



CHALLENGES ASSOCIATED WITH THE AWARENESS AND USE OF ELECTRONIC JOURNALS BY FACULTY MEMBERS OF TERTIARY INSTITUTIONS IN SOKOTO STATE

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Abstract

The study investigated challenges associated with the awareness and use of electronic journals by faculty members in tertiary institutions of Sokoto State. In spite of the relevance of e-journals, a field survey had shown that faculty members in tertiary institutions of Sokoto State often encounter serious challenges in their effort to use electronic journals for teaching, learning and research activities. The study uses survey research design covering eight (8) tertiary institutions in Sokoto State. Questionnaire was used as the instrument for data collection and administered to 329 faculty members. The data collected were analysed, using frequencies and percentages. Findings from the study revealed unstable power supply; inadequate ICT infrastructure; poor technical skills among others as the major challenges confronting faculty members in using electronic journals in the tertiary institutions of Sokoto State. Recommendations made include the need for the institutions to improve the supply of electricity across the campuses by providing adequate, steady, constant and uninterrupted power supply as well as the provision of ICT infrastructure in the institutions.

Keywords: Challenges, Use, Faculty Members, Electronic Journals, Tertiary Institutions

Introduction

Academic and scientific research has been the backbone to finding answers for the complex questions that affect our environments and societies. Research therefore plays a major role in the quest for information, knowledge and answers to everyday enquiries. Knowledge creation is an expensive venture (Asamoah-Hassan and Frempong, 2008), requiring heavy investment, which is mostly beyond the capabilities of many developing countries (The World Bank, 2017).

Traditionally, the printed resources provided by the academic libraries (books and journals) have been the main source of reference for both students and their tutors. However, the dwindling resources of libraries have left many especially in the developing countries unable to stock the needed current materials that are required for effective teaching, learning and research (Dadzie, 2016). Ease of storage, access and retrieval of information from the library round the clock, has been the main problem in the traditional library system. The proliferation of technology in recent years however, has dramatically altered how information is accessed, stored and disseminated (Hewitson, 2014). The limitation posed by the use of the physical library system is gradually being eliminated. With advances in new

technology, access to information on a local, regional, national and international level is possible for end users through their computers.

Literature on e-journals has been reviewed extensively in academic circles. Many of such studies looked at the extent of awareness and usage, particularly in relation to teaching, learning and research. Awareness is knowing what is going on or an understanding of the activities (Nura, 2015). It can also be describing as specific coordination and knowledge sharing among individual. However, to understand the level of awareness among researchers and faculty members on e-journals, many studies employed log analyses (Borrenge, Ubano, Mallusdhan and Apati 2012); online questionnaire surveys (Rusch-Feja and Siebeky, 2009); and interviews/focus groups (Olsen, 2014). On the awareness level, in a study carried out at the Catalan Universities in Spain (Borrenge et al, 2012), 95.3% of the respondents indicated their awareness of electronic journals existence, with 52% using them in their academic pursuits. There is evidence of a high proportion of teaching and research staff being aware of the collection of electronic resources in their institutions, and a necessary preference for the electronic



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format to the detriment of the printed format especially in the developed world.

Many universities have tried broad range of awareness techniques to enlighten the academics on the general concept of e-journal to correct their non-use despite having lots of benefit when effectively utilised. For example, Drake (2014) ran formal launch events, produced press release in the University newspaper, published glossy brochures and posters, and ran feature advertisement on the library web page. In addition, they approach academics directly, by emailing all Head of Schools to request invitation to School staff meetings to talk about electronic journals and answer any question /concerns, providing regular end on e-print and identifying, and contacting e-searches with prolific publication output (Callan, 2006).

On the contrary, studies in many underdeveloped and developing countries show slow progress in the adoption of these electronic journals. A research earlier carried out by Rameharan and Dawe (2006) at the University of West Indies in Trinidad and Tobago show that just 8% of the academic staff members of the institutions were aware of electronic journals, there is a possibility that if the survey is extended to African universities, most of the faculty members in the continent may have the same problem.

