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**INFLUENCE OF ELECTRONIC REFERENCE ON USERS'
SATISFACTION IN ACADEMIC LIBRARIES**

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**INFLUENCE OF ELECTRONIC REFERENCE ON USERS'
SATISFACTION IN ACADEMIC LIBRARIES**

BY

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Abstract

The study investigates the influence of electronic reference on users' satisfaction in academic libraries. In order to achieve the set objectives, the researcher adopted survey research design using questionnaire as the instrument for gathering data. The total population for the study was 15,022 from which 150 students were sampled. Based on the findings of the study, electronic reference sources are only available to a low extent, Information Communication Technologies are used to a high extent for rendering reference services, electronic reference has a positive influence on users' satisfaction and erratic power supply, poor internet connectivity, inadequate facilities and librarians poor attitude among others are the prevalent constrains of electronic reference in academic libraries. It was therefore concluded that the adoption and utilization of electronic reference tremendously increases users' satisfaction in the library. The study recommended that academic libraries should be encouraged to harness electronic reference in their operations

Keywords: *Academic Libraries, Electronic Reference, Influence, Users' Satisfaction.*

INTRODUCTION

Academic libraries are established and maintained in higher citadel of learning, with the primary aim of providing resources and services to satisfy the learning and research information needs of its users. These libraries connote the libraries that are attached to tertiary institutions such as universities, polytechnics, colleges of education, colleges of agriculture, colleges of technology and also, research institutes (Akporhonor, 2005). Abubakar (2011) expressed succinctly that academic libraries are the heart or nerve centre of institutions of higher learning where every academic activity takes place.

In this present age, the Information Communication Technologies have become a force that has revolutionized and improved the way library services are rendered. As stated by Sivakumaren, Geitha and Jayaprakash (2011), libraries have adopted the modern technology in rendering services to users. Egharevba (2018) asserted that library and information professionals try as much as possible to satisfy the information needs of clientele irrespective of the mile they have to go. It is this quest to satisfy users' information needs that has resulted to the application of Information Communication Technologies in the routine operations of 21st century libraries. Since the fundamental essence of academic libraries is centered on satisfying the information needs of its users and the role of the reference section in this regard, libraries see no way in which the function of this core area is not affected by the adoption of information communication technologies.

The reference section renders services that are mostly classified as reference and information service, as it has to do with a form of personal assistance provided to the information users. Okunade eds. (2016) defined reference service as an information service that involves the knowledge, use, recommendations, interpretation or instruction in the use of one or more information sources by a member of the library staff. Reference services in libraries basically have to do with

the interaction between the reference librarian and the clientele (users) so as to fill the gap in the information need of the patrons. Reference service is characterized by a degree of interaction between staff members and individual users or specifically identified groups of users or potential users. Kumar (2009) quoted Raganathan who described reference service as the process of establishing the right contact between the right reader and the right book at the right time in the right personal way. Hence, the essence of reference service is to aptly provide answers to users' information needs by being able to ascertain what each user information needs is at every point in time. Apotiade, Oyewole and Balau (2015) averred that in order to effectively assist the users with the right information, the reference librarian must display qualities of resourcefulness, confidence, respectfulness, empathy, attentiveness and love for service when rendering the services.

Electronic reference came to limelight due to the adoption of Information and Communication Technologies in libraries. Virtual reference or Digital Reference are other ways used in referring to electronic reference. Electronic reference services are not restricted to the nine to five (9:00am – 5:00pm) opening hours of the library building as it enables a quick response to users query at any time of the day without the location of the users as a constraint. Geronimo (2009) expressed that electronic reference refers to a library service that uses a librarian's knowledge to provide onsite and/or remote clients with relevant information based on a request that was initiated electronically.

Electronic reference is advantageous to the library patrons as it provides simplicity of the information access to users who cannot have physical contact with the library due to geographical or time constraints. It is evident that electronic reference service and sources effectuates colossal improvement in the service quality in the library as it straightens the users' satisfaction curve.

Therefore, in order to maximally satisfy the information needs of users, academic libraries are to adopt information communication technologies in their reference service which performs the last (usually perceived to be the core) of the library's three-fold function of acquiring, organizing and disseminating information in order to improve the quality of the services it renders. Sureshchandar, Rajendran and Kamalanabhah (2002) observed that there is a relation between the service quality and customer satisfaction.

Statement of the Problem

Reference Service is a very vital aspect of library services as the end point of a successful interaction between the reference librarian and a user or a proper consultation of reference resources is the filling of the gap in the user's information need.

