LAFIA JOURNAL OF LIBRARY AND INFORMATION SCIENCE
Volume 1, Number 1, 2022.
https://lalibjournals.org/index.php/LJLIS
ISSN: Print - 2814-0702, Online - 2814-0710
(LJLIS)

INFORMATION ACCESSIBILITY AS FACTOR IN INFORMATION USE BY STUDENTS WITH DISABILITIES AT FEDERAL COLLEGE OF EDUCATION (SPECIAL) OYO, NIGERIA

[1]Olayinka Mary Adekoya
Department of Library and Information Science,
Federal University Lokoja, Kogi State, Nigeria.
Email: adekolayinka10@gmail.com

[2]Isaiah Michael Omame
University Library,
Federal University of Lafia, Nasarawa State, Nigeria.
Email: omameazy@yahoo.com

[3]Dooshima Theresa Akaaka
University Library,
Federal University of Lafia, Nasarawa State, Nigeria.
Email: dooshitessy@gmail.com
&
[4]David Moses
Department of Library and Information Technology,
Federal University of Technology Minna, Nigeria.
Email: davidakomaye@gmail.com

Abstract
This study examined information accessibility as factor in information use by students with disabilities at Federal College of Education (FCE) Oyo, Nigeria. Descriptive survey research design was employed for the study while total enumeration method was used to select two hundred and twenty students with disabilities. Three research questions and one hypothesis were generated to guide the study. Descriptive statistics was used to analyze the data collected while the inferential statistics was used to test the null hypothesis at 0.05 level of significance. The findings of the study revealed that information accessibility has a positive significant relationship with information use by students with disabilities, hence, information accessibility is a factor of information use. Assistive technological devices and personal computers emerged as the main formats for accessing information by the students with disabilities. Findings also revealed that the major barrier to information access and use by students with disabilities was the negative attitude exhibited by members of library staff. The study recommended the need to expose students with disabilities to ICT training to equip them with modern skills in accessing information for everyday use and the need to make institutional and public libraries accessible to individuals with disabilities through the provision of necessary accessible resources.

Keywords: Information, Information Accessibility, Information Use, Students with Disabilities, Federal College of Education Oyo.

Introduction

The low level of information accessibility and use by students with disabilities in tertiary institutions in Nigeria has been a matter of grave concern to researchers, information studies professionals, parents, teachers, education administrators and other stakeholders. The survival of man in a society depends on his ability to access and utilize his information needs for problem solving, planning and decision making. Today, information is regarded as one of the basic needs after air, water, food and shelter; it is therefore important for survival and for human development. Aina (2013) agreed to this as he defined information to be the accumulation of knowledge by human beings in all areas of endeavor that is used solve problems and reduce uncertainty. However, as important as information is to everyone, it is often difficult to be accessed by individuals with disabilities such as those with visual disability, hearing defect and mobility impairment amongst others.

It is no news that the Internet has revolutionized the way information is made available or disseminated, in spite of this, information access to this group remains an elusive goal, severely limiting their opportunities for employment, education, entertainment or leisure and independence in the country. Literature suggests that information availability and information accessibility are key variables that facilitate information use. This view is borne out of the fact that no one uses information that he does not need or that is unavailable and inaccessible.

Qamar in Nwachukwu, Abdulsalami and Salami (2014) defined information accessibility as the intensification in the delivery of information resources and services to users in order to improve their knowledge base. It must be quickly stressed here that it is not enough that information is available. It must also be accessible in a form that the recipient can use. Kleynhans and Fourie (2014) posited that users possess the fundamental rights to access needed information regardless of their religious/ethnic affiliations and physical conditions. According to the authors, this encourages the user to access needed information without any form of hitch. Ahmed and Naveed (2020) stated that persons with disabilities on a norm are faced with challenges that stem from inequality and discrimination, from all walks of life, including the library. In a Nigerian scenario, disabled students are scarcely provided with facilities that allow for adequate access to needed information compared to a normal student. Awais and Ameen (2015) also corroborated the above by stating that disabled persons are sometimes oblivious of their rights to information access most especially in libraries and this could be one of the reasons for the lack of access. The concept of information accessibility is very important in this research specifically as it focuses on people with disabilities and their access to entities, often through the use of assistive devices such as screen readers, web browsers and other technological formats. It is one thing for the information resources to be available and it is quite another thing entirely for it to be accessible. Mathiesen (2014) concurred to this by stating that one has access to information when one has the freedom or opportunity to obtain, to make use of and to benefit from that information.