A study by Salaam and Aderibigbe (2010) in the University of Agriculture, Abeokuta, Nigeria, it came to light that some of the academic staffs were not aware of such electronic facility (as e-journals). The study further reported that usage was encouraging among the few staffs that are aware but emphasized that the library of the institution should intensify its awareness and orientation campaigns since the University do recruits new staff on a regular basis. A study by Gedeon (2008), show that over 40% of researcher in Nigeria strongly agree that lack of knowledge or awareness of electronic journal is an obstacle to the used of e-journals in their institutions. This is an addition to over 25% who agree (as opposed to strongly agree) to the same. Lack of knowledge or awareness of e-journal is not peculiar to the respondents at the University of Lagos.

According to Uwaifo (2012) in a survey of awareness and use of electronic information resources by library and information science

students, in Delta state University, Abraka. The finding of the survey shows that respondents are aware of 29 identified electronic information resources. Top of the list is electronic mail (97.69%), follow by OPAC (95.95%), Databases (94.22%), chatting (93.64%), online newspapers (92.49%), e-books (91.91%), e-journals (92.49), spotting news (92.49), and CD-ROMs (91.33%). In the survey, the user degree of awareness on electronic journals and other electronic resources is very encouraging. This is not surprising because of the fact that there are numerous ICT-based in curriculum of library and information science program. Similarly, in their research title Reading and Internet Use Activities of Undergraduate Students of the University of Calabar, Eden and Ofre (2010) observe that university undergraduates are often largely unaware of myriad electronic information resources (journals inclusive) available to them, this is probably due to lack of awareness.

Despite the above situation, many studies Boukacem-Zeghmouri and Schöpfel, 2018; Ibrahim, 2017; and Research Information Network, 2019 have confirmed the acceptance and use of electronic journals among faculty members. According to Borrengo, Anglada, Barrios and Cornellás (2007), there is evidence of a high proportion of teaching and research staff being aware of the collection of electronic resources in their various institutions, and a necessary preference for the electronic format to the detriment of the printed format especially in the developed world.

This acceptance can be attributed to some of the following characteristics associated with electronic journals: the inclusion of multimedia; improved access to information in terms of convenience, speed, and range of materials; hyperlinking; increased access possible for simultaneous and remote users (Austin and Nelson, 2020). On the contrary, some studies on the African continent (Omotayo, 2012; Manda, 2015) show slow progress in the adoption of these electronic materials because of inadequate end-user training, slow connectivity, limited access to connectivity points, poor search skills, and budget cuts. As a result of this therefore, the research aims at finding out challenges associated with the awareness and use of



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electronic journals by the faculty members of tertiary institutions in Sokoto State as pointed out by the literature.

Research Objectives

1. To determine the extent of awareness of electronic journals by faculty members of tertiary institutions in Sokoto State.
2. To determine the extent of use of electronic journals by faculty members in tertiary institutions of Sokoto State.
3. To identify factors facilitating the use of electronic journals by faculty members in tertiary institutions under study.
4. To identify the challenges associated with the use of electronic journal by faculty members in the tertiary institutions under study.

Research Methodology

This study adopted a quantitative research methodology using survey research design. The population of the study was 1,995 faculty members from the eight tertiary institutions in Sokoto State. The sample size of the population was determined using values from

Louis, Lawrence and Keith (2007) table. From the table for a population of 2000, a random sample of 322 respondents is sufficient to generate 95% confidence level and $\pm 5\%$ margin of error. Confidence level according to Louis, Lawrence and Keith (2007) is an index of how sure one can be (95% of the time or 99%) that responses lie within a given variation range. For this study, a confidence level of 95% and a margin error of $\pm 5\%$ was used. Therefore, a sample size of 322 was considered. The number was decided proportionately among the institutions; hence, 16% was used from the population of each institution. Questionnaire was the main instrument for data collection, and was administered to all cadres of faculty members in all the eight tertiary institutions after it was pre-tested. Both open and closed-ended questions were used.

