PROVISION AND UTILIZATION OF DIGITAL REFERENCE RESOURCES AMONG LIBRARIANS IN FEDERAL UNIVERSITIES IN NORTH CENTRAL NIGERIA

By

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ABSTRACT

This research examined the provision and utilization of digital reference resources among federal university libraries in North Central Nigeria. This study adopts descriptive survey research. It identified the digital reference resources provided and utilized in by the libraries, the technological skills possessed by the librarians, the modalities and methods of provision and utilization of digital reference resources, the benefits of digital reference resources, the challenges faced in the provision and utilization of digital reference resources and the strategies for providing and utilizing the digital reference resources were provided. A descriptive survey research design was used for the study. A total population of 71 librarians from three federal universities in north central Nigeria were used for the study. Census study was used to adopt the entire 71 libraries as respondents for the study. Three instruments were used for data collection in the study; these are: observation checklist, structured questionnaire and interview schedule. The data collected was analyzed and presented using simple mean, percentages, tables and frequency counts. The findings revealed that different kinds of digital reference resources were available and in use in the libraries. The librarians possess the technological skills for provision of digital reference resources. There are different methods employed for the provision of digital reference resources that are effective in the libraries. There are similar methods of utilization of digital reference resources in the libraries. The benefits of training librarians for digital reference services include; translating reference questions to search engines, exploring search engines result quickly, retrieving a saved document etc. The challenges faced include: lack of fund, power failure, cost of subscription/packages, frequent advancement in ICT, negative attitude of librarians towards training among others. Hence, the following recommendations were made: frequent training programs should be organized, result oriented training programs should be organized to help librarians overcome techno phobia, funds should be made available, attractive salaries and

better working conditions should be provided to facilitate the provision and utilization of digital reference resources in the libraries.
Keywords: *Provision, Utilisation, Digital Reference, Digital Reference Resources, Librarians, Federal Universities, North Central, Nigeria.*

INTRODUCTION

A university is an institution of higher education and research which grants academic degrees in various fields and subjects of learning. Universities are also known as institutions of higher learning. They support the nation in building able and reliable citizens. The main objective of the university is to provide high quality, comprehensive educational and training opportunities that are compatible with changing needs of the students and citizens of the country at large. Through its academic programs, the university prepares its students for the challenges ahead and empowers them to meet the task of a rapidly changing world. The universities work hand in hand with the libraries to achieve the objectives and goals of the institution. According to Agboola (2005), University libraries are very important components of universities. This is because no academic excellence will be achieved without a good library to back up its teaching, research and other community service mandates. The university libraries based on its primary objectives of contributing to learning, teaching, research and cultural development of its parent institutions collect, process, organize, store, preserve and disseminate information resources which include reference resources, serial publication, books, research reports (Projects, thesis, Dissertations) Africana Publications, audiovisual material. There is no doubt that these library resources are very essential for learning, teaching and research and if the university library must retain its place as the information gate way, these are some of the resources that must be provided for effective service delivery in the libraries e-books, dictionaries, full-text journals, online data bases amongst others.

Library resources are those materials, both print and non-print, found in libraries which support curricular and personal information needs. Print items include books, magazines, newspapers, pamphlets, microfiche or microfilm. Non-print items include films, disc records, filmstrips, slides, prints audiotapes, videotapes, compact disc and computer software.

Resources in the library according to Oyewusi and Oyeboade (2009) are collections of all text and bibliographic information sources; it also includes information technology such as those that support browsing, authoring and communication like computer and the internet.

Moreover, digital reference resources may also be seen as information resources that are used in the library to provide access to the information available in the library. The provision of reference services in the library involves using these information resources also known as digital reference resources. Collaboration between the user and the librarian in a computer based medium is done with the information resources provided in the library. Digital reference resources been used in the library include e-books, dictionaries, encyclopaedias, full-text journals, audio-visual files, newspapers, online data bases, journals, theses and dissertations which are all utilized through a computer mediated communication which are known as information resources in the library. Digital reference resources are also information resources that the library provides access to in an electronic format.