Individuals with disabilities have low information accessibility as well as limited access to the communication channels like bulletin boards and chat rooms, and thus reap few of the benefits that the channels bring. Besides communication channels, information accessibility in other forms have also been found to be important. Students with low audio and visual information, for instance, have low perception of the system's attractiveness and usefulness and the social-presence of other parties. Access level has been observed to affect the choice and use of information system. Higher information accessibility through greater information

access and proper organization should frustrate users less and lead to higher perception of ease of use.

Traditionally, access to information for students with disabilities has largely been mediated by teachers, family members, friends and caregivers amongst others. Meanwhile, radio, braille, large prints, tape recorder, talking books, and audio cassettes are used by students with visual defect to access information. Similarly, students with hearing impairment use alternative formats such as captions, CCTV, sign language interpreters, text messages, relayed services and the like to access information. On the other hand, students with mobility impairment access information through websites, CD or DVD or any other means ordinarily like the regular students except that they find it difficult to gain physical access to the library and other information service centres. Additionally, all the disability groups can use library and their mobile phones to access information from any source. This is in line with the assertion of Abdulsalami (2013) that the use of media resources by users kindles and increases interests in learning and research.

Despite their obvious limitations, Information and Communication Technologies (ICTs) seem to have made information access and use a bit easier for persons with disabilities generally. ICTs include any common devices or applications such as radio, television, cellular phones, computers, satellite system as well as network hardware and software, and associated services. ICTs, when available and accessible, can serve as critical enablers that allow persons with disabilities to realize full and effective opportunities to participate on the basis of equality in all aspects of society and development (UN, 2012). The electronic technologies have touched every sector of human endeavours (Lucky & Achebe, 2012). Individuals with disabilities who are educated can use many of the modern-day ICT facilities independently just like their regular counterparts if necessary accessibility devices are put in place. In addition, ICTs can help persons with disabilities to have a quality access to information, knowledge and independent living. Since different groups face different challenges, the only sensible thing to do, then, would be to deploy ICTs in a manner that is accessible to accommodate all types of disability, for instance, audio or tactile output for those with visual disability and text or graphics for those with hearing disability. Whatever may be the case, students with disabilities need to bear in mind the three basic principles of ICTs accessibility and utilization namely their ability to perceive the needed technologies, their ability to understand them and their ability to operate them (UN,2012). These principles are germane to effective ICT-mediated information accessibility and utilization among students with disabilities in every institution.

Statement of the Problem

The problem of access to information by students with disabilities emanates not only from the scarcity of information materials in alternative formats but it is also the result of the negative attitudes of members of society. Persons with disabilities are generally viewed as abnormal and are often excluded from the main stream of public services including library and information provision (Eskay and Chima, 2013). Students with disabilities need to access information through the utilization of a wide variety of formats and resources to be able to make sense of their learning. Adetoro (2011) reported that information materials for students with visual impairment, for instance, become useful only when they are transcribed into alternative formats. The ultimate purpose of using information is to satisfy the seekers' needs. Because all users' information needs are varied, their satisfaction amounts to a high-level achievement for them. Users' satisfaction is influenced by the means of accessing

information. Without good information communication channels, accessibility will be difficult and its utilization impaired. Therefore, effective channel of communication is paramount in the utilization of information for users' satisfaction. Chima and Nwokocha (2013) asserted that the efficacy of the principle of information utilization is anchored on its ability to satisfy the needs of all seekers including those with disabilities. From the researcher's observation, students with disability find it quite challenging to access needed information due to scarcity of information of information resources and facilities for the disabled. Also, it has been observed from available literature that not much research has been carried out on the current topic. These reasons prompted the researchers to carry out the research on the Information accessibility as factor in information use among students with disabilities at Federal College of Education (FCE) (special) Oyo, Nigeria.

Objectives of the Study

The main objective of this study is to determine whether information accessibility is a factor of information use among students with disabilities in Federal College of Education (Special), Oyo, Nigeria. However, the specific objectives are to:

1. Ascertain the preferred formats for accessing information by students with disabilities at Federal College of Education, Oyo, Nigeria.
2. Identify the purpose of information use by students with disabilities at Federal College of Education, Oyo, Nigeria.
3. Examine the barriers encountered by students with disabilities in accessing the needed information at Federal College of Education, Oyo, Nigeria.

