

Digital Library Services: Availability and Usage for Research and Academic Purposes among Undergraduates of Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria

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Abstract

This study investigated into the availability and usage of Digital Library services (DLS) for academic purposes in Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria. The descriptive survey was adopted for this study. The population comprises of all undergraduates in Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria. The respondents were selected using simple random sampling techniques and the sample size consisted of 200 undergraduates selected from the five faculties in the University. About 35 respondents were selected from faculty of Arts, 50 from faculty of Education, 34 from faculty of Social Sciences and Management, from faculty of science 36 respondents were selected and faculty of Vocational and Technical Education 45 respondents were selected using simple random sampling technique. The instrument for data collection was the researcher's self-developed questionnaire titled "Digital Library Services Availability and Usage for Academic Purposes among Undergraduates Questionnaire, "DLSAUAPQ". The instrument was validated by 3 experts. The reliability coefficient was obtained using Cronbach Alpha 0.81 value for availability and 0.85 values for the usage of digital library services. Research questions were answered using mean and standard deviation, while the hypothesis was tested using t-test. The finding of the study showed that there are inadequate digital library services in the university and that very few undergraduates made use of the available DLS for academic purposes. Also, gender does not reveal any appreciable difference. The study therefore recommends that the level of awareness of the availability of DLS should be increased to the library users.

Keywords: Digital Library Services, evolution, traditional libraries, digital libraries awareness

Introduction

The University undergraduates visit libraries in order to retrieve accurate, adequate, relevant and current information in digital resources form for effective and efficient research work and academic purposes. The undergraduates are expected to study more after classroom instructions to collect relevant information for class activities such as assignments, seminars, term papers, dissertations, thesis and research projects. This is because university libraries house the intellectual contents of the institutions. The attempt to digitize the intellectual contents is known as digitization. In digital library, resources are kept and made available in digital form and the services of the library are also made available electronically (Nwabueze & Urhiewhu, 2015).

The main purpose of digital library materials is for preservation and easy access by students, researchers and other users. Digitalization improves access to library resources, by digitalizing library collections; information will be accessible to all instead of a group of students (Fabunmi *et al.*, 2006). Digital projects also enable users to search for collections rapidly and comprehensively from anywhere at any time. It also removed the challenges of distance, as users do not have to travel to libraries that possess the hard copies of libraries materials before they can access and use such materials.

The availability and usage of Digital Information Resources (DIRs) can facilitate, increase and ease processing and access of information to library users (Shariful, 2012). Dhamdhare (2012) observed that digital library services and practices expand the features and facilities in library to develop digital library services with Information and Communication Technology (ICT). The research revealed that students and research scholars wish to publish their research articles and other papers online to download whenever they want. Perdana and Prasajo (2020) examined the search pattern of online journals among the faculty members. The study revealed that the majority of the digital libraries were aware of availability of online journals.

The level of availability and usage of e-resources in any university library may influence the information services provision to students in that library. (Rajasekaran *et al.*, 2023). Ganesamoothy *et al.* (2022) opined that the level of e-resources available to any university library and the degree of usage to which they are put determine the information services delivery and skilful used, influence information services provision by making them more meaningful. Ashraf *et al.* (2019) reported that University libraries play significant role in complementing research by funding, provision of facilities and dissemination of information. Gakibayo *et al.* (2013) explored the merits of electronic resources over printed ones include the following: speedy access, ease of use, ability to search multiple files at a time and ability to access documents from outside the library university. Tenopir (2003) in his study revealed that e-resources have been rapidly adopted in academic areas, though the behaviour varies according to the discipline or subject area. Also, Fatoki (2004) investigated the impact of library resources and the internet among undergraduate students in Ibadan and it was revealed that 65% of the respondents use the internet for research activities. It was indicated in the research that 72% of students preferred to use the university library's internet services, 35% the Cybercafe, and 5% neither. In a study investigated by Ojo and Akande (2005) on 350 respondents examined undergraduates' access, usage and awareness of e-resources at the University College Hospital (UCH) Ibadan, Nigeria. The study revealed that the level of usage of the e-resources by undergraduates is not high. This was as a result of lack of information retrieved skills for exploiting e-resources, thus making the level of usage e-resources by medical students very low.