Digital reference resources play a very vital role in digital reference service delivery, because the information resources are being used to provide the answers to a user's query and it is done in an online or electronic format, which makes digital reference resources to also play a very vital role in service delivery in this information age. It provides a library user with the necessary

resources needed for information to answer his or her query. Digital reference resources may come as full text journals, newspapers, e-books, dictionaries, encyclopaedias; Jay, Simpson and Smith (2009). Digital reference resources from one of many formats can be collected to support universal collections. They ensure permanent access to collections in other formats.

STATEMENT OF THE PROBLEM

Digital reference resources have helped libraries and librarians to become more relevant and productive in delivery of library services in this digital age. Digital reference resources have also assisted the library users in making effective use of the library resources and in their comfort zone with little or no stress. The advent of digital reference resources to the library has proven to be very important in information search and in getting answers to query for library users.

With the coming of Digital reference resources and services, the university libraries can now achieve its main objective of helping students and staff of its institution to achieve academic excellence by helping them with easy access to information resources and also help them find answers to their query. Since Digital reference resources have become a significant movement in the world of traditional libraries, the university libraries will also incorporate digital reference resources to their traditional reference resources. Furthermore, based on the benefits of digital reference resources to both the libraries and its clientele, it is very important that there should be adequate provision and utilization of digital reference resources by the university libraries to users, and the library users should make maximum use of its potentials. The state of the art in the federal university libraries is that most libraries in North central Nigeria, these days have done little in providing and utilizing the digital reference resources in their libraries. The asynchronous mode of digital referencing is the area they have done little compared to the synchronous mode which is still a problem for these universities. Hence, many university libraries are losing their users due to inability to deliver digital reference resources to their users in real time and due to the fact that most reference librarians are not computer literate, thereby leading to a great loss of library users and patronage. This automatically affects the utilization of the library resources.

It is against this backdrop that the researchers deem it fit to embark on this study. This study is aimed at filling this gap in knowledge. The problem of this study is to examine the extent of provision and utilization of digital reference resources in the federal universities by librarians in North central Nigeria with focus on University of Agriculture, Makurdi (UAM), Federal University Lafia, (FUL) and University of Abuja, Gwagwalada (UA).

OBJECTIVES OF THE STUDY

The general objectives of this study are to determine the provision and utilization of digital reference resources in federal university libraries in North-central geographical zone of Nigeria.

However, the specific objectives of the study are to:

1. Identify the digital reference resources provided in the federal university libraries in North-central, Nigeria.
2. Ascertain the technological skills possessed by librarians for utilization of digital reference resources in the federal university libraries in North-central, Nigeria.

3. Find out the modalities for provision of digital reference resources in the federal university libraries in North-central, Nigeria.
4. Determine the method employed in the utilization of digital reference resources in the federal university libraries in North-central, Nigeria. Identify the challenges faced in the provision and utilization of digital reference resources by librarians in the federal university libraries in North-central, Nigeria.
5. Proffer strategies that could be used to provide and utilize digital reference resources for users in the federal university libraries in North-central, Nigeria.

RESEARCH QUESTIONS

The following research questions were raised to guide the study:
1. What are the digital reference resources provided in the federal university libraries in North-central, Nigeria?
2. What are the technological skills possessed by librarians for provision of digital reference resources in the federal university libraries in North-central, Nigeria?
3. What are the modalities for the provision of digital reference resources in the federal university libraries in North-central, Nigeria?
4. What are the methods employed in the utilization of digital reference resources in the federal university libraries in North-central, Nigeria?
5. What are the challenges faced in the provision and utilization of digital reference resources by librarians in the federal university libraries in North-central, Nigeria?
6. What are the strategies that could be used to effectively provide and utilize digital reference resources for librarians in the federal university libraries in North-central, Nigeria?

RESEARCH METHODOLOGY

Descriptive survey research design was adopted for the study. Descriptive survey according to Ifidon and Ifidon (2007) is a research method that describes the current situation with a subject. It involves collecting data in order to answer questions concerning conditions or relationship that exist, practices that prevail, points of view or attitude that are held, processes that are going on, effects that are being felt or trends that are developing in a given population. This design was considered suitable for this study because, it will involve a systematic and comprehensive collection of information about librarians and users' opinions on the provision and utilization of digital reference resources in federal university libraries in North-central Nigeria.

The total population of the study is 71 librarians from three Federal Universities in North Central Nigeria, as shown in the Table 1.0.