Research Questions

In accordance with the research objectives, the study was guided by three research questions and one hypothesis null as follows:

1. What are the preferred formats for accessing information by students with disabilities at Federal College of Education, Oyo, Nigeria?
2. What is the purpose of information use by students with disabilities at Federal College of Education, Oyo, Nigeria?
3. What are the barriers encountered by students with disabilities in accessing the needed information at Federal College of Education, Oyo, Nigeria?

Hypothesis

A null hypothesis was formulated and tested at 0.05 level of significance:

Ho1. There is no significant relationship between information accessibility and use by students with disabilities at Federal College of Education, Oyo, Nigeria.

Methodology

The research design adopted for this study was descriptive survey research design. Descriptive survey was considered most suitable for this study because the study describes the relationship between information accessibility and information use by students with disabilities in Federal College of Education (Special), Oyo, Ibadan and because it would elicit the opinion of the students with disabilities on the research topic.

The population of the study was two hundred and twenty (220) students with disabilities in FCE, Oyo, Nigeria, comprising 140 students with hearing impairment, 70 students with visual impairment and 10 students with mobility impairment. Furthermore, total enumeration (census) was used for the study because the population was small and manageable (Nwana, 1992).

The proportionate Stratified Random Sampling technique was used at first to stratify the sample size of 220 students with disabilities. The choice of the proportionate stratified random sampling technique is justified because it would ensure that the minority constituents of the population of students with disabilities at F are adequately represented in the sample

A self-developed structured questionnaire tagged "*Information Accessibility and Use Questionnaire*" (IAUQ) was used to gather data for the study. A four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) was used to determine the aggregate response of the participants in the study. Two research assistants were trained to help administer the questionnaire to the participants in the study location. The participants were informed of the purpose of the study and their rights regarding participation. The researcher respected the dignity, equality, independence and diversity of the participants. Later, the entire two hundred and twenty copies of the questionnaire were retrieved for analysis. The generated data from the questionnaire were analysed based on the research questions and objectives. The research questions were analysed using descriptive statistics, specifically mean and standard deviation.

The data collected were analyzed using frequency count, percentages, Pearson Product Moment Correlation and Multiple Regression.

Data Analysis and Interpretations

The demographic distribution of the respondents by gender, age, educational qualification and type of disability is presented in Table 1.

Table 1: Socio-Demographic Distribution of the Respondents

Classification	**Sub-groups**	**Frequency**	**Percentages**
Gender	Male	143	65.0
	Female	77	35.0
Total		**220**	**100**
Age group	16-20 years	154	70.0
	21-25 years	55	25.0
	26 -above	11	5.0
Total		**220**	**100.0**
Education level	1st year	112	50.9
	2nd year	69	31.4
	3rd year	39	17.7
	Total	**220**	**100.0**
Type of disability	Hearing loss	140	63.6
	Visual imp.	70	31.8
	Mobility imp.	10	4.5
	Total	**220**	**100.0**
Degree of Disability	Profound	80	36.4
	Severe	103	46.8
	Moderate	37	16.8
	Total	**220**	**100.0**

Table 2: The Preferred Formats for Accessing Information by Students with Disabilities at FCE Oyo

S/N	Preferred formats for accessing information	SA	A	D	SD	Mean	S.D.	Remark
1	I depend mostly on assistive technologies to access information	110 50.0%	93 42.3%	17 7.7%	0 0.0%	3.13	.633	Accepted
2	Visual format is mainly my means of accessing information.	117 53.2%	49 22.3%	11 5.0%	43 19.5%	3.08	1.167	Accepted
3	I depend on textbooks or conventional print to access useful information.	40 18.2%	121 55.0%	38 17.3%	21 9.5%	2.85	.841	Accepted
4	I depend on sign language interpreters to access information	89 40.5%	49 22.3%	12 5.5%	70 31.8%	2.63	1.287	Accepted
5	It is sometimes difficult to access complete information using any known formats	18 8.2%	82 37.3%	105 47.7%	15 6.8%	2.60	.743	Accepted
6	I prefer my friends to help me access information.	49 22.3%	21 9.5%	119 54.1%	31 14.1%	2.53	.986	Accepted
7	I prefer my siblings and classmates to help me access information	40 18.2%	28 12.7%	125 56.8%	27 12.3%	2.29	.920	Rejected
8	I depend only on audio format to get most of my information.	71 32.3%	14 6.4%	4 1.8%	131 59.5%	2.18	1.395	Rejected
9	All formats for accessing information are equally important.	14 6.4%	18 8.2%	124 56.4%	64 29.1%	1.91	.790	Rejected
10	Talking books/ tape recordings/braille are my preferred formats.	35 15.9%	29 13.2%	28 12.7%	128 58.2%	1.58	1.157	Rejected
	N=220, Grand Mean = 2.48							

