

THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FACILITIES FOR INFORMATION SERVICE DELIVERY FOR STUDENTS WITH SPECIAL NEEDS IN NORTH-CENTRAL, NIGERIA.

BY

Gomna, Andrew Mary¹, Amina Abubakar Saidu², F. J. Abduldayan³ and Usman, Abubakar⁴
College Library, Niger State College of Nursing Sciences Bida, Niger State¹,
Department of Library and Information Science, FUT, Minna, Niger State^{2, 3 and 4}

Corresponding Email: gmary2011@gmail.com

Abstract

The study investigated the use of ICT facilities as catalyst to information service delivery in schools with students with special needs in North Central Nigeria. Three research questions were formulated. Survey research design was used with population of 309 students with special needs in six schools in North Central Nigeria and total enumeration was carried out. Structured questionnaire was used, descriptive statistics was also used to analyze data. Response showed that 246 copies of questionnaire were filled, retrieved and found usable. Result showed that two school libraries utilised five different ICT facilities for information service delivery and there was high level of service delivery in the areas of user, document delivery and reference services. Communication, funds, commitment of library staff were among the challenges to information service delivery in the studied schools. The study recommended amongst the neglected area of information services be revisited.

Keywords: ICT Facilities, Information Service, Students, Special Needs, North-Central, Nigeria.

Introduction

Libraries of today including those for special needs have changed in recent years. This change came as results of Information and Communication Technologies (ICTs) which has impacted on services delivered to library users including those with special needs. The traditional methods of service delivery by libraries have given way to the electronic means. The development and application of ICT for service delivery have improved and facilitated the dissemination of information and access; it has equally provided new roles in information provision, dissemination and transfer. Haber (2011) posits that the libraries before now provided books at stand-alone locations, however, with time; their offerings will evolve with the digital age to meet the changing needs of their patrons. The school libraries for special needs are compelled also to incorporate digital sources in order to remain at the fore front of service delivery to students with special needs. Libraries must of a necessity strive to retain their patrons and be at the peak of providing information sources that will suit the demands of present day information seekers. There is a need therefore to ensure that school libraries continue to rise high in information service delivery to their users.

School libraries are at the fore front of providing library services to their users in order to support their teaching and learning. Effective delivery of library

services using modern facilities by librarians that will meet the needs and aspirations of students and teachers is a long standing goal of the information profession. However, with time, the traditional method of library service delivery became no longer sufficient especially in the 21st century due to the numbers of literature that are produced in diverse nature to users. The advent of Information and Communication Technology (ICT) and other online social networking tools such as the Internet, software packages to mention but a few for effective library service delivery replaced the traditional method because they were found to be prompt and far reaching. This conforms to the studies conducted by Suvaweera *et al.* (2016) who asserted that the use of online social networks by libraries and information centers have increased and are common among new and old library users which promotes adequate access, sharing and dissemination of information to the students with special needs and other group of users which are seen as the core function of school libraries.

Similarly, Aggrwal and Buggarapu (2016) opined that online social networking is an effective tool for organizational productivity and service delivery. The use of online social networks is growing and gaining prominence in school libraries which has resulted in effective service delivery by librarians to their users including the students with special needs. Anyira (2011) discussed in their findings that most of their



respondents agreed to support the idea of using social networking tools in library service delivery. As such, students with special needs require enhanced assistance in their search for data-based materials particularly students and pupils. Students with special needs should be assisted with the information they need which will serve as motivating factor for their continued use and value of the library in meeting their needs especially in the case of class works and assignments. A crucial requirement for libraries is that the services they render, information they provide and preserve in many formats must be made available to all users including the students with special needs in school libraries.

Libraries are established to provide free and equal access to information for all groups of users including those with special needs, be it in prints, electronic or audio-visual form. Krolak (2010) explained that, libraries are meant to provide information materials and disseminate them to the students with special needs and other patrons. Libraries play key role in creating literate environment and promoting literacy by offering relevant and attractive reading materials for all ages at all literacy levels and by offering literacy classes for users including those with special needs and for effective service delivery the use of Information and Communication Technology (ICT) will be imply.