Table 1.0. Total Population of Librarians from three Federal University Libraries in North-Central Nigeria

S/N	University	Ownership	No of Librarians
1	University of Agriculture, Makurdi (UAM) Library	Federal	47
2	Federal University Lafia Library (FUL)	Federal	11
3	University of Abuja Library (UA)	Federal	13

| Total | | | | | | | 71 | |

Sources: Preliminary Investigations by the Researchers

Census study was used as the sampling technique for the study, that is, total enumerations of the entire population were used. This is because the population was small and manageable for the researchers to handle, hence, there was no need for sampling.

Data relevant to this study were collected using a combination of structured questionnaire, observation checklist and interview so as to obtain results that is valid and reliable. The questionnaire is titled Digital Reference Resources Questionnaire (DRRQ). Moreover, the questionnaire is structured in a four point-rating scale, allowing the respondents to tick [√] on the appropriate options they consider correct from the list as well as providing their own information where necessary.

The draft of the three instruments, the structured questionnaire, the interview and the observation checklist were given to three experts in the Department of Library and Information Science, University of Nigeria, Nsukka, for face, content and construct validation. The data gathered with the questionnaire were analyzed and presented using a frequency table, simple percentages and mean score. The pass marks of the responses were obtained by adding the values in the scale (4+3+2+1=10) and dividing by 4 (10/4) to obtain a mean score of 2.50 as the decision rule or benchmark for the pass mark. Any item that ranks from 2.50 and above were regarded as positive and accepted while anyone below 2.50 was regarded as negative and rejected. The mean was computed from the sum of the value points and divided by the number of the responses. The formula that was used in calculating the mean is $X = \sum x/n$. Where X=mean, $\sum$=summation sign, x=values and n=number of responses. The observation check list was presented in a table. The data collected using interview was presented in a prose like format following the interpretation of the analyzed data in the questionnaire.

RESULTS, DATA ANALYSIS AND DISCUSSION

Research Question 1

What is the digital reference resources provided in the federal university libraries in North-Central Nigeria?

Table 2.0: Observation Checklist Result of Digital Reference Resources Provided in Federal University Libraries in North-Central Nigeria

S/N	ITEM	UAM		FUL		UA		OVERALL	
		AU	NA	AU	NA	AU	NA	AU	NA
1	E-books	√	-	-	√	√	-	2	1
2	Dictionaries	√	-	√	-	√	-	3	-
3	Encyclopaedias	√	-	√	-	√	-	3	-
4	Full-text Journals	√	-	√	-	-	√	2	1
5	Audio-visual Files	—	√	√	-	-	√	1	2
6	Newspapers	√	-	√	-	√	-	3	-

7	Online data bases	√	-	-	√	√	-	2	1
8	Journals	√	-	√	-	-	√	2	1
9	Theses	√	-	√	-	√	-	3	-
10	Dissertations	-	√	√	-	-	√	1	2
	Total	8	2	8	2	6	4		

Key: AU (Available and in Use), NA (Not Available)

Results in table 2.0 presents the data collected on the digital reference resources provided in UAM, FUL and UA libraries. The report shows that eight (8) items scored a total of two (2) and above in its Availability and Use rate. This implies that such resources are available and in use in the three libraries understudy. These digital reference resources include E-books, dictionaries, encyclopaedias, full-text journals, audio visual files, newspapers, journals, and theses. The remaining two (2) items scored between one (1) and below in its availability and in use rate. This also means that such resources are not available in the three libraries understudy. They include: online data bases and dissertations.

Research Question 2

What are the technological skills possessed by librarians for digital reference resources in the federal university libraries in North-Central Nigeria?