Result and Discussion

Response Rate

The response rate from the eight tertiary institutions is shown in table 1

Table 1: Response Rate

S/N	Tertiary institutions of Sokoto State	Percentage	%
1	Usman Danfodio University, Sokoto	45.2	
2	Sokoto State University, Sokoto	12.1	
3	Shehu Shagari College of Education Sokoto	24.3	
4	Umaru Aliyu Shinkafi Polytechnic, Sokoto	8.4	
5	School of Nursing and Midwifery, Sokoto	3.2	
6	Sultan Abdulrahman School of Health Technology, Gwadabawa	2.3	
7	Collage of Legal and Islamic Studies, Wamako	1.3	
8	College of Agriculture, Wurno	1.0	
	Total	97.8	

Table 1, shows that a total of 329 copies of the questionnaire were administered among the faculty members in tertiary institutions of Sokoto State by the researcher, out of which 305 were duly completed, returned and found usable for the analysis which represents 97.8%. The remaining 24 copies of the questionnaires not returned accounted for 7.29%, which is insignificant when compared with the response rate of 97.8%.

This shows that the returned copies of questionnaire were good enough to generate the needed data for the study. The high response rate was achieved because of the effort of the researcher in seeing that the instrument was administered personally. Therefore, this analysis is based on the 93% of the questionnaire that were filled by the faculty members.

Table 2: Awareness of Electronic Journals by Faculty Members

S/N	Options	Frequency	Percentage%
1	Yes	287	94.1
2	No	18	5.9
	Total	305	100.0



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The respondents were asked to indicate their awareness on the existence or otherwise of electronic journals. Majority of the respondents, 287 (94.1) indicated that they were aware of electronic journals; which implies that many of the lecturers were aware of electronic journals in the tertiary institutions in Sokoto State

Sources of Awareness of E-journals

Respondents were asked to indicate the sources of their awareness about electronic journals. Their response is presented in Table 3.

Table 3: Sources of Awareness of E-journals

S/N	Options	Frequency	Percentage %
1	Through friends /colleagues	66	21.6
2	Through workshops/seminars	10	3.3
3	Through my institution library	111	36.4
4	I don't know	118	38.7
	Total	287	100.0

From the table, 111(38.4%) of the respondents indicates that they got their awareness through their institutions libraries followed by 66(21.6%) who indicated they became aware of e-journals through friends/colleagues. Only 10(3.3%) of the respondents indicated getting their awareness through workshops/seminars while 118(38.7%) of the respondent don't know how they got their awareness on e-journals.

This implies that the institutions libraries play key roles in providing access to electronic journals for the academic staff in the institutions under study.

Reasons for Lack of Awareness about Electronic Journals

Respondents were asked to indicate their reasons for lack of awareness of e-journals. The finding is presented in Table 4.

Table 4: Reasons for Lack of Awareness about Electronic Journals

S/N	Options	Frequency	Percentage%
1	My institution library doesn't subscribe to e-journals	6	1.8
2	I don't attain workshops/seminars on e-journal	3	1.0
3	I don't know	5	1.6
4	I don't visit my institution library	4	1.5
	Total	18	5.9

Table 4 shows that 6(31.8%) of the respondents based their reasons for not having awareness about e-journals on the fact that their institution libraries don't subscribe to e-journals while 3(1.0%) of the respondent indicated that they don't attain workshop/seminars on e-journals. Similarly, 4(1.5%) of the respondent shows that they don't visit their institutions libraries. However, 5(1.6%) of the academic staff don't know the reasons why they are not aware of

e-journals. From the table, the findings of the research indicate that lack of awareness about e-journal among academics in tertiary institutions of Sokoto State is insignificant because majority of the academic staff have indicated that they are aware of e-journals.

Use of E-Journals by Faculty Members

Respondents were asked if they do use electronic journals in their institutions. The results are in Table 5.

Table 5: Use of E-Journals by Faculty Members

Options	Frequency	Percentage%
Yes	139	43.4
No	148	51.5
Total	287	100.0



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From this table 139(43.4%) of the respondents indicated that they used e-journals and 148(51.45%) of the respondents indicated that they don't use e-journals. This indicates that more than half of the respondents in tertiary institutions of Sokoto State were not using electronic journals. This implies that they predominantly use other sources of information such as the print

information sources for their teaching and researching activities.