Effective use of Information and Communication Technology (ICT) in the library for information service delivery, the innovation that ICT has brought into education has made tremendous changes to the lives of people in the society, including students with special needs. Thus, the use of Information Communication Technology (ICT) requires knowledge and skills to operate and has become an essential element in education and training, such that their uses in the educational process have good effect if properly applied. Ayodele (2012) described Information and Communication Technology (ICT) as electronic based technology generally used to process, retrieve, store, and package information as well as provide access to knowledge. Information and Communication Technology (ICT) is a combination of network of software and hardware as well as a convergence of information, communication and technology.

Information and communication technology application in library and information field has made remarkable progress in the world. Information technology not only affects the technical services of libraries but also shapes the library services that are being offered to the public. Worldwide libraries have been exploring new technologies for providing better and faster access to vast information resources and

efficient information services to their users. Information technology has offered better solution to achieve greater level of efficiency, productivity and excellent service in the libraries (Abidoeye and Popoola, 2011). Libraries are not left behind in the transformation which Information and Communication Technologies (ICT) have brought in schools with special needs including the conduct of their operations and service provision. This has resulted in the introduction of concepts such as e-library, e-banking, e-governance, e-learning, e-business, e-publishing, e-document, e-journals and the likes.

Similarly, the advances in the science and the application of Information and Communication Technologies (ICTs) particularly the Internet and other network technologies have continued to impact positively on the methodologies of library and information service delivery, education and training of information professionals as well as in the area of information seeking behavior and use. Thus Information and Communication Technology (ICT) have now become common features in all fields. The influence of Information and Communication Technology (ICT) is now manifested in every sphere of human endeavor including the library and information science field which is considered as pervasive. Abubakar (2010) mention that, the inclusion of Information and Communication Technology (ICT) into many professions has led to today's society being addressed as the information society.

With the advancement in ICTs, electronic information in the form of electronic books, electronic journals, and the Internet has launched the world into an information age. No institution or organization can still rely on only traditional printed information resources to perform effectively and efficiently. To librarians, Information and Communication Technology (ICT) is a significant development that provides tools for managing the avalanche of information generated by modern society. Information and Communication Technology provide libraries with capabilities for the location of information, storage and retrieval and dissemination of information. Internet access enable libraries to locate information stored in other computers around the world in the web (website) with online search facilities, information stored at different location can be easily retrieved. Through the use of web pages, e-mail and CD-ROM, libraries disseminate information. Digitization of library information resource, which converts print resource into electronic form makes information accessible from anywhere be it at home, offices or any workstation once connected to the Internet.

Libraries as centers of knowledge perform the basic role of educating the library users including the students with special needs in finding or locating resources that will meet their information needs. The students with special needs require special library services to limit their obvious inhibitions in the use and exploitation of the information contents of the library. This could be the reasons why library for the special needs was established, to provide information support services to the less privileged in the society. The special needs users of the libraries by all means needs to get their special information needs satisfied in their special ways through effective service delivery by the librarians.

The term 'Students with Special Needs' varies in meaning and significance not only in different countries but within individuals and also according to the purpose for which its meaning is applied or for which it is desired to classify such person. Secondly the extent to which any type of deformity will be considered as students with special needs is strictly relative to the expectations of the culture in which the person lives. The students with special needs have more than one type of deformity or the other. The inter depending relationship between the special needs persons further get support from Justice Eskey (2013) who explained special needs as individuals that lack the ability to perform any activity in the manner within the range considered normal for a normal being. It is the special needs students, more than any impairment that aggravates the problems of the disabled. Similarly, Akolade *et al.* (2015) opined that the number of those with disability is seven million globally and are among the most marginalized groups in the world, people with special needs have poorer health outcomes, education achievements, less economic participation and higher rates of poverty than people without disabilities. Summarily, the special needs students are those who are unable by physical, intellectual, sensory or are persons who are in one form or the other incapacitated to make effective use of the library resources. The need for the provision of special library service to students with special needs cannot be over emphasized. As such, the librarians in the schools that have students with special needs should be proactive in using the modern ICT facilities such as the Internet, software packages to mention but a few to render effective services to the special needs students in meeting their informational and recreational needs.