Table 3: Technological Skills Possessed by Librarians for Digital Reference Resources in Federal University Libraries in North-Central Nigeria

S/N	Technological Skills Possessed for Digital Reference Resources in the library	UAM		FUL		UA		Average		Rank	Decision
		$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD		
1.	Typing skills	3.43	0.80	4.00	0.00	3.50	0.54	**3.52**	0.73	1st	**HP**
2.	General Internet Skills	3.40	0.73	4.00	0.00	3.13	0.99	**3.45**	0.75	2nd	**HP**
3.	Communication Skills	3.36	0.73	4.00	0.00	3.25	0.71	**3.43**	0.70	3rd	**HP**
4.	Save and Save Documents	3.24	0.88	3.87	0.35	3.25	0.46	**3.33**	0.80	4th	**HP**
5.	Information Retrieval Skill	3.17	0.82	4.00	0.00	3.13	0.35	**3.28**	0.77	5th	**HP**
6.	Use of E-mail Skill	3.10	0.85	3.75	0.46	3.63	0.52	**3.26**	0.81	6th	**HP**
7.	Web Access Skills	3.29	0.74	3.63	0.52	2.63	0.92	**3.24**	0.78	7th	**HP**
8.	Skills in Use of Search Engines (goggle scholar, yahoo etc.	3.19	0.83	3.75	0.46	3.00	0.76	**3.24**	0.80	7th	**HP**
9.	Skills in Use of Online Dictionary and Thesaurus	3.21	0.75	3.63	0.74	3.00	0.76	**3.24**	0.76	7th	**HP**

10.	Word Processing Skills	3.07	0.78	3.75	0.46	2.75	0.46	**3.12**	0.75	8th	**HP**
	Grand Mean	**3.25**	**0.79**	**3.84**	**0.30**	**3.13**	**0.65**	**3.31**	**0.77**		

KEYS: HP (Highly Possessed), MP (Moderately Possessed), LP (Less Possessed), NP (Not Possessed)

Data in Table 3 shows that all the 10 items in therein have an overall mean of 3.12 and above. These include: typing skills (3.52), general internet skills (3.45), communication skills (3.43), save and save documents (3.33), information retrieval skills (3.28), use of e-mail skill (3.26), web access skills (3.24), skills in use of search engines (Google scholar, Yahoo etc) (3.24), skills in use of online dictionary and thesaurus (3.24) and word processing skills (3.12)

Research Question 3
What are the modalities for the provision of digital reference resources in the federal university libraries in north-central Nigeria?
Table 4: Modalities for the Provision of Digital Reference Resources in Federal University Libraries in North-Central Nigeria

S/N	Methods of Provision for Digital Reference Services	UAM		FUL		UA		Average		Rank	Decision
		$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD		
1.	E-mail	3.48	0.67	3.75	0.46	3.38	0.92	**3.50**	0.68	1st	**HE**
2.	Reference via Web or Web Forms	3.14	0.98	3.38	0.52	3.50	0.54	**3.22**	0.88	2nd	**HE**
3.	Text Based Chat/Instant Messaging	3.05	1.01	3.50	0.93	3.38	0.74	**3.16**	0.97	3rd	**HE**
4.	Video Conferencing or Web Cam Services	2.83	1.06	2.87	0.35	2.88	0.84	**2.84**	0.95	4th	**ME**
5.	Collaborative Digital Reference Services (CDRS)	2.81	1.09	3.12	0.64	2.63	0.52	**2.83**	0.98	5th	**ME**
	Grand Mean	**3.06**	**0.96**	**3.32**	**0.58**	**3.15**	**0.71**	**3.11**	**0.89**		

KEYS: HE (Highly Effective)**,** ME (Moderately Effective)**,** LE (Less Effective)**,** NE (Not Effective)

Data in table 6 shows that all the 5 items in table 6 had an overall mean of 2.83 and above. This includes E-mail (3.50), Reference via Web (3.22), Text Based Chat/Instant Messaging (3.16),

Video Conferencing or Web Cam Services (2.84) and Collaborative Digital Reference Services (CDRS) (2.83)

Research Question 4
What are the methods employed for utilization of digital reference resources in the federal university libraries in north-central Nigeria?