Extent of Use of Electronic Journals by Faculty Members

Respondents were asked to indicate the extent to which the use electronic journals in their institutions. Table 3 present the findings

Table 6 Extent of Use of Electronic Journals by Faculty Members

S/N	Options	Frequency	Percentage %
1	Always	22	15.8
2	Frequently	27	19.4
3	Occasionally	36	25.8
4	Rarely	54	38.8
Total		139	100.0

From the table above, 54(38.8%) of the respondent indicated that they rarely used e-journals, 36(25.8%) of the respondents rarely used electronic journal. 27(19.4%) of the respond frequently used electronic journal and 22(15.8%) of the respondents always

used electronic journal. Based on these findings, there is a diverse opinion on the extent to which the faculty members use electronic journal. This implies that majority of them rarely used the e-journals

Table 7 Factors Facilitating the Use of Electronic Journals

Conditions facilitating use of e-journals	Frequency/%		Total
	Yes	No	
Sufficient knowledge and skills to use e-journals	263(91.6)	24(8.3)	287(100.0)
Adequate awareness and access to e-journals	251(87.4)	36(12.5)	287(100.0)
Frequent training, workshop, seminar and conferences on the use of e-journals	276(99.2)	11(3.8)	287(100.0)
Positive attitude of academics toward the use of e-journals	214(74.7)	73(25.4)	287(100.0)
Providing enabling infrastructural facilities	226(78.7)	61(21.2)	287(100.0)
Adequate supply of electricity	218(75.9)	69(24.0)	287(100.0)
Authority and relevance	184(64.1)	121(35.9)	287(100.0)
Price value	94(32.8)	193(67.2)	287(100.0)

Table 7 reveals that majority of the respondents 276 (99.2%) indicated that frequent training; workshop; seminar on the use of e-journals is a factor that would facilitate the use of electronic journals by academic. Moreover 263 (91.6%) of the respondents believed that sufficient knowledge and skills to use e-journals can also serve as a facilitating factor towards the use of electronic journals. In addition, 251 (87.4) of the academic staff agreed that provision of adequate awareness and access to e-journals would also improve use of electronic journals. The result from the table also indicated adequate supply of electricity

218 (75.9%) and providing enabling infrastructural facilities 226 (78.7%) were also among the prefer factor that facilitates the use of electronic journals by academic staff.

Similarly, 214 (74.7) of the respondents indicate positive attitude of faculty members toward the use of e-journals as other factors that would facilitate the use of electronic journals in tertiary institutions of Sokoto State. However, authority and relevance 94(32.8%)were the least prefer factor for the faculty members in using electronic journals in tertiary institutions of Sokoto State (table 7).



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Challenges Associated with Use of Electronic Journals by faculty Member

The responses were based on 287 respondents instead of only 139 that used e-

journals in the institutions. This is so because of the multi-choice nature of the challenges. The result of the findings is in Table 8.

Table 8: Challenges Associated with use of Electronics Journals by Faculty Members

S/N	Challenges	Freq/ %	Freq/%
		Yes	No
1	Irrelevant e-journal in my discipline	89(31.0%)	198(68.9%)
2	Inadequate awareness	47(15.4)	258(84.6%)
3	Inadequate updates when new e-journals related to my area of research interest are available	111(69.8%)	48(30.1%)
4	Too many procedures when searching for an article	91(57.2%)	68(42.7%)
5	Connectivity problem	198(68.9%)	89(31.0%)
6	Unstable power supply	261(90.9%)	26(9.0%)
7	Lack of technical skills	180(62.7%)	107(37.2%)
8	Lack of adequate internet connection and facilities	193(67.2%)	94(32.7%)
9	Not user friendly	77(55.3%)	62(44.6%)
10	Lack of having user name password of my institution library subscribed e-journals	72(51.7%)	67(48.2%)
11	Language barriers associated to some journal articles	32(11.1%)	255(88.8%)
12	Lack of time to spend on searching e-journals	19(6.6%)	268(93.3%)
13	Purchasing online journals is too expensive	244(87.0%)	25(8.7%)
14	I don't know the payment procedures of purchasing online e-journals	82(28.5%)	205(71.4%)
15	Open access e-journals are most time not sufficient for me	157(54.7%)	130(45.2%)

The respondents were asked which among the following what constitute a challenge to them in using electronic journals. From the Table, majority of the respondents 261(90.9%) consider unstable power supply a challenge hindering use of electronic journals by academics in the various institutions of Sokoto State. While only 26(9.0%) of the respondents did not regard unstable power supply as a challenge toward the use of electronic journals in their institutions. This indicates that majority of the respondents in the tertiary institutions of Sokoto State considered unstable power supply as a major challenge hindering them in using electronic journals.