Plantino (2023) investigated on assessment and utilization of digital library services in the new normal and its implications to students' academic application. It was revealed from the findings that students' utilization of digital library services is on an average of twice a week. Also, Hendl (2020) pointed out that the rise of digital services offered by the library enabled the user to utilize various electronic resources. Agyeiku (2022) found the undergraduate students utilize the resources and service of the library for their assignment, learning, examination purposes, class preparation and self-development.

Gender had been seen as a relevant factor in the use of electronic database, while issues of gender difference among students towards the use of library resources have been elevated by researchers. Also, in the research study carried out by Bamidele and Adekanmbi (2019) on the influence of gender differences on usage of patterns of electronic information sources among undergraduates of selected universities in Southwest Nigeria. It was revealed from the study that there is no basis for gender differentiation in the use of electronic resources usage appeared negligible. Bassi and Camble (2011) reported electronic resources in university libraries of Adamawa State, Nigeria. The findings revealed that a total of 280 (43.5%) and 102 (38.1%) males and females students indicated that they used the e-resources for research. And 227 (35.3%) and 96 (35.8%) of males and females' students respectively responded that they use e-resources for assignments. It was concluded from the study that male students used e-resources more for research purposes while female students used e-resources more for research purposes while female students used the resources for assignments and leisure. Smith (2015) conducted research on gender matter on the use of university library access and career preparedness. The findings revealed that female students felt more prepared by their degrees programmes when they felt library resources were available. Females were also more likely to feel library materials were available if they believed the university's distance learning technology was reliable and that web-based technology provided by the university was adequate.

Bridging the Gender Digital Divide (EDD) in access, use and appropriation of technologies would promote the digital inclusion in spaces traditionally dominated by men (Pelaez-Sanchez *et al.*, 2023)

Statement of the Problem

In the past, libraries have been seen as collection of books, manuscripts, journals and similar, items. At that time, libraries have increasingly developed to provide information resources and services to users in times of need. The term digital libraries and virtual library refers to the vast collection of information to which students gain access remotely.

After the advent of Information and Communication Technology (ICT) libraries have adopted a new mode of digital technology and digital libraries have become a need of the current time. The increased availability of ICT had led libraries and librarians to

develop relations with computer centres. ICT has made it possible for the shift from paper to digitized hypermedia which has created a high degree of comfort from the traditional setup to the digital world. Digital library made libraries closer to the users, that information can be shared, can be made available and new forms of information becomes possible. With the importance of DL, there is needed to look into how Nigerian University undergraduates use the DL and how DL is available in their various universities. Therefore, the research study is about the usage and availability of Digital library services among undergraduates in Ondo State, Nigeria.

Objectives of the Study

The study was based on the following objectives:

1. To investigate the availability of digital library services for research and academic purposes among undergraduates.
2. To determine the level of usage of digital library services for research and academic purposes among undergraduates.
3. To find out if there is difference between the levels of usage of digital library services based on gender.

Research Questions

The study sought and provided answers to the following research questions.

1. What is the level of availability of digital library services for research and academic purposes among undergraduates of AFUED?
2. What is the level of usage of digital library services for research and academic purposes among undergraduates of AFUED?

Research Hypothesis

The following research hypothesis was formulated and tested at 0.05 level of significance.

1. There is no significance difference between male and female undergraduates' level of usage of digital library services for research and academic purposes.

Methodology

The study used a quantitative research design based on a survey method through questionnaire. Survey method was employed on this research study, because it is an efficient way for collecting information from a large number of respondents. Simple