Despite the advancement of technology, it has been observed that many academic libraries have not met the global trend of the use of ICT but are still entirely dependent on the traditional system of operations as well print reference materials in providing reference services to the users. These however, are neither sufficient nor reliable because they are inadequate due to hindrances they possess such as time wastage and distance barrier which acts on the laws of librarianship; one of which states that the time of users should be saved.

Therefore, as the traditional practices are no way suitable enough to ensure that users derive maximum satisfaction, there becomes a need that the influence of electronic reference on users' satisfaction in academic libraries is studied. Hence, it is on this premise that this study is carried out.

Objectives of the Study

The general objective of this study is to investigate the influence of electronic reference on users' satisfaction in academic libraries. The specific objectives are:

1. To examine the extent to which electronic reference sources are available in academic libraries
2. To determine the extent to which information communication technologies are used in rendering reference services to users in academic libraries
3. To find out the influence of electronic reference on users' satisfaction in academic libraries
4. To determine the constraints of electronic reference in academic libraries.

Research Questions

This Study seeks to provide answers to the following questions:

1. To what extent are electronic reference sources available for use in academic libraries?
2. To what extent are information communication technologies used in rendering reference services to users in academic libraries?
3. What is the influence of electronic reference on users' satisfaction in academic libraries?
4. What are the constraints of electronic reference in academic libraries?

Literature Review

Academic library is an institution that serves as a repository for recorded information and knowledge in tertiary institutions. Academic libraries are information centers established to support the mission of their parent institutions to generate knowledge, equip people with knowledge so as to make the society better and to improve the standard of living of man-kind. The primary objective of academic libraries alongside supporting the mission of their parent institution which

is teaching and research, is the preservation and access to knowledge and information (Singh & Kaur, 2009). Okiy (2005), cited in Abubakar (2011) expressed that libraries are now expected to provide users a range of information and communication technologies necessary for retrieving information quickly from both immediate and remote databases as well as creating a need for library corporation and consortium initiatives. Campbell (2006) observed that so many creative and useful services have evolved within academic libraries in the digital age: quality learning space, creating metadata, offering electronic reference services, teaching information literacy, choosing resources and managing resource licenses, collecting and digitizing archival materials and maintaining digital repositories. Singh and Kaur (2009) further stated that there is a paradigm shift from printed publications to digital documents and from ownership to access.

Due to the advancement of technologies, the concern of academic libraries have gone beyond just making decision on what books, journals and other information resources to acquire to develop their collection and satisfy the insatiable information need of institutions' staff and students. Their concern however, have been extended to how they can remain relevant in this digital era, even though resentment still occurs and the budgets of institutional administrators are still meagre. Development in ICTs have now offered academic libraries an exciting and challenging opportunities that require them to respond positively in all facet of their operation and service in order for them to main relevance in this modern era (Abubakar, 2011).

Reference is a fundamental aspect of the library as a whole. The essence of reference service is to fill the gap between users information need by being able to ascertain what each user information needs is at every point in time by understanding the difference in their information seeking behaviors and patterns and to provide

information that will suite that particular need. Reference service also includes the dissemination of information retrieved in the most suitable manner to various users.

Electronic Reference is an emerging trend of traditional reference (Chandwani, 2010). Electronic Reference connotes the intervention of Information Communication Technologies (ICTs) in the library's reference resources and services. The need for electronic reference came to limelight when libraries asserted that adopting Information Communication Technologies in their reference functions will make it more effective as electronic reference extends beyond the limitations posed by traditional reference. Since satisfying the users' needs remains the utmost priority of the library.

Satisfying users' needs in libraries has been and remains the primary objective of libraries and librarians. Quality service is a competitive necessity for businesses and service organizations (Adeniran, 2011). Users' Satisfaction is related to the response of users after they use any service or product whether it meets their required needs and expectations (Hussien & Mokhtar, 2018). User satisfaction is widely used by researchers and Information professional to evaluate Information retrieval system success. According to IGI Global Disseminator of knowledge- "user satisfaction is the utility received by an information seeker from the services rendered by the library and information centre at an affordable cost and convenient time".

Singh (2003) studied the evaluation on the evaluation of electronic reference sources. He concluded by laying emphasis thus, "For evaluating web documents, author or contact person with address (e-mail); document URL, including an institution identifier (e.g. edu); date of creation or revision and link to sponsoring institution website may be used. For evaluating resources one should be very critical of any information found on web, and it should be carefully examined. Information available on the internet is not regulated for quality and accuracy, therefore it is particularly important to evaluate the internet resources or information.