Moreover, 244(87.0%) of the respondents indicated that purchasing online journals is too expensive which also constitute a serious challenge in using electronic journal against 25(8.7%). About 198(68.9%) indicated connectivity problem as a challenge to use of electronic journals while 89(31.0%) of the respondents did not indicate this as challenge. Additionally, 111(69.8%) of the respondents indicated that inadequate updates on the availability new e-journals related to their

area of research interest also constitute a challenge. Whereas 48(30.1%) indicated that this does not constitute any challenge to them. The Table also show that 193(67.2%) of the respondents indicated lack of adequate internet connection and facilities as another challenge in using electronic journals while in contrast 94(32.7%) of the respondents indicated that they don't have this challenge in their institutions. 157(54.7%) of the respondents indicated that open access e-journals are most time not sufficient for them which also constitute a challenge while 130 (45.2%) indicated that the statement does not constitute any challenge to them. The table also show that 180 (62.7%) of the respondents also indicated lack of technical skills as a challenge in using e-journals. While 107 (37.2%) of the respondents did not considered that as a challenge. However, only 77 (55.3%) of the respondents indicated that electronic journals are not user friendly as against 62 (44.6%) of the respondents who did not believed with the statement. The Table also show that while less than half 89(31.0%) of the respondents indicated the challenge of having irrelevant e-

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journal in their discipline, more than half 198(68.9%)of the respondents did not believed this to be a challenge.

Similarly, only 19 (6.6%) of the respondents considered lack of time to spend on searching e-journals as a challenge in using electronic as against 268 (93.3%) who did not consider lack of time to spend on searching e-journals as challenge to using electronic journals by academic staff in tertiary institutions of Sokoto State.

Finally, 32 (11.1%) of the respondents considered language barriers associated to some journal articles as challenge to electronic journals to 255(88.8%)who did not consider language barriers associated to some journal articles as a challenge to the use of electronic journals by academic staff in tertiary institutions of Sokoto State. Only 82 (28.5%)of the respondents indicated that they

don't know the payment procedures of purchasing online e-journals which also pose a challenge to them in using e-journals while more than half of the respondents 205 (71.4%)of the respondents did not believe this to be a challenge to them. These findings show clearly academic staff in the tertiary institutions under study are being confront with so many challenges which make it very difficult for the academic staff to use electronic journals in their institutions.

Possible Solution to the Challenges Hindering Faculty Members in Using Electronic Journals

The faculty members were asked to suggest solutions to the challenges hindering the use of electronic journals in their institutions. The results of the finding are in Table 6.

Table 6: Possible Solutions to the Challenges of Electronic Journals

S/N	Options	Frequency	%
1	Provision of adequate, steady, constant, uninterrupted and reliable power supply.	108	35.4
2	Provision of sufficient fund or financial backing to the institutions and particularly libraries to maintain academic activities.	96	31.5
3	Provision of adequate staff special training and re-training on the use of electronic journals for service delivery through workshop and seminars.	72	23.6
4	Provision of adequate ICTs and infrastructural facilities as well as full and reliable internet services to the institutions.	50	16.4
5	Provision of awareness on electronic journals for knowledge sharing which can be done through orientation.	46	15.1
6	The need for commitment and encouragement from the institutions management on the use of electronic journals	38	12.5
7	The need for proper awareness and easy access to of electronic journals.	30	9.8
8	Enlightening and sensitising the academic staff on the existence and importance of electronic journals to teaching learning and research, the need for the institutions management to liaise with the library staff in other to find there areas of technological challenges and try to remedy them as well as immediate provision of effective solution to the identified challenges affecting the use of electronic journals for academic activities.	27	8.9
9	Provision of good institutional policies on electronic journals and better implementation of these policies.	21	6.9
10	The institution management should also encouraged the library by providing proper planning, support and encouragement as well as necessary needs that facilitates the use of electronic journals by academic staff.	19	6.2
11	The institutions management to provide a conducive environment so as to enhance use of electronic journals.	13	4.3



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The responses of the faculty members on the table above were based on an open ended question that sought their opinions on the suggestions that could contribute successfully in overcoming the obstacles hindering them in using electronic journals. 126 (41.3%) of the faculty members responded to the question and their responses were analyzed and grouped under common terms. The highly cited suggestion was that of the provision of adequate, steady, constant, uninterrupted and reliable power supply (mention 107 times). Followed by the provision of sufficient fund or financial backing to the institutions and particularly libraries to maintain academic activities in general (mention 108 times).

