (Voogt, Philip , & Oluwaranti , 2013). The implementation of ICT in education was to transform the teaching and the learning process from the conventional instructional instructor focused on a student-focused approach with the active participation of the learners (Voogt, 2010). The utilization of ICT tools has enhanced the productivity of academic staff of institutions as they used ICTs for functions such as information collection, processing, reporting, teaching, educating, managerial capacities, organization, storage, dissemination, and research (Aderoju & Olumorin, 2017). ICT can complete, enrich and transform education for the better, it have become the most basic building block of modern academic and industrial society, it has been mainstreamed in instruction design in different teaching and learning process (UNESCO, 2018). ICT has impacted on the quality and quantity of education, most especially for classroom instruction and research in traditional and distance education institutions. Technology presents a new dimension to communication in the world thereby lessening the world to one small but a connected village. New technologies present remarkable access to information, content, and information. This is evident in the communication devices used in contemporary society and most particularly in the educational sector in Nigeria.

Abdulraham and Soetan (2017) noted that ICT is the utilization of scientific tools and techniques for developing, documenting and communicating information for solving problems or providing required administrations in different regions of human undertaking. The integration of information and communication technology (ICT) has the potential to radically modify the social structure and mode of operation, and this social change will in turn force educational institutions to react and change as well. With respect to the role of technology in education. The evolution means of generating and gathering information in the twentieth century has influenced students utilization of information resources, among such information resources includes electronic resources.

Statement of the Problem

The infiltration of innovative technological resources in education has made E-books, also known as electronic books to become an essential part of electronic resources that meets the 21st century innovation. ICT use in education ensures a consistent progression to quality education via electronic delivery systems. It is no doubt that E-books is already a fundamental part of the electronic learning system, which is used to describe different kinds of digital or electronic books consisting of text, images or both that are viewed using e-readers on computers, phones, tablets or other electronic devices (desktop or mobile). Most of these come in different e-reading formats such as adobe pdf, Microsoft word document, amonge others; and often accessed via online view, downloads, e-mails, shared via social media and other delivery channels.

However, despite the growing popularity and use of e-books and e-book readers in Nigerian institutions. Some factors tends to militate against the college of education students awareness of e-books such as their over-reliance on lecturers hardcopy handouts as the course material . Furthermore, it is apparent that Nigerian institutions have libraries, but the inadequate availability of E-library facilities has since impacted negatively on students exposure and access to e-books through open access to institution e-books repository. Hence, students inefficient utilization of e-books for learning, due to their inadequate of exposure to electronic resources for learning, and the negative nature of their already streamlined mentality to the use of hardcopy learning resources despite the billions of e-books and resources available online with the wider advantage of flexibility, accessibility and mobility. All of which are apparent problems and one that is yet to be articulated in-line with contemporary learning practices with the use of electronic resources available online.

Abdullah and Gibb, (2006) in a study revealed that e-book awareness amongst students was low as was the level of e-book usage, a inadequate of awareness regarding e-book availability and publicity also contributed to the main reasons for a inadequate of utilization of e-books amongst students surveyed in the study. Oriogu, et.al., (2018) in

another study revealed that students surveyed in the study do not often access e-books due to their inadequate awareness on how to access e-books on the institution's e-library repository. The researchers also revealed that students inadequately use e-books from the institution's e-library repository, as long as they could get the desired books in hardcopy from the institution library. These challenges were however reported to be due to inactive links, students' unawareness and orientation on where to locate or how to access needed e-books and poor internet connections, all of which invariably lead to poor utilization of e-books amongst students.

Having established the prevailing problems and other impediments critical to students' unawareness, access and utilization of e-books; hence this study. This study therefore, seeks to investigate and determine the inherent reasons behind the Colleges of education students' awareness, access and utilization of e-books for learning in Kaduna State and more importantly to proffer suggestions and solutions to solve or improve students' awareness, access and utilization of e-books for learning.

Purpose of the Study

The main purpose of this study is to examine the Colleges of education science students' awareness, of e-books for learning in Kaduna State Nigeria. Specifically, this study: Determined colleges of education science student's awareness of e-book for learning;

Research Questions

1. What are the colleges of education student's awareness of E-books for learning?

Methodology

This research design was descriptive method of survey type. It is considered appropriate because the descriptive research method involves the systematic collection and analysis of data collected from a large population that helps to describe the characteristics of the population as they appear based on the phenomenon under consideration for this study without external manipulations by the researcher. The questionnaire was used to gather information on awareness, access, and utilization of E-books for learning among the colleges of education science students in Kaduna State which is the focus of this study. The population for this study was science students in all colleges of education in Kaduna state. Two colleges of education was purposively selected because they are the only two colleges in the State. The target population consisted of all the science students of the colleges of education in the selected colleges. A multistage sampling procedure was used for the study, proportional sampling techniques was used to allocate the number of respondents in each school base on their estimated population using Israel Model (2012) at a 5% level of precision,

purposive sampling was used in the selected school to select 398 science students from the sample colleges of education to serve as the respondents in this study.

Data was collected using the researchers-designed questionnaire titled “Colleges of Education Science Students Awareness of e-books for Learning in Kaduna State Nigeria. It is divided into two parts, section A elicited demographic information from the respondents, section B contained items to investigate the students awareness of E-books, the items in section B was rated on a response mode of Extremely Aware, Very Aware, Slightly Aware, Not Aware At All.