The extent to which library users derive satisfaction greatly depend on the quality of the reference service. In the study carried out by Tenopir (2001) the result showed that by the end of the 1990s, 99% of 70 academic libraries offered e-mail reference and 29% offered real time reference service. It further stressed that the year 2000 brought the advent of live reference in academic libraries with the use of chat or commercial call centre software to communicate with users in real time. Waghmare and Salve (2014) reported in their study that adoption of ICT in libraries has resulted into various improvements in the rendering references services including ask a library, electronic/remote access to reference librarians, 24/7 references and so on.

In order to establish beyond reasonable doubt that electronic reference propels a greater notch of users' satisfaction, Adeniran (2011) examined the relationship between service quality and user's satisfaction at Redeemers University. The study revealed that the academic staff and students who formed the population for the study, students were found most frequently used the library. The college of management sciences had the highest frequency of use and it also showed that users were satisfied with the resources and services of the library. Meaning that the more efficient the library services is, the greater in which users' needs are satisfied, and electronic reference ensues more quality service in the academic library.

Research Methodology

The study employed a descriptive survey research design to gather information. According to Nwogu (2005) "a descriptive survey design is one in which a group of people or item is studied by collecting and analyzing data from a few people or items considered to be representative of the entire group". The tool

used for the collection of data is the questionnaire, and the data collected was analyzed and interpreted.

The populations of the study in this research are the users of John Harris Library and Benson Idahosa University Library.

The total population is described in the table below.

Table 1

Respondents	No of Registered Users
John Harris Library	13, 835
Benson Idahosa University Library	1, 187
Total	15, 022

Since the population of this study is very large, the use of sample becomes very necessary. For this reason, the researcher adopts the simple random sampling technique because in simple random sampling technique, every element has an equal chance of getting selected. 1% fraction was used to get a sample size of 150 which is in line with the table presented by Krejcie and Morgan (1970) for determining the sample size.

Discussion of Findings

The response rate from the users of selected university libraries revealed that 146 (97.3%) copies of the questionnaire were duly completed, returned and used for this analysis out of the 150 questionnaire distributed.

Table 2: Gender Distribution of the Respondent

Gender	Frequency	Percentage (%)
Male	56	38.6
Female	90	61.6
Total	146	100

Table 2 shows that there were 56 (38.4%) male respondents and 90 (61.6%) female respondents. This implies that majority of the respondents were female.

Table 3: Age of the Respondents

Age	Frequency	Percentage (%)
16-20 years	63	43.1
21-25 years	63	43.1
26-30 years	18	12.4
31 years and above	2	1.4
Total	146	100.0

Table 3 shows that out of a total number of 146 respondents that took part in the study, 43.1% of the respondents are within the age range of 16-20 years, 43.1% are also within 21-25 years, 12.4% are within 26-30 years and 1.4% are 31 years and above. It indicates that majority of the respondents are within the age range of 16-20 years and 21-25 years as both age brackets represents 63 (43.1%) each of the total respondents.

Table 4: Universities of the Respondents

Universities	Number of Student	Percentage (%)
University of Benin	115	78.8
Benson Idahosa University	31	21.2
Total	146	100.0

Table 4 shows that 78.8% of the respondents are from University of Benin and 21.2% are from Benson Idahosa University of Benin. This indicates that the respondents of this study are from University of Benin. This is due to the low amount of registered users of Benson Idahosa University Library.

Table 5: Academic Level of Respondents

Academic Level of Respondents	Frequency	Percentage (%)
100 Level	32	21.9
200 Level	32	21.9
300 Level	34	23.3
400 Level	39	26.7
500 Level	2	1.4
600 Level	7	4.8
Total	146	100

Table 5 shows that 21.9% of the respondents are in 100 level, 21.9% also in 200 level, 23.3% in 300 level, 26.7% in 400 level, 1.4% in 500 level and 4.8% of the respondents are in 600 level. This implies that students in 400 level participated more in the study than students in other levels.

Research Question One: To what extent are electronic reference sources available for use in the library?

Table 6: Extent to which Electronic Reference Sources are Available for Use

S/N	Extent to which Electronic Reference Sources are Available for Use	VH		H		L		VL	
		FQ	%	FQ	%	FQ	%	FQ	%
1	Electronic Dictionaries	31	21.3	35	24.0	56	38.3	24	16.4
2	Online Encyclopedias	20	13.8	57	39.0	52	35.6	17	11.6
3	Electronic Almanacs	18	12.3	35	24.0	56	38.3	37	25.4
4	Electronic Gazettes	18	12.3	31	21.2	58	39.8	39	26.7
5	Online Directories	17	11.6	44	30.1	52	35.6	33	22.7

6	Online Atlases	15	10.3	44	30.1	53	36.3	34	33.3
7	Electronic Maps	20	13.8	38	26.0	58	39.7	30	20.5
8	Electronic Yearbooks	17	11.6	41	28.1	61	41.8	27	18.5

Table 6 shows the extent to which electronic reference are available sources are available in academic libraries. The table reveals that 77(52.8%) of the respondents indicated that online encyclopedias are available to a high extent, 66(45.3%) for electronic dictionaries, 61(41.7%) for online directories, 59(40.4%) for online atlases, 58(39.7%) for electronic yearbooks, 58(39.8%) for electronic maps, 53(36.3%) for electronic almanacs and only 49(33.5%) of the respondents asserted that electronic gazettes are available to a high extent.