Statement of the Problem

The hallmark of establishing and the basis of maintaining all organizations including libraries is service provision (delivery). Libraries today especially those in the schools that have special needs students are facing the difficulties of providing services in this

information age to meet their needs. People with special needs are peculiar people who must be given special attention in the libraries. Providing services for students with special needs is a great task which must be done with all diligence and the empathy it requires. However, it has been observed that the library staff or librarians particularly those schools with special needs students do not have insight on how to communicate with the students with special needs. The librarians do not know the problems encountered by the students with special needs especially in terms of accessing or locating information to meet their information needs. As such, in providing information services to the students with special needs, the library staff or librarian must have an insight on how to communicate to know the problem encountered by the user groups and how to solve it by providing them with the needed information.

In addition, the researchers observation has shown that poor services to students with special needs is a common problem in Nigeria as well as the lack of ICT facilities to provide effective and efficient service delivery to students with special needs. It is in the light of this that this study investigated the use of Information and Communication Technology (ICT) facilities as catalyst to information services delivery in schools that have students with special needs in North Central Nigeria.

Objectives of the Study

The objectives of the study are to:

1. assess the Information and Communication Technology (ICT) facilities available for information service delivery to students with special Needs in North-central Nigeria;
2. ascertain the level of use ICT facilities for information service delivery to students with special Needs in North-central Nigeria;
3. Identify barriers to the use of ICT facilities for information service delivery to students with special Needs in North-central Nigeria.

Research Questions

The study provided answers to the following research questions:

1. What types of ICT facilities are available for information service delivery to students with special needs in North Central Nigeria?
2. What is the level of ICT facilities use for information service delivery to students with special need in North central Nigeria?
3. What are the barriers to the use of ICT facilities for information service delivery to students with special Needs in North Central Nigeria?

Literature Review

Information and Communication Technology (ICT) are tools that facilitate the production, transmission and processing of information. Ayo (2011) opined that ICT facilities include computer facilities (computers, scanners, printers, ups and power point projectors); computer software resources (online databases, CD-ROMs, library application software, Internet and storage media); audio-visual media/equipment (satellite connection), digital cameras, video compact disk (VCD), digital video disk (DVD) radio, television, audio tapes, video tapes and phone copiers; and communication media (telephone-intercom and global system of mobile communication (GSM). Generally speaking, information and communication technologies ICTs consists of hardware, software, networks, and media for processing, transmission and presentation of information. It is a broad-based concept that encompasses the gathering (acquisition), organization (packaging), storage and retrieval for disseminating information that can be in textual or numeric (ebooks and documents) pictorial and vocal forms (audio-visual) using the combination of all the above (multimedia) including computers and telecommunication facilities". Information and Communication Technology applications have greatly enhanced the services in school libraries, thus totally changing the concept. This changes have brought in both challenges and opportunities for the school libraries. Kameswari et al (2011) opined that Information and Communication Technology is a communication tool used in educational knowledge transfer process especially in schools.

Anhwere, Pauline and Manu (2018) conducted a research to assess the level, outcome and extent of use of library resources by lecturers in university of Cape Coast, Ghana. The study was guided by three research questions and descriptive survey was used with 400 lecturers in the university and 50% of the population was sampled for the study. Questionnaire was administered by the researchers, while mean was used to analyze the collected data. Results showed that there are so many library collection and lecturers used library for consultation of reference services, research and borrowing purposes. Books tend to be (utilized) more than any other collection in university library.

In a related study conducted by Chuks Ibe, Udensi, Madu and Saka (2018), awareness and use of electronic information resources among postgraduate students in North central Nigeria was examined. Two

research questions were formulated and include: awareness and how often EIR have been utilised by postgraduate students. Survey research was adopted with population of 15,538 postgraduate students in five State and five Federal Universities in North Central Nigeria. A sample size of 556 postgraduate students was used for the study. Questionnaire was used as instrument for data collection. Results showed that the level of awareness of the available EIR was low and postgraduate students used CD-ROM very often. Igbinovia, Ishola and Alex-Nmecha (2018) conducted a study to determine the library and information sciences for the attainment of Sustainable Development Goals (SDGs) in Osun State Nigeria. Population of 27 heads of libraries in Osun State and total enumeration was used and questionnaire was used in data collection. The study found 10 library and information services for SDG in ranking order with 10 respondents indicated Selective Dissemination of Information (SDI) and followed by information provision and least from "open access publishing and repository" and of technological infrastructure". Challenges include amongst poor funding, trained library personal and attitude of government and Non-Governmental Organisations.

