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**The Impact of Internet Usage on Library Reference Services in Academic Libraries in Kenya: A case Study of Lukenya University Library**

By Momanyi M. Evans and Achimwayi A. Eunice

**Abstract**

Reference services are personalized services offered by any library. In most cases a personal discussion takes place between a user and a reference librarian, before information need is met. The study is conceived with the aim of finding out how the integration of the Internet in library service providence has contributed to library reference services in Lukenya University library. The objectives of the study are to; identify users internet usage rate in the library reference service, to identify the effect of internet usage as an information tool that reference librarian use, identify the challenges and solutions of internet usage on the reference library service This study was guided by S. Ranganathan theory of information retrieval and use. The target population for the study was users drawn from Lukenya University. The sample size was 65 respondents. Simple random sampling was used to select 14 lecturers, 40 students, 8 non-teaching staff and purposive sampling was used to select 3 librarians. A descriptive case study method was used in the research where both qualitative and quantitative data was collected using questionnaire, interview schedule and observation method. Qualitative data was analyzed using descriptive statistics including percentages and frequency counts. The respondents showed that Lukenya University library has internet and provided access to their users. Users have used the internet for three and a half years for academic purpose and user internet training tendered to be during orientation. The librarians have internet training from colleagues and gained the skills by actual use. Librarians have integrated the internet as an information tool which has contributed positively to reference work. The study recommended that the problem of internet usage be addressed by Lukenya University management by developing internet reference as a core service, through increased bandwidth and employing designated reference librarian. The findings of this study will help all stakeholders, who include the university management, users and librarians in addressing issues of internet usage on Reference services in Lukenya University Library.

**Key words:** Internet Usage; Library Reference Services; Academic Libraries; Kenya; Lukenya University

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## **The Impact of Internet Usage on Library Reference Services in Academic Libraries in Kenya: A case Study of Lukenya University Library**

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### **Introduction**

#### **1.1 Background information to the study.**

Reference service means, “Process of establishing contact between a reader and this document in a personal way.” His document refers to those which serve his requirements precisely. It is a personal service, which involves various activities, aimed at making information available to the users as easily as possible. In order to provide information, a reference librarian may make use of internet, resources of the library as well as those resources available outside his library. Reference services, or the personal assistance provided to library users seeking information, have been a main component of library activities for more than a century. Ever since the first library was established in Sumeria about 5,000 years ago, the library’s activities have been shaped by questions and answers (Katz, 2002a).

Over time, various technological developments have been used to assist in the provision of reference services. The tools consulted by reference librarians have become more varied and complex. The introduction of computerized resources and computer networks over the past 30 years has made the situation ever more complicated (Tedd, 1993; Ford, 2003). The reference environment has undergone a significant transformation, as collections and information in general become increasingly accessible electronically. Chowdhury and Margariti (2004) noted that the introduction and development of the Internet and its associated Web technologies in the past decade have significantly influenced both the way libraries provide information services to their users and the way users choose to access information.

Librarians are exploring ways of supporting patrons in the emerging virtual communities. One way in which this is being done, according to Moyo (2002), is by offering value added services, such as digital reference services to support remote access and navigation of library electronic resources. Tenopir and Ennis (2002) indicate that information and communication technology (ICT) has transformed academic libraries’ orientation and services. Nowadays, users take for granted web-based online catalogues, library-provided interactive portals to quality web sites, and a plethora of commercial online databases, the most popular of which are web2 versions. The workstations, complex internal and external network connections, and a combination of in-house and online resources define reference services of the new millennium.

#### **Statement of the problem**

Studies have shown that the use of internet plays a great role in library. The various research studies conducted to evaluate the extent of usage of internet in multiple aspects of academic libraries reveals that librarians utilize internet in acquisition and to large extent in the processing. The study sought to establish if the introduction of internet in library in reference service at

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Lukenya University library has any impact on usage of reference service. Introduction of internet in the library operation and software development has been researched to great extend; however no research has be conducted on how internet can be used for reference service in a university library. Most research has focused on processing and acquisition of internet in technical work forgetting the area of reference services.