This implies that electronic reference sources are only available in a low extent.

Research Question Two: What is the extent to which Information Communication Technologies are used in rendering reference services?

Table 7: Use of Information Communication Technologies in Rendering Reference Services.

S/N	Use of Information Communication Technologies in rendering reference services	VH		H		L		VL	
		FQ	%	FQ	%	FQ	%	FQ	%
1	For e-mail reference service	36	24.6	63	43.2	40	27.4	7	4.8
2	For video conferencing or webcam services	28	19.2	54	37.0	47	32.2	17	11.6
3	For conducting reference services through blogs and other organization's websites	29	19.9	57	39.0	44	30.1	16	11.0
4	For instant messaging/text based chat	37	25.3	51	34.9	43	29.5	15	10.3
5	To facilitate the use of social networking sites	26	17.8	67	45.9	35	24.0	18	12.3

6	To enable online discussion boards	28	19.2	53	36.3	38	26.0	27	18.5
7	For digital reference robots	20	13.7	66	45.2	27	18.5	33	22.6

Table 7 shows the extent to which information communication technologies are used in rendering reference services. The study revealed that 99(67.3%) of the respondents indicated that ICTs are used for e-mail reference service in a high extent, 93(63.7%) to facilitate the use of social networking sites, 88(60.2%) for instant messaging/text based chat, 86(58.9%) for conducting reference service through blogs and other organization’s websites, 86(58.9%) for digital robots, 82(56.2%) for video conferencing and webcam services and 81(55.5%) respondents indicated that information communication technologies are used to enable online discussion boards in academic libraries.

Therefore ICTs are used for rendering reference service in academic libraries but e-mail reference services, social networking sites and instant messaging/text based chat are utilities in which information communication technologies are mostly used for.

The findings corroborates with that of Madukoma (2015) who indicated that ICTs are used in rendering reference services in universities libraries but disagrees with the study of Ramos and Abrigos (2011) which assertion from the study conducted, was that only 22 out of 356 academic libraries render digital reference services.

Research Question Three: What is the influence of electronic reference on users’ satisfaction?

Table 8: Influence of Electronic Reference on users’ satisfaction

S/N	Influence of Electronic Reference on users' satisfaction	SA		A		D		SD	
		FQ	%	FQ	%	FQ	%	FQ	%
1	Utilizing the electronic reference services are usually worth the while	62	42.5	63	43.1	13	8.9	8	5.5
2	Electronic references resources are invaluable	37	25.3	55	37.7	39	26.7	15	10.3
3	Accessing the reference desk digitally facilitates quick response to queries	64	43.8	51	34.9	27	18.6	4	3.7
4	Electronic reference generally makes research faster	82	56.2	46	31.5	11	7.5	7	4.8
5	The quality of service derived from electronic reference is better than that from the traditional reference desk	64	43.8	52	35.6	21	14.4	9	6.2
6	With electronic reference, librarians easily ascertain users information need	50	34.2	76	52.1	17	11.4	3	2.1
7	Electronic reference resources are more reliable and accessible than print reference resources	58	39.7	59	40.5	24	11.6	5	3.4
8	I usually get maximum satisfaction with electronic reference resources and services	42	28.8	67	45.9	26	17.8	11	7.5

Table 8 shows the influence of electronic reference on users' satisfaction. The table reveals that 128(87.7%) of the respondent agreed that electronic reference generally makes research faster, 126(86.3%) asserted that with electronic reference, librarians easily ascertain users' information need, 125(85.6%) agreed that electronic reference services are usually worth the while, 117(80.2%) agreed that electronic reference resources are more reliable and accessible than print reference resources, 116(79.4%) agreed that the quality of service derived from electronic reference is better that from traditional reference desk, 115(78.7%) agreed that

accessing the reference desk digitally facilitates quick response to queries, 109(74.7%) indicated that they usually get maximum satisfaction with electronic reference resources and services and 92(63%) agreed that electronic reference sources are invaluable.

This implies that electronic reference have a positive influence on users; satisfaction in academic libraries.