Table 5: Methods Employed for Utilization of Digital Reference Resources in Federal University Libraries in North-Central Nigeria

S/N	ITEM	UAM		FUL		UA		OVERALL	
		E	NE	E	NE	E	NE	E	NE
1	E-mail	39	3	7	1	8	-	57	4
2	Reference Via Web or Web Forms	30	12	4	4	2	6	36	22
3	Video Conferencing or Web Cam Services	20	22	1	7	1	7	22	36
4	Collaborative Digital Reference Services (CDRS)	18	24	2	6	3	5	23	35
5	Text Based Chat/Instant Messaging	29	13	6	2	5	3	40	18
	Total	**136**	**74**	**20**	**20**	**19**	**21**	**178**	**115**

KEYS: E (Effective), NE (Not Effective)
Results in Table 5 presents the data collected on the available methods of utilization of digital reference resources and services provided in UAM, FUL and UA libraries. The report shows that three (3) items scored a total of two (2) and above in its level of effectiveness. This implies that such services are effective and in use in the three libraries understudy. They include E-mail, reference via web or web forms, text based chat/instant messaging, while the other two (2) items scored between one (1) and below to show that it is not effective. Include video referencing or web cam services, collaborative digital reference services (CDRS).

Table 7: Challenges Faced in the Provision and Utilization of Digital Reference Resources and Services by Librarians in Federal University Libraries in North-Central Nigeria

S/N	Challenges faced in the Provision and Utilization of Digital Reference Resources and Services in the Library.	UAM		FUL		UA		Average		Rank	Decision
		$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD		
1.	Lack of fund	3.50	0.92	4.00	0.00	3.50	0.54	3.57	0.82	1st	SA

2.	Poor internet supply	3.40	0.70	4.00	0.00	3.12	0.64	3.45	0.68	2nd	A
3.	Power failure	3.45	0.80	3.87	0.35	2.75	0.89	3.41	0.82	3rd	A
4.	Cost of subscription/packages	3.12	0.89	4.00	0.00	2.88	0.84	3.21	0.87	4th	A
5.	Frequent advancement in ICT	3.17	0.88	3.38	0.74	2.63	0.92	3.12	0.96	5th	A
6.	Negative attitude of librarians towards training	2.95	0.88	3.25	0.71	3.12	0.64	3.02	0.83	6th	A
7.	Loss of qualified personnel in African libraries to developed countries	2.86	1.07	3.75	0.46	2.88	0.84	2.98	1.02	7th	A
8.	Low comfort level of librarians with ICT	2.86	1.00	3.25	0.46	2.75	0.84	2.90	1.02	8th	A
	Grand Mean	**3.16**	**0.91**	**3.69**	**0.39**	**2.95**	**0.81**	**3.21**	**0.88**		

KEYS: SA (Strongly Agreed), A (Agreed), D (Disagreed), SD (Strongly Disagreed)

The data in Table 7 reveals that all 8 items had an overall mean of 2.90 and above. Thus, lack of fund (3.57), poor internet supply (3.45), power failure (3.41), cost of subscription/packages (3.21), frequent advancement in ICT (3.12), negative attitude of librarians towards training (3.02), loss of qualified person in African libraries to developed countries (2.98) and low comfort level of librarians with ICT (2.90).

Research Question 7

What are the strategies for provision and utilization of digital reference resources and services for librarians in the federal university libraries in North-central Nigeria?

Table 8: Strategies for Provision and Utilization of Digital Reference Resources for Librarians in Federal University Libraries in North-Central Nigeria

S/N	Strategies that could be used to enhance the Challenges in Provision and Utilization of Digital Reference Resources and Services in the Library	UAM		FUL		UA		Average		Rank	Decision
		$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD		
1.	Frequent training programs should be organized	3.71	0.46	3.87	0.35	3.87	0.35	3.76	0.43	1st	VA

2.	Librarians should take training as motivational tool for maximum performance through the use of orientation programs	3.76	0.43	3.75	0.43	3.63	0.52	3.74	0.44	2nd	VA
3.	Steady power supply/internet supply	3.71	0.46	4.00	0.00	3.50	0.54	3.72	0.45	3rd	VA
4.	Result oriented training programs to help librarians overcome techno phobia should be organized	3.76	0.43	3.63	0.52	3.38	0.52	3.69	0.47	4th	VA
5.	Funds should be made available	3.79	0.52	3.75	0.71	2.75	1.17	3.64	0.74	5th	VA
6.	Self-upgrade from the librarians	3.62	0.49	3.63	0.52	3.50	0.54	3.60	0.49	6th	VA
7.	Attractive salaries and better working conditions should be considered	3.62	0.58	3.87	0.35	3.25	1.04	3.60	0.65	6th	VA
8.	Increase of bandwidth to increase speed of server	3.43	0.59	3.87	0.35	3.63	0.52	3.52	0.57	7th	VA
	Grand Mean	**3.68**	**0.50**	**3.80**	**0.41**	**3.44**	**0.65**	**3.66**	**0.53**		