Table 1: Distribution of the Respondents according to Gender

Gender	Frequency	Percentage
Male	240	60.3
Female	158	39.7
Total	398	100

Table 1 Shows that 240 respondents representing 60.3 percent were male while 158 respondents representing 39.7 percent were female. It implies that the majority of the respondents were male.

Results and Discussion

Research Question One: What is the college of education science student’s awareness of e-books for learning?

Table 2:

S/N	Statement	EA		VA		SA		NA	
		F	%	F	%	F	%	F	%
1	Quality e-books which are useful for learning are readily available online	106	26.6	214	53.8	26	6.5	52	13.1
2	E-books are available for learning in my area specialization	94	23.6	173	43.5	40	10.1	91	22.9
3	I am familiar with the cost benefits of using e-books for learning	92	23.6	132	33.2	122	30.7	52	13.1
4	I know about the flexibility and convinces of e-books for learning	120	30.2	79	19.8	66	16.6	133	33.4

5	I'm familiar with e-books apps for mobile devices (e.g ReadEra, Cool Reader, Nook, Bluefire Reader and so on)	106	26.6	107	26.9	66	16.6	119	29.9
6	I am familiar with the dedicated e-book reader devices (e.g Amazon Kindle, Kobo clara Reader, Sony Reader and so on)	134	33.7	106	26.6	92	23.1	66	16.6
7	I am aware of e-book open-access sites (e.g project Gutenberg, open library, internet archive, and so on)	121	30.4	120	30.2	92	23.1	65	16.3
8	I know that I can download the e-book to mobile devices and laptops	146	36.7	160	40.2	40	10.1	52	13.1
9	I am aware that my college library provides access to e-books	118	29.6	146	36.7	27	6.8	107	26.9
10	I have knowledge of the availability of free academic e-books for learning	159	39.9	80	20.1	79	19.8	80	20.1

Table 3 shows the opinions of the respondents on their awareness of e-books for learning among college of education students in Kaduna State. 320 respondents representing 80.4 percent agreed that they are aware that quality e-books which are useful for learning are readily available online while 78 respondents representing 19.6 disagreed. It indicated that the students in colleges of education in Kaduna State are aware of the quality e-books which are useful for learning are readily available. 267 respondents representing 67.1 percent agreed that e-books are available for learning in the students' area of specialization while 131 respondents representing 32.9 percent disagreed. It implies that e-books are available for learning in the students' area of specialization in colleges of education in Kaduna State. 224 respondents representing 56.3 percent agreed that they are familiar with the cost benefits of using

e-books for learning while 174 respondents representing 43.7 percent disagreed. It means that the students are familiar with the cost benefits of using e-books in colleges of education in Kaduna State.

199 respondents representing 50 percent agreed that they know about the flexibility and convinces of e-books for learning while 199 respondents are not aware about the flexibility and convince of e-books for learning in colleges of education in Kaduna State. 213 respondents representing 53.5 percent agreed that they are familiar with e-books apps for mobile devices such as readera, cool reader, nook, Bluefire reader while 185 respondents representing 46.5 percent are not aware. It implies that the majority of the students are aware of e-books apps for mobile devices in colleges of education in Kaduna State. 240 respondents representing 60.3 percent agreed that they are familiar with the dedicated e-book readers' devices such as amazon kindle, kobo clara reader, and sony reader while 158 respondents representing 39.7 percent disagreed that they are not aware. It indicated that the students are familiar with dedicated e-book reader devices such as amazon kindle, kobo clara reader and sony reader in colleges of education in Kaduna State.

241 respondents representing 60.6 percent agreed that they are aware of e-book open access sites such as project Gutenberg, open library, and internet archives while 157 respondents representing 39.4 percent are not aware of e-book open access sites. It means that majority of the students are aware of e-book open access sites such as project Gutenberg, open library and internet archive. 306 respondents representing 76.9 percent agreed that they know that they can download the e-books to mobile devices and laptops while 96 respondents representing 23.1 percent disagreed. It implies that the students are aware that they can download the e-books to mobile devices and laptops.

264 respondents representing 66.3 percent agreed that they are aware that their college library provide access to e-books while 134 respondents representing 33.7 percent disagreed. It indicated that the students are aware that colleges of education in Kaduna State libraries provide access to e-books. 239 respondents representing 60 percent agreed that they have knowledge of the availability of free academic e-books for learning while 159 respondents representing 40 percent disagreed. It implies that the students have knowledge of the availability of free academic e-books for learning in colleges of education in Kaduna State.

Summary and Conclusion

This study investigated awareness, of e-books for learning among science student in colleges of education in Kaduna State, Nigeria. The research question seeks to check the students' awareness of e-books for learning among science students in colleges of education in Kaduna State, such awareness includes; quality e-books which are useful

for learning are readily available online, e-books are available for learning in the students' area of specialization, the students are aware that their college library provide access to e-books. The findings of this study are similar to that of Asunka (2013) revealed that the level of awareness and perception of e-books among undergraduate students in was somehow considerable, but the degree of acceptance and use was limited to reference sources.

In conclusion, the findings revealed that majority of the science students in colleges of education in Kaduna State were aware of the availability of e-books for learning.

Recommendations

Based on the findings of this study, it is recommended that

Institutions should create awareness among the students on the availability e-books on their colleges' websites by organizing orientation programmes where the students should be trained on to how to download e-books.

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