Data presented in Table 2 revealed that items 1-6 statements had their mean values ranged from 3.13-2.53 indicating that their mean values were above the cut-off point of 2.50. This showed that items 1-6 were agreed by respondents as the preferred formats for accessing information by students with disabilities at FCE, Oyo. The table also revealed that items 7-10 were not preferred formats for accessing information by students of FCE, Oyo, with mean values ranged from 2.29-1.58. The results therefore show that, students with disabilities at FCE, Oyo, preferred some of the items as formats for accessing information.

Table 3: Purpose of Information Use by Students with Disabilities at FCE Oyo

S/N	Purpose	SA	A	D	SD	Mean	S.D.	Remarks
1	I use information to solve my daily problems.	181 82.3%	39 17.7%	0 0.0%	0 0.0%	1.64	.383	Rejected
2	I use information to satisfy my educational and academic needs only.	167 75.9%	51 23.2%	2 0.0%	0 0.0%	1.61	.455	Rejected
3	I use information to maximize my usefulness.	164 74.5%	52 23.6%	4 1.8%	0 0.0%	1.54	.486	Rejected
4	I use information to build my personal knowledge for different purposes.	160 72.7%	51 23.2%	9 4.1%	0 0.0%	1.51	.546	Rejected
5	I use information to develop my future career goals.	141 64.1%	75 34.1%	4 1.8%	0 0.0%	1.40	.522	Rejected
6	I use information for recreation and to satisfy all my needs.	135 61.4%	82 37.3%	3 1.4%	0 0.0%	1.38	.518	Rejected
7	I use information to regulate my intimate and inter-personal relationships issues.	130 59.1%	68 30.9%	22 10.0%	0 0.0%	1.31	.672	Rejected
8	I use information to participate in social activities.	121 55.0%	80 36.4%	19 8.6%	0 0.0%	1.27	.651	Rejected
9	I use information to know about the goings-on in the community	114 51.8%	77 35.0%	29 13.2%	0 0.0%	1.25	.709	Rejected
10	I use information to interact with other people.	101 45.9%	97 44.1%	22 10.0%	0 0.0%	1.18	.657	Rejected
		N= 220, Grand Mean = 1.41						

Data presented in Table 3 revealed that all the 10 items statements had their mean values ranged from 1.64-1.18 indicating that their mean values were below the cut-off point of 2.50. Response rates on purpose of information use shows that information is used mostly students with disabilities at FCE, Oyo to solve daily problems (mean =1.64) and to satisfy academic and educational needs (mean =1.61).

Table 4: **Barriers Encountered by Students with Disabilities in Accessing Information at FCE Oyo**

S/N	Barriers	SA	A	D	SD	Mean	S.D.	Remark
1	Negative attitudes of library staff members are a major problem.	195 88.6%	25 11.4%	0 0.0%	0 0.0%	3.45	.318	Accepted
2	Scarcity of materials in alternative formats affects me negatively.	172 78.2%	36 16.4%	9 4.1%	3 1.4%	3.11	.608	Accepted
3	Discriminatory attitudes of members of society hinder many students with disabilities from accessing useful information.	146 66.4%	71 32.3%	3 1.4%	0 0.0%	3.11	.506	Accepted
4	Physical accessibility to the library or school buildings is a key concern.	103 46.8%	102 46.4%	9 4.1%	6 2.7%	3.09	.694	Accepted
5	Lack of information about library services is a barrier.ss	77 35.0%	141 64.1%	2 0.9%	0 0.0%	2.31	.494	Rejected
6	My poor knowledge skills hinder my information accessibility.	39 17.7%	96 43.6%	62 28.2%	23 10.5%	1.66	.885	Rejected
7	I encounter difficulty with Web-pages that have images and other non-textual elements.	37 16.8%	12 5.5%	65 29.5%	106 48.2%	1.63	1.098	Rejected
8	I often have to depend on others in using the Web because it was not suited to my needs.	34 15.5%	20 9.1%	54 24.5%	112 50.9%	1.35	1.101	Rejected
9	Screen readers are a big problem to me because of their confusing nature.	35 15.9%	21 9.5%	49 22.3%	115 52.3%	1.29	1.117	Rejected
10	I encounter no barrier in accessing information.	2 0.9%	9 4.1%	98 44.5%	111 50.5%	1.11	.621	Rejected
	N=220, Grand Mean = 2.21							