KEYS: VA (Very Appropriate), A (Appropriate), FA (Fairly Appropriate), NA (Not Appropriate)

The data presented in Table 8 reveals that all the 8 items had an overall mean of 3.52 and above. They were, frequent training programs should be organised (3.76), librarians should take training as a motivational tool for maximum performance through the use of orientation programs (3.74), steady power supply/internet supply (3.72), result oriented training programs to help librarians overcome techno phobia should be organized (3.69), funds should be made available (3.64) self-upgrade from the librarians (3.60), attractive salaries and better working conditions should be considered (3.60) increase of bandwidth to increase speed of server (3.52). In addition, the interviewee in UAM, FUL and UA Libraries were of the view that most of the digital reference resources and services are available but not in use frequently due to some challenges. They also accepted that some of the digital reference resources and services available in their libraries are effective, but due to the challenges of power supply, lack of funds, poor maintenance culture and cost of subscription/packages are among the factors affecting the effective provision and utilization of digital reference resources and services in the library. They suggested that the following strategies should be put in place to effectively

utilize the library digital reference resources and services in the library; availability of funds, steady power supply and frequent training of staffs.

SUMMARY OF MAJOR FINDING

Based on the analyzed data from the respondents of the study, the research revealed that:

1. The digital reference resources provided in UAM, FUL and UA libraries are E-books, dictionaries, encyclopaedias, full-text journals, audio visual files, newspapers, journals, and theses while online data bases and dissertations are not available.

2. It is very clear that the librarians possess the much needed skills for digital reference resources. The skill possessed includes typing skills, general internet skills, and communication skills, save and save documents, information retrieval skills, use of e-mail skill, web access skills, skills in use of search engines (Google scholar, Yahoo etc), skills in use of online dictionary and thesaurus and word processing skills.

3. It is evident that all the items listedare the modalities for the provision of digital reference resources in the federal university libraries in North Central Nigeria. They include E-mail, Reference via Web, Text Based Chat/Instant Messaging, Video Conferencing or Web Cam Services and Collaborative Digital Reference Services (CDRS).

4. It is evident that some services are provided in the three libraries understudy. They include E-mail, reference via web or web forms, text based chat/instant messaging, while some are not provided, they include; video referencing or web cam services and collaborative digital reference services (CDRS).

5. Frequent training programs should be organised, librarians should take training as a motivational tool for maximum performance through the use of orientation programs, steady power supply/internet supply, result oriented training programs to help librarians overcome techno phobia should be organized, funds should be made available, self-upgrade from the librarians, attractive salaries and better working conditions should be considered and an increase of bandwidth to increase speed of server are the strategies for enhancing the challenges in provision and utilization of digital reference resources for librarians in the federal university libraries in North Central, Nigeria.

DISCUSSION OF FINDINGS

The findings of this study are discussed under the following subheadings based on the research questions and the objectives of the study.

Types of Digital Reference Resources available in the Libraries

Based on the findings of the present study, different kinds of digital reference resources are available and in use in the libraries. The digital reference resources available are as follows: E-books, Dictionaries, Encyclopaedias, Full-text Journals, Audio-visual Files, Newspapers, Online data bases, Journals and Theses. These digital reference resources are available and in use in the libraries understudy despite its limited number. Dissertation and Audio Visual Files are items that are lacking among the digital reference resources. This finding is in line with Jay, Simpson and Smith (2009), who stated that electronic resources may come as full text

journals, newspapers, e-books, dictionaries, encyclopaedias; and these resources form one of many formats collected to support universal collections. Oyewusi and Oyeboade(2009) also supported this view that library resources are collections of all text and bibliographic information sources. These resources are used by the reference librarian to answer queries of users and make it accessible to the patrons of the library. Some of the acquisition of these digital reference resources is encouraging and speaks volume of the eagerness and enthusiasm of the libraries understudy to serve its users very well by making sure these digital reference resources are put in place and are in use to.