random sampling technique was used for this research study and the population consisted all undergraduates at Adeyemi Federal University of Education, (AFUED), Ondo, Ondo State, Nigeria. Five faculties were used for this research study regardless of their departments and gender. In order to give all the respondents equal opportunity for been selected, a random sampling technique was adopted to select thirty-five (35) respondents from Faculty of Arts, Faculty of Education, fifty (50) respondents, Faculty of Social Sciences and Management thirty-four (34) respondents, Faculty of Sciences, thirty-six (36) respondents and Faculty of Vocational and Technical Education forty-five (45) respondents were selected. In all, two hundred (200) were selected and eighty-nine were males while one hundred and one (111) were females regardless of their departments. The main instrument for this study is researcher’s designed questionnaire titled “Digital Library Services: Availability and Usage for Academic Purposes among Undergraduates Questionnaire “DLSAUAPUQ”. The questionnaire consists of two sections: Section “A” contains Demographic data of respondents and Section “B” contains items on Undergraduates’ Usage and Availability of Digital Library Service for Research and Academic purposes. The questionnaire was subjected to both face and content validity to check the appropriateness and adequacy of the content of the instrument. One Lecturer from Department of Computer and two Liberians from Federal University of Technology, Akure, Ondo State validated the instrument. After they deemed it fit to be validated, their advice and suggestions were used to modify the questionnaire to produce final draft.

The questionnaire was tested for reliability on fifty (50) randomly selected undergraduates from Tai Solarin University of Education, Ijebu-Ode, Ogun State, who were not part of this study. The data gathered from the trial test was analysed to check for internal consistency in reliability. The Cronbach Alpha was used and the values obtained were 0.81 for the availability and 0.85 for the usage of digital library services among Undergraduates. This indicated that the research instrument was highly reliable. The researcher with the help of research assistants in the five faculties at AFUED administered copies of e-questionnaire through various social media platforms of the selected respondents.

At the end of the exercise, 200 valid responses of the e-responses were retrieved from the undergraduates upon which analysis of the results were carried out using mean, standard deviation and t-test to answer the research questions raised and tested the research hypothesis formulated for the study.

Results

Research Question 1: What is the level of availability of Digital Library Services for research and Academic Purposes among Undergraduates of AFUED?

Table 1: Availability of Digital Library Services among Undergraduates AFUED

Item	SA	A	D	SD	Mean	Std. D.	Remarks
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Digital Library Services: Availability and Usage for Research and Academic Purposes among Undergraduates of Adeyemi Federal University of Education, Ondo, Ondo State, Nigeria

There are no adequate DLS gadgets for research and academic purposes	76	85	26	13	3.12	.87	Accepted
The DLS gadgets in my faculty is restricted and limited to some other specific usage	71	94	13	22	3.07	.93	Accepted
I prefer the usage of traditional library rather than DLS because DLS gadgets are not available	113	27	27	1	3.42	.74	Accepted
Digital library services is not yet established because of the insufficient ICT facilities	60	95	8	37	2.89	1.04	Accepted
Weighted Average					2.73		

Key; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree
Decision Value for Remark: Not Accepted =0.00-2.44, Accepted = 2.45-4.00

Table 1 shows the level of availability of Digital Library Services (DLS) among Undergraduates of Adeyemi Federal University of Education, Ondo. The table indicates agreement among the undergraduates for all items, “I prefer the usage of traditional library rather than digital library services because DLS gadgets are not available for undergraduates” which received the highest mean score ($x = 3.42$). Based on the result from this table and the mean score acceptance by the decision rule, the investigation on the issue of availability of DLS facilities are: there is no sufficient DLS gadgets for research and academic purposes in my faculty, DLS gadgets in my faculty are restricted and limited to some other specific usage; I prefer the usage of traditional library rather than digital library services because DLS gadgets are not available for undergraduates, DLS is not yet established because of insufficient ICT facilities.

Research Question 2: What is the level of usage of Digital Library Services (DLS) for research and academic purposes among Undergraduates of AFUED?

Table 2: Level of Usage of Digital Library Services among Undergraduates of AFUED

Item	SA	A	D	SD	Mean	Std. D.	Remarks
I do not make use of digital library for any research and academic purposes	21	92	56	31	2.51	.88	Accepted
There are no digital library services in my faculty	63	22	79	36	2.16	1.11	Accepted
Some students cannot make use of digital library services for their research purposes	40	37	53	70	2.23	1.13	Accepted
Only brilliant students make adequate use of digital library services in my faculty	18	36	49	97	1.88	1.01	Accepted
Weighted Average					2.29		

Key; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree
Decision Value for Remark: Not Accepted =0.00-2.44, Accepted = 2.45-4.00

Table 2 shows the level of usage of digital library services among undergraduates of Adeyemi Federal University of Education, Ondo. The table indicates agreement among the undergraduates for all item with, “I do not make use of digital library services for my research and academic purposes ($x = 2.51$) and “There is no digital library services in my faculty” which received a mean score ($x = 2.56$). Furthermore,

the table shows the undergraduates disagreed that some student cannot use digital library services for their research purposes ($x = 2.23$) and only brilliant students make adequate use of digital library services in my faculty ($x = 1.88$). Meanwhile, based on the value of the weighted average (2.99 out of 400 maximum values obtainable) which falls, within the decision value for low, it can be inferred that the level of usage of digital library services among undergraduates of AFUED, Ondo is low.