Data presented in Table 4 revealed that items 1-4 statements had their mean values ranged from 3.45-3.09 indicating that their mean values were above the cut-off point of 2.50. This showed that these items were agreed by respondents as the challenges faced accessing information by students with disabilities at FCE, Oyo. The table also revealed that the challenges on items 5-10 were not faced by students of FCE, Oyo, with mean values ranged from 2.31-1.11 which is below the cut-off point of 2.50. The results therefore show that, students with disabilities at FCE, Oyo, preferred some of the items as formats for accessing information. Response rates on barriers encountered in accessing information revealed that negative attitude of library staff members is the main barrier (mean =3.45) followed by scarcity of information materials in alternative formats (mean =3.11).

Hypothesis

Table 5: Significant Relationship between Information Accessibility and Information Use by Students with Disabilities at FCE Oyo

Variable	Mean	Std. Dev.	N	R	P	Remark
Information accessibility	18.818	3.335				
			220	.163*	.016	Sig.
Information use	14.090	3.137				

*Sig. at 0.05 level

Table 5 above shows that there is a positive significant relationship between information accessibility and information use among students with disabilities ($r = .163^*$, $N= 220$, $p<.05$). Consequently, the null hypothesis is hereby rejected.

Discussion of Findings

The study focused on information accessibility as factor in information use by students with disabilities at FCE Oyo. Three research questions and one hypothesis guided the study.

Research question one ascertained the preferred format for accessing information by students with disabilities at FCE, Oyo. It was found out that most of the students opted for the use of assistive devices to access information. The finding thus agrees with Lucky and Achebe (2012) who noted that the computer helps students with disabilities to surf the web with the aid of assistive technologies such as screen reader, optical character recognition device, hearing aids, auditory training devices (FM systems), computers, televisions captioning and telecommunication devices.

Research question two examined the purpose of information use by students with disabilities at FCE, Oyo and found that the students use the accessed information to solve their daily problems. This view lends credence to the findings of Chima and Nwokocha (2013) who established that every use of information is goal-oriented: it must aim at solving a problem or enhancing a better understanding of an already known situation.

Research question three sought to identify the barrier to information access by students with disabilities at FCE, Oyo. Findings revealed that negative attitude of members of library staff was the major barrier followed by the scarcity of information materials in alternative formats. This is supported by Eskay and Chima (2013) who noted that persons with disabilities are generally viewed as abnormal and are often excluded from the main stream of public services including library and information provision. Poor library services, lack of availability of the required materials and

negative attitudes of library staff are all barriers to information acquisition by students with disabilities. The result is also in agreement the findings of Ajayi and Akinniyi (2004) who maintained that students with disability are often frustrated due to the non-availability of sources.

Hypothesis one examined significant relationship between information accessibility and information use by students with disabilities at FCE, Oyo. Finding revealed that on the contrary there was a positive significant relationship between information accessibility and information use. This result supports the views of Mathiesen (2014) that one has access to information when one has the freedom or opportunity to obtain, to make use of and to benefit from that information.

Conclusion

The study investigated information accessibility as a factor in information use by students with disabilities at Federal College of Education, Oyo. Based on the findings of the study, it was revealed that most of the students opted for the use of assistive devices to access information and also used the accessed information to solve their daily problems. However, certain barriers were faced by students with disabilities in accessing needed information which include negative attitude of members of library staff and scarcity of information materials in alternative formats among others. Finally, the hypothesis tested revealed that there was a positive significant relationship between information accessibility and information use.

Discussion on information accessibility often suggests that it depends not only on the availability of information but also on the capability of the individual to effectively use the information. However, in order for the information to be accessible, it must be available, findable, reachable, comprehensible and useable.

Recommendations

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

1. The study recommended, among others, the need to expose students with disabilities to ICT training to equip them with modern skills in accessing information for everyday use.
2. Institutional and public libraries should be made readily accessible to individuals with disabilities through the provision of necessary information resources in the alternative formats.
3. Members of staff of the library should be better trained to handle students with disabilities without any form of negativity or discrimination.

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