Other suggestions mentioned by the respondents were that, there should be adequate faculties special training and re-training on the use of electronic journals for service delivery through workshop and seminars (mention 96 times). Provision of adequate ICTs and infrastructural facilities as well as full and reliable internet services to the institutions was also suggested by respondents (72 times). There were also suggestions on the need for the provision of awareness on electronic journals for knowledge sharing which can be done through orientation (mention 50 times). The respondents suggested that there is also the need for commitment and encouragement from the institutions management on the use of electronic journals (mention 46). Respondents also emphasized on the need for proper awareness and easy access to electronic journals (mention 30 times). This suggests that more vigorous and proper awareness campaign or strategies is needed by the tertiary institutions under study to sensitize the academics on the needs; importance and use of electronic journals (mention 38 times)

Moreover, the need for enlightening and sensitising the academic staff on the existence and importance of electronic journals to teaching learning and research, the need for the institutions management to liaise with the library staff in order to find their areas of technological challenges and try to remedy them as well as immediate provision of effective solution to the identified challenges affecting the use of electronic journals for

library service by the management (mention 30 times).

Other faculty members also suggested that there should be good institutional policies on electronic journals and better implementation of these policies (mention 27 times). The institutions management should also have encouraged the libraries by providing proper planning, support and encouragement as well as necessary needs that facilitates the use of electronic journals by faculty members (mention 21 times). Academics must also be ready and willing to accept changes brought by new innovation.

Others respondents suggested that proper consideration should be given to all factors that could contribute to the successful implementation of use of electronic journals for academic activities (mention 19 times). Finally, the need for the institutions management to provide conducive environment for proper functioning of ICTs (mention 13 times).

To this end therefore, the researcher observed that more than majority of the respondents emphasized on the need for provision of adequate, steady, constant, uninterrupted and reliable power supply as well as proper awareness and easy access to of electronic journals. This suggests that more vigorous and proper effort should be geared toward supply of electricity as well as awareness campaign or strategies should also be done by the tertiary institutions under study to sensitize the faculties on the needs; importance and use of electronic journals. Furthermore, the library management should see to it that electronic journals are made easily accessible, considering their strategic values in this 21st century.

Discussion of Findings

The challenges enumerated by the faculty members in the tertiary institutions of Sokoto State seem to point to the same challenges many electronic journal users encounter especially across the African continent. Similarly, the findings of this study recorded slow internet speed as the major concern for many of the users; some respondents also recount the lengthy time they spend to search and worst of all download a single article. Another challenge stated was the frequent power outage on campus. Inadequate internet searching skills was also found to be common

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among the faculty members. Many showed interest in the use of electronic journals but lamented their inadequate skills made them spend long hours on the Internet without finding what wanted. The study of (Omotayo, 2012 and Manda, 2015) corroborated this finding when it reported slow progress in the adoption of these electronic materials because of inadequate end-user training, slow connectivity, limited access to connectivity points, poor search skills, and budget cuts. Additionally, many of the users identified the high cost of printing downloaded articles as a major challenge. When asked to save such materials and read on screen, some reiterated that it was difficult to constantly read from the screen and that it was time consuming to search for an article on the computer to read, especially when you have a lot of them saved. However, when compared to the cost of subscribing to a printed journal, the cost of printing hard copies was still by far, less expensive

Conclusion

The study concludes that, inadequate internet connection and facilities, high cost of purchasing online journals as well as inadequate supply of electricity are the major challenges militating against the use of e-journals in tertiary institutions of Sokoto State.

Recommendations

Based on the findings of the study, therefore the following recommendations were made:

1. The institutions should improve the supply of electricity across the campuses by providing adequate, steady, constant, uninterrupted and reliable power supply. This could be achieved through the provision of an alternative power supply system during power outages in order not to disrupt academic activities on campus.
2. A full and reliable internet services should be provided to the institutions to improve access to and downloading of articles
3. The institutions through the library should make provision for subscription to relevant e-journals databases to ease the difficulty faculty members are facing in purchasing electronic journals.

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