Technological Skills Possessed by Librarians in the Libraries

In the technological skills possessed by librarians in federal university libraries in north-central, Nigeria for digital reference resources, the study reveals that librarians have knowledge and skills for typing skills, communication skills, general internet skills, web access skills, information retrieval skills, use e-mail, skills in use of search engines (google and yahoo), skills in use of online dictionary and thesaurus, word processing skills and save and save documents. The analysis from the study is in agreement with the position of Ojedokun & Okafor (2011), who in their findings discovered that librarians had skills in e-mail use, word processing application and the use of search engines like Google, and Yahoo. The acquisition of some these basic skills like typing skills, web access skills, communication skills and word processing skills by the librarians in these libraries will help the library to deliver digital reference services with ease, speed and accuracy.

Modalities for Provision for Digital Reference Services in the Libraries

Based on the findings of the study, there are different methods of service provision for digital reference services that are available and in use in the library. They are as follows: E-mail, Reference via Web or Web Forms and Text Based Chat/Instant Messaging. These methods are used to provide digital reference services in the library. The Video Conferencing or Web Cam Services and Collaborative Digital Reference Services (CDRS) are methods that can be used for provision of digital reference service but are not used due to its cost. The findings is in line with the submission of Berube (2003) who pointed out that several researchers have used these two broad terms 'asynchronous mode' and the 'synchronous mode' as the two major types of service delivery models in digital reference services. The modalities used in the federal university libraries in North central Nigeria for provision of digital reference services like e-mail, reference via web and text based chats are very encouraging but more modes could me employed like the video conferencing and Collaborative Digital Reference Service (CDRS) for better and more effective service provision.

Methods of Utilization for Digital Reference Services in the Libraries

Based on the study, there are similar methods of utilization of digital reference resources. These methods of utilization that are available and in use include E-mail, Reference via Web or Web Forms and Text Based Chat/Instant Messaging while the Video Conferencing or Web Cam Services and Collaborative Digital Reference Services (CDRS) are not available for digital reference resources and services in the libraries understudy. In line to this study, Anyanwu, Oduagwu, Ossai-Ohah & Amechi, (2013), states that utilization simply means the extent to which people are making use of whatsoever resources that is already available in the community or in an organization. The methods used in the federal university libraries in North central Nigeria for utilization of digital reference resources like e-mail, reference via web and

text based chats are very encouraging but more methods could me employed like the video conferencing or web cam services and Collaborative Digital Reference Service (CDRS) for better and more effective resource provision.

Challenges faced in the Provision and Utilization of Digital Reference Resources in the Libraries

The findings revealed a number of problems associated with the provision and utilization of digital reference resources in the library such as: lack of fund, poor internet supply, power failure, cost of subscription/packages, frequent advancement in ICT, and negative attitude of librarians towards training, loss of qualified personnel in African libraries to developed countries and low comfort level of librarians with ICT. The interviewee of these universities in agreement with the researcher stressed further on the poor allocation of funds to libraries as a major impediment that hinders the provision and utilization of digital reference resources and services in the library. In line with the findings of the study, Okpaleke & Uwaifo (2012) observed some inherent challenges in the provision and utilization of digital reference resources in the library, which include; increase in library expenditure, lack of regular training and retraining of library staff, cost of subscription/packages, frequent power failure etc. From the above mentioned challenges, it is very clear to see that these challenges really hinder the university libraries to deliver its services very well and if adequate plans are not made to tackle these challenges it will affect the provision and utilization of digital reference resources in the library.

Strategies for Provision and Utilization of Digital Reference Resources in the Library

The findings of the study showed that all the item were considered very appropriate as strategies that could be used for provision and utilization of digital reference resources in the library. These include: frequent training programs should be organized, steady power supply/internet supply, result oriented training programs to help librarians overcome techno phobia should be organized, funds should be made available, self-upgrade from the librarians, attractive salaries and better working conditions should be considered; and increase of bandwidth to increase speed of server. In agreement to this study, Nwalo, (2002) pointed out that staff training and retraining is the panacea for the success of any digital library project. Therefore, if these strategies could be used, it will go a long way in the provision and utilization of digital reference resources in libraries and also help librarians in effectively discharging their duties and responsibilities.