The findings is in agreement with Dollar and Singh (2006) affirmation that the use of information communication technologies in rendering reference service as it enhances service efficiency as well as the overall effectiveness of the library. The findings is also in agreement with the survey of Waghmare and Salve (2014) which reported that the adoption of ICTs in libraries have resulted into various improvements in rendering reference service.

Research Question Four: What are the constrains of electronic reference?

Table 9: Constrains of electronic reference

S/N	Constrains of electronic reference	SA		A		D		SD	
		FQ	%	FQ	%	FQ	%	FQ	%
1	Lack of Skills required to use modern technology	47	32.	48	32.9	33	22.6	18	12.3
2	Librarians' Incompetence	42	28.8	56	38.4	34	23.2	14	9.6
3	Poor internet connectivity	59	40.4	51	34.9	23	15.8	13	8.9
4	Unawareness of the availability of electronic reference	42	35.7	50	34.2	30	20.5	14	9.6
5	Inadequate ICT facilities	62	42.5	44	30.1	27	18.5	13	8.9
6	librarians poor attitude towards embracing electronic reference	50	24.2	55	37.7	34	23.3	7	4.8
7	Erratic power supply	63	43.2	52	35.6	18	12.3	13	8.0

8	Restriction on library's websites	42	28.8	62	42.5	30	20.5	12	8.2
9	Insatiable Electronic Reference Sources and Services	38	26.0	61	41.8	36	24.7	11	7.5
10	Insufficient Information Retrieval Skills for exploiting the resources and services	52	35.7	44	30.1	38	26.0	12	8.2

Table 9 shows the constraints of electronic reference. The study revealed that Erratic power supply (78.8%), Poor internet connectivity (75.3%), inadequate ICT facilities (72.6%), librarians poor attitude towards embracing electronic reference (71.9%), restrictions of library's website (71.3%), unawareness of the unavailability of electronic reference (69.9%), insatiable electronic reference sources and services (67.8%), librarians incompetence (67.2%), insufficient information retrieval skills for exploiting the resources and services (65.8%) and lack of skills required to use modern technology (65.1%) are some of the prevalent constrains of electronic reference.

This study aligns with the survey conducted by Ukachi (2011) which established that the extent to which ICTs facilities are applied to reference service is low due to identified problems like irregular power supply, limited duration of use, inadequate number of facilities etc as inhibitors to efficient utilization of ICT facilities.

Summary of Major Findings

After careful and critical analysis of data collected from the respondents, the following major findings were established from the study.

1. The electronic reference resources available to a high extent in academic libraries include electronic dictionaries, online directories, online atlases, electronic yearbooks, electronic maps and electronic almanacs.
2. The study revealed that ICTs are majorly used in academic libraries for e-mail reference services, social networking sites and instant messaging/text based chat than other electronic reference service.
3. The study further revealed that electronic reference increases the level of users' satisfaction in academic libraries as it is faster, efficient, more reliable and easier to access than traditional reference services and resources.
4. The study further identified the prevalent constrains of utilizing electronic reference to include erratic power supply; Poor internet connectivity; inadequate ICT facilities; librarians poor attitude towards embracing electronic reference; restrictions of library's website; unawareness of the unavailability of electronic reference among others.

Conclusions

From the analysis and summary of major findings, it can be deduced that electronic reference sources are only available to a low extent in academic libraries. Inference can also be drawn that many users are not aware of the availability of these electronic reference sources. Electronic Reference Services (Both Synchronous and Asynchronous) are been utilized in the libraries. The influence of electronic reference on the satisfaction of users cannot be over emphasized as it encourages library users' active participation because the likelihood of users' information need to be satisfied is enhanced.

Therefore electronic reference is a very reliable strategy for enabling optimum service in the library and thus, be adopted by libraries desiring to achieve its organizational objective.

Recommendations

In the light of the findings of the study, the following recommendations are made:

1. Strategies like awareness campaigns should be employed to inform users of the availability of electronic reference sources in academic libraries
2. There should be adequate annual or bi-annual orientation and user education in which users are enlightened on utilities like e-mail reference services, instant messaging/text based chat, libraries' blog, website and social networking sites as well as other electronic reference.
3. Users should be encouraged to harness the library's reference resources and services even when they cannot physically visit the library.
4. The library should provide a reliable and alternative power supply such as electric generators, solar power energy and inverters to help solve the issue of erratic power supply.
5. A strong internet connectivity should be available to ensure fast and stress less utilization of electronic reference.
6. Measures should be taken to drastically minimize if not eliminate other challenges that wreak havoc and hinders an effective electronic reference in academic libraries.

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