### **Objectives of the study**

Specifically the study seeks to;

- i. To find out users' internet training skills given on how to use the internet in the library reference service
- ii. To investigate the effect of internet usage as an information tool that reference librarian use.
- iii. To find out the challenges and solutions of internet usage on the library reference service

### **Literature Review**

#### **Previous researchers**

Ranganathan presented a paper entitled, "Genesis and present position of reference service and reference material." In this paper, Ranganathan discusses the changing role of the library from preservation stage to a stage of an efficient communication. This shift occurred after the industrial revolution, when there was an imbalance between the population demand and supply of various commodities and services; this imbalance resulted in intense research in research centers In his 1876 paper, "Personal Relations Between Librarians and Reader," Samuel Green wrote that it is essential to provide reference assistance to help users locate information because the public is not trained to find information (Bopp & Smith, 2001). By the end of the nineteenth century, the role of the librarian had expanded to include reference service, and it has been part of the profession since then. In the interim, great advances have been made in the field of librarianship. New technologies change the way we search for information and what we expect from reference service. With the introduction of the computer and the Internet, libraries expanded the role of reference beyond the use of the mail, telephone, or the fax machine. However, Green's point remains pertinent: having access to sophisticated technology and more information does not mean that users have better research skills

#### **User internet usage and training**

In early 1990s, a new networking technology, which was originally developed in Defense Department to connect computers for defense-related research, became available in the public domain. This technology allowed isolated computers to be connected in an enormous network, known as the Internet. Basically, the Internet provided an infrastructure for electronic information stored in individual computers to flow around the entire network. Greatly enhancing the availability and accessibility of electronic resources, the Internet quickly gained popularity among libraries (Straw, 2001). The arrival of the Internet and its exponential growth, not only

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expanded the choices of electronic resources, revamped the old ways of database and catalog searching, but also reinforced the instructional role of reference librarians. Unlike well-structured database resources, the enormous amount of information available on the Internet is neither critically scrutinized nor carefully organized. Moore (1998a) described the Internet as “a library with all the books tossed on the floor” (p.117). Thus, in order to help users navigate the overwhelmingly intricate resources on the Internet without being misled by deceptive and biased information, reference librarians had to spend more time teaching them how to access the Internet, how to locate information on the Internet, and how to evaluate located information and then utilize them (Straw, 2001; Moore, 1998a; Hope, Kajiwara & Liu, 2001). Apparently, the Internet has been a ground-breaking force in reshaping libraries’ reference services. Straw (2001) believed that “the Internet is transforming the nature of reference work” (p.9).

### **User internet usage**

Reference and research librarians are highly depending upon the Internet to respond the ready and long range types of reference questions nearly in all kinds of libraries (Sauers, 2001). Reference librarians concern critical-thinking skills, emotional intelligence, teaching ability, and question analysis to connect the user with appropriate resources. Furthermore, it is involving face-to-face interaction between a patron and a librarian who answered every type of question from one or more multipurpose service points, prevailed throughout the “paper era” (Rao and Babu, 2001). A reference service is considered one of the key activities in an academic library. Reference librarians assist users in finding, selecting and using various information sources and materials. To be more effective and efficient, they rely on a variety of printed and electronic sources to provide relevant and accurate information to their users. Another source that is becoming more and more popular among reference librarians is the Internet. It enables them to search, retrieve, request, receive, and download information from sources scattered all over the world. The Internet continues to have a profound effect in promoting the sharing of information, making rapid business transactions, and supporting global collaboration among individuals and organizations. As a result, a huge number of information sources are available through the Internet, coupled with the flexibility, speed and accuracy in information retrieval that have brought a revolution in information generation, access and utilization (Abdoulaye & Majid, 2000).