CONCLUSION AND RECOMMENDATIONS

Digital reference resources are crucial to information processing and retrieval in the present day libraries especially in an academic environment. Provision of digital reference resources is very pertinent in libraries especially in this digital age. From the results of the findings of this study, one can conclude that for the effectiveness of provision and utilization of digital reference resources required for university library projects are enormous and wide ranging. The task and skills needed are quite different from the traditional method possessed by most reference librarians of today. For librarians to remain at the cutting edge of the profession especially those of them from the federal university libraries in the North Central zone of Nigeria, the provision and utilization of digital reference resources becomes very pertinent. These can only be made possible through provision and utilization of digital reference resources. The findings of the study revealed that for the federal university libraries in North Central to fully provide digital reference resources, their librarians must be well trained to

acquire the varied digital skills that are needed to operate a digital reference resources. However, some impediments to the effective utilization of digital reference resources and services were exposed. Hence, the following recommendations were made:

1. The university library management should make fund available for digital reference purposes in the libraries through avenues like Tertiary Education Trust Fund (TETFund) and Petroleum Trust Development Fund (PTDF). This will enable the university libraries to be able to acquire the resources needed for the facilitation of digital reference resources and services.
2. Librarians, especially reference librarians should be exposed to skill acquisition platforms such as seminars, workshops and symposia in order to acquire the necessary competencies required for digital reference resources.
3. Library schools should improve and modernize their curriculum by adding the e-environment courses that will impart digital skills to the future librarians thereby giving them a foundational platform for the mastery of these skills even from the school.
4. Librarians should personally utilise a large number of self-improvement training facilities online. This will go a long way in helping them master and acquire these skills themselves without much protocol and assistance.

REFERENCES

Agboola, A.T. (2000). Five decades of Nigerian university libraries: A Review of *Library Journal.* 50. 280- 289.

Anyanwu, E. U., Oduagwu, Ossai-Ohah, O. V. & Amechi, N. M. (2013). Reposition library and information graduates in Nigeria for self employment through entrepreneurship education. *American International journal of Contemporary Research, 3(8), 178-184.* Retrieved online from: https://pdfs.semanticscholar.org. On 20th July, 2020.

Awolola, J. O. (1998). College of education libraries in Kwara state (Nigeria): a comparative study. *Library Herald,* 36. No. 3, 152-158.

Berube, L. (2003). *Digital Reference: An issue paper from the networked services policy task group.* http://www.ukoln.ac.uk/public/nsptg/virtual/. Retrieved on September 6, 2016.

Heise, J. & Kimmel, S. (2003). Reading the river: the state of the art of real-time virtual reference. *Internet Reference Services Quarterly,* 8(1/2) 1-7.

Ifidon, S. E. & Ifidon, E. I. (2007). *New Direction in African management.* Ibadan: Spectrum books limited industrial service.

Nwalo, K. I. N. (2002).Staff training for library automation projects: Pre/Post computerization of library operations in information age. *Proceedings of Selected Papers of the Cataloguing, Classification and Indexing Section on the Nigerian Library Association*, 167-178.

Nwogwu, J. E. & Obiagwu, M.C. (1991). *Basic Librarianship.* Abuja, Nigeria: Totan publishers

Ojedajun, A. A. & Okafor, V. N. (2011). *Relevance and adequacy of IT skills of librarians in Southern Nigeria in the digital and electronic environment in Nigeria. Information for all: Strategies for National Development*. Ibadan University Press PLC.

Okpaleke, J. S. & Uwaifo, S. O. (2012). Relationship between librarians' background and adopted leadership styles in selected federal university libraries in Nigeria. *Middlebirth Journal of library and Information Science, 10(1), 224-239*. Retrieved online from http://ic21ce-icllt-2015. On 19th July, 2020.

Oyewusi, F. O. Oyeboade, S. A. (2009). An empirical study of accessibility and use of library resources by undergraduates in a Nigerian state university of technology. *Library Philosophy and Practice (e-journal)* (1-3).

Jay, M., Simpson, B. & Smith, D. (2009). CatQC and shelf-ready material: Speeding collections to users while preserving data quality. *Information Technology and Libraries*, 28 (1), 41-48.

Robinson, M. (2008). Digital nature and digital nurture: libraries and, learning, and the digital native. *Library Management* 29 Issue 1/2, 67-76.