Hypotheses Testing

H_{01} : There is no significance difference between male and female undergraduates' level of usage of digital library services for research and academic purposes.

Table 3: Summary of T-test showing difference in male and female Undergraduates' usage of Digital library services

Variable	N	Mean	Std. D	Df	T	Sig.	Remark
Male	89	9.02	1.99				
Female	9.31	1.91		198	-1.055	.293	Not Significant

Table 3 shows the difference in the level of usage of digital library services by male and female undergraduates. The table shows that the mean score for male undergraduates is 9.02 while that of female undergraduates is 9.31. The value of the mean scores do not reveal any appreciable difference. Therefore, there is no significant difference between male and female undergraduates' level of usage of digital library services in Adeyemi Federal University of Education, Ondo ($df = 198$; $t = -1.055$; $p > 0.05$). Hence, hypothesis 1 is retained.

Discussion

The result of this research study showed that the level of availability of Digital Library Services (DLS) among undergraduates for research and academic purposes are: there is no sufficient DLS gadgets, DLS gadgets in my faculty are restricted and limited to some other specific usage, undergraduates prefer the usage of traditional library to digital library services and that DLS is not yet established because of insufficient ICT facilities. Rajasekaran *et al.* (2023) argues that the level of availability and usage of e-resources in any university library may influence that information services provision to students in that library. Also, Ganesamoorthy *et al.* (2022) in a similar study revealed that the level of e-resources available to any university library and the degree of usage to which they are put determine the information services delivery and skilfully used, influence information services provision by making them more meaningful.

Findings of the study revealed the usage of digital library services among undergraduates for research and academic purposes. It was revealed that undergraduates' usage of Digital Library Services (DLS) is low; this may be attributed to insufficient DLS gadgets and awareness of the students on the usage of

DLS for research and academics purposes. The findings of Platino (2023) revealed that students' utilization of digital library services is on an average of twice in a week. Also, the findings of Hendal (2020) and Agyeiku (2022) contradicts the outcome of this study that undergraduates utilized DLS for their assignments, learning, examination purposes, class preparation and self-development. They also pointed out that DLS offered by the library enabled the user to utilize various electronic resources findings on the difference between male and female undergraduates' level of usage of digital library services for research and academics purposes, it was revealed that there is no significance between male and female undergraduates' level of usage of digital library services for research and academic purposes. This finding is in consonance with Bassi and Camble (2011) who asserted that male students used e-resources more for research purposes white female students used the resources for assignments and leisure. In contrary to this finding Smith (2015) conducted research on gender matter on the use of university library access and career preparedness. The findings revealed that female students felt more prepared by their degree programmes compared to the male students.

Conclusion

The availability and usage of digital library services is a Sine-qua-non to information acquisition by undergraduates in the university libraries. The study determined the level of availability of digital library services for research and academic purposes among undergraduates. It was concluded from this study that there are no sufficient digital library services for research and academic purposes.

The respondents agreed on the level of usage of digital library services for research and academic purposes was concluded that the level of usage of digital library services among undergraduates is low.

Also, there was no significance difference between male and female undergraduates' usage of digital library services for research and academic purposes. It was also concluded that there is no significance difference between male and female undergraduates' level of usage of digital library services.

Recommendations

The following recommendations were made based on the findings of the study:

1. The level of awareness of the availability of Digital Library Services should be increased to the library users through organizing workshops, conferences and seminars.
2. Trained personnels should be on ground to assist the undergraduates' usage of the available digital library services in the university library.

3. Both male and female undergraduates must develop positive attitudes towards the usage of digital library services in order to maximize the usefulness of the resources which can enhance their academic career.

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