Osimetha (2019) examined use of e-resources and user satisfaction by undergraduate students of National Open University of Nigeria, Lagos Study Centre. Level of use of e- resource, level of users' satisfaction and challenges in the use of e-resources formed the specific objectives of the study. Copies of questionnaire were personally administered and returned with the help of research assistant. The results showed inaccessibility to some electronic resources, constant power failure, poor Internet access and inadequate computer facilities. It was discovered that almost 65% of the respondents consulted 10 e-resources and almost 80% of the respondents were satisfied with the e-resources.

Methodology

The study adopted survey research design method. This study adopted survey research design method because it has the advantage of wider application as it allows data to be collected on a large population. The population of the study consist of three hundred and nine (309) students in schools with special needs students. Instrument was a structured questionnaire (with 4-point rating scale). Data was organised and analysed using frequency counts, mean and standard deviation.

Analysis and Discussion

Research Question One: What are the Available Information and Communication Technology (ICT) Facilities for Information Service Delivery to Students with Special Needs in North Central Nigeria?

Table 1: Information and Communication Technology (ICT) Facilities available for Information Service Delivery

S/No	ICT Facilities	Abuja School for Deaf Kuje, Abuja	FCT School for the Blind Children, Jabi, Abuja	Kwara State School for Special Needs	Niger State School of Special Education, Minna	The School for the Handicapped Bukuri, Jos	Jevaron School for the Handicapped Keffi, Nasarawa State	RCM Special Section for the Hearing, Handicapped Benue State	Kogi State School for the Handicapped	Total
1.	The library use computers for service delivery	0	1	1	1	1	1	1	1	7
2.	The library use Internet for service delivery	0	1	1	1	0	0	0	0	3
3.	The library use E-resources for service delivery	0	0	1	1	1	1	1	1	6
4.	The library use audiovisuals for service delivery	0	1	1	1	0	0	1	1	5
5.	The library use mobile phones for service delivery	0	0	0	0	0	0	0	0	0
6.	Projectors are used to delivered services	1	0	1	1	0	1	0	1	5
	Total	1	3	5	5	2	3	3	4	26

Key: Yes =1, No = 0

From the table, two schools from Kwara and Niger State utilized five different ICT facilities in delivering information services as indicated by the students. Though School for Deaf Kuje, Abuja (with exception

of projector) couldn't afford to use computer and audio-visuals in the information service delivery. Table 2 shows the responses of the respondents on the levels of information service delivery in each of the schools with special needs in North Central Nigeria.

Research Question Two: What are the Levels of Information Service Delivery to Students with Special Needs in North Central, Nigeria?

Tables 2: Levels of ICT Facilities used for Information Service Delivery to Students with Special Needs in North Central, Nigeria

S/N	Library Services	VH 4	H 3	L 2	VL 1	n	FX	\bar{X}	StD	Decision
1.	User Services	211	202	93	72	578	1708	2.96	0.46	High
2	Document delivery Services	145	263	88	82	578	1627	2.82	0.32	High
3.	Reference services	172	159	181	66	578	1593	2.76	0.26	High
4.	Inter-Library work Services	34	38	317	189	578	1073	1.86	0.64	Low
5.	Referral Services	62	88	233	195	578	1173	2.03	0.47	Low
6.	Children Section Services	43	82	216	237	578	1087	1.88	0.62	Low
7.	Internet Services	28	70	225	255	578	1027	1.78	0.72	Low
8.	Mobile Library Services	64	51	287	176	578	1159	2.00	0.50	Low
	TATOL	759	953	1640	1272	4624	10447	2.26	0.24	

Table 2 revealed that out of the eight (8) items listed to determine the levels of information service delivery to students with special needs, three (3) items have a mean score greater than the benchmark mean of 2.50 on a four-point scale out of which users services (\bar{X} = 2.96, SD = 0.46) top the list with others such as document delivery services (\bar{X} = 2.82, SD = 0.32) and item 3: reference services (\bar{X} = 2.76, SD = 0.64). The

remaining five (5) items have a mean score lesser than the benchmark mean of 2.50 on a four-point scale which also depicts low level of information service delivery with the lowest from Internet service delivery. (\bar{X} = 1.78, SD = 0.72).

Research Question Three: What are the barriers to the use of ICT Facilities for information service delivery to students with special needs in North-central, Nigeria?

Table 3: Barriers to the use of ICT Facilities for information service delivery to students with special needs in North Central Nigeria.

S/N o	Barriers to Library Services	SA 4	A 3	D 2	SD 1	n	FX	\bar{X}	StD	Decision
1.	Lack of librarians who have the ability to communicate using sign language	275	187	65	51	578	1842	3.19	0.69	Agreed
2	Lack of funds to acquire resources that will cater for students with special needs	217	251	64	46	578	1795	3.12	0.61	Agreed
3.	Lack of commitment from the top management	185	203	160	30	578	1699	2.94	0.44	Agreed
4.	Lack of skills by Librarians	238	219	43	78	578	1773	3.07	0.57	Agreed
5.	The architecture of the school library building lack signs to take care of the need of students with special needs.	28	42	243	265	578	989	1.71	0.79	Disagreed
6	Lack of Internet facilities in the library	213	124	158	83	578	1623	2.81	0.31	Agreed
	TOTAL	1156	1026	733	553	3468	2.81	0.31	3.41	

Table 3 revealed that five (5) out of the six (6) items listed have a mean score greater than the benchmark mean of 2.50 on a four point scale with highest from lack of librarians ability to communicate using sign language ($\bar{X} = 3.19, SD = 0.69$) and this is followed by item 2: lack of funds to acquire resources that will cater for students with special needs ($\bar{X} = 3.12, SD = 0.61$), item 3: lack of commitment from the top management ($\bar{X} = 2.94, SD = 0.44$), item 4: lack of skills by librarians ($\bar{X} = 3.07, SD = 0.57$) and item 6: lack of Internet facilities in the library ($\bar{X} = 2.81, SD = 0.31$). Items 5: the architecture of the school library building lack signs to take care of the need of students with special needs ($\bar{X} = 1.71, SD = 0.79$) have a mean score below the benchmark mean of 2.5 on a four likert point scale thus the lowest means score.

Discussion of Findings

Research question one sought to find out the ICT facilities used for information service delivery. It was discovered that in two schools (Kwara and Niger State), five ICT facilities namely: computers, Internet resources, E-resources, audio-visuals and projectors were used to deliver various information services. The reason could be that the two schools are owned and funded by government and as such funds are likely to be committed for the procurement of the ICT facilities. This finding does agree with the findings by Anhwere, Pauline and Manu (2018) as the co-researchers discovered availability of numerous collection with emphasis on the consultation of books than other collections.

Research question two discovered high level of information service delivery in three different library service (user services, document delivery and reference services). These services can be provided manually or off line. This finding does tally with the findings by Chius Ibe, Udensi, Madu and Saka (2018) as they reported the level of awareness of the available EIR to be low and use CD ROM very often.

Research question three discovered librarians lacking communication skills and acquisition of funds as the two major barriers to information service delivery to students with special needs in North Central Nigeria. Lack of communication skills on the part of librarians and acquisition of funds will paralyse the activities of school libraries especially in meeting the information needs of this category of students/users. This findings does not agree with those of Igbinovia, Ishola and Alex-Nmecha (2018) and Osimetha (2019) respectively. The two set of co-researchers reported poor funding, trained library personnel and attitude of government/Non-Governmental Organizations as well as inaccessibility to some e-resources, constant power failure, poor Internet access and inadequate computer facilities in their studies.

Conclusion

From the findings of the study it could be concluded that there is no library particularly those meant for users with special needs users can achieve its goal and objectives

without effective information service delivery and provision of ICT facilities that will facilitate library services to student with special needs in north central Nigeria. Barriers to effective information service delivery to students with special needs in the studied schools and lack of Internet facilities to mention but a few are obstacles to effective information service delivery to students with special needs in the studied areas.

Recommendations

Based on the findings, the following recommendations were made:

1. Management of the schools with special needs students should procure computers, projectors and other ICT facilities for the libraries attached to schools
2. The other neglected services such as children, Internet and mobile library services be given due attention.
3. The identified obstacles to the provision of information services be adequately addressed through the provision of adequate funds and training programme for library staff.

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