### **User internet training**

Training of the internet use for library staff and users is another component of libraries. Education and public libraries arrange are especially keen to provide such services. However, due to the variety of user communities, it seems difficulty for libraries to cope with training issues. Styczynski (2000) examined the changes in the internet training provided by a corporate library and concluded that the job of librarians will be to stay on top of all the changes so that they can effectively train the users of the future

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King(2006) observed that traditionally library staff have been trained on a” need- to- know” basis, with an initial training concerning basic library procedures such as circulation, and with additional training occurring as and when it is needed; such as training in the use of a new catalogue or management system. In the study, he found that it became the number one choice of library administration to have public library staff trained in ICT competency

### **Effect of usage of the internet as information tool that reference librarian use.**

Application of internet to library operations is believed to have had tremendous effect on reference services (Oyegade, 2000). Lancaster and Sandore (1997) in Ukachi (2008) enumerated the effects as modification of traditional services, introduction of new services, disintermediation of services and the extension of services to remote users. Reference librarians now provide users with databases that give access to millions of journal articles as well as access to the internet which has holdings of even more libraries and limitless variety of formal and informal sources of information. Thus, needed information can now be identified, accessed and delivered within the shortest time possible with very little effort from both the librarian and the user. Katz (2002) emphasized that with the internet, ready reference can be performed with even greater speed since information carrying materials can easily be downloaded from numerous sites.

### **Real time Reference Service: Library Chat Rooms**

According to Ronan (2003), Many libraries are experimenting with Internet chat technology as an innovative method for offering real time reference service, using chat software, live interactive communication software, call counter management software, web contact software, bulletin board services, interactive customer assistance system, etc. While digital reference service is asynchronous method of information delivery, the Internet chat providing the benefit of synchronous communication between a user and a reference librarian (or mentor). Interactive reference services facilitate a user to talk to a real, live reference librarian at any time of day or night from anywhere in the world. Unlike with email reference, the librarian can perform a reference interview of a sort by seeking clarifications from the user. The librarian can conduct Internet searches and push websites onto the patron’s browser, and can receive immediate feedback from the patron as to whether his or her question has been answered to his satisfaction. Several institutions in US including Cornell University, Internet Public Library, Michigan State University, North Carolina University are offering Internet chat-based service using software like Live Person, AOL Instant Messenger, Conference Room and Google Talk

### **Reference librarians and users attitude towards the internet usage**

Tenopir and Ennis (1998b) reported on the changes in the attitudes of reference librarians and users, user instruction, workload and the workplace environment of reference librarians. Librarians reported greater user expectations and greater job satisfaction, a greater need for instruction at every level of computer skills and a greater workload as more resources were added without an increase in the number of staff.

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Kinder, Robin (1994) has stated that the availability of various kinds of electronic information resources in the Internet environment has enhanced the capacity of libraries to provide services. It does not mean, however, that the library staff can meet their users' needs more easily. The reason is that the users' expectations of the library have increased in the Internet environment. For example, users now expect that libraries provide twenty-four-hour network access to a growing number of bibliographic and full-text databases as well as other electronic materials and that information in any formats from anywhere in the world can and should be delivered in a matter of days for their use. Moreover, library users also expect that the library staff offer some kind of workshops to instruct them in an effective use of the information resources on the Internet.

### **Challenges and solution of internet usage on reference services**

Remote access by library users is a serious challenge to reference services. Academic libraries must develop strategies to cope with the demands of the user for remote access. Many academic libraries still have access to large numbers of serial titles in their online databases, whose full text articles can be accessed by users for teaching, learning, and research. These rich repositories are not available through mere navigation of the Internet, but are only available to authorized users. Professors and other teaching staff who are engaged in research may also be able to purchase articles with research funds. In this scenario, the worst off are the millions of people who live in developing countries, and who cannot access the Internet or pay for the articles.

The free resources and services of the public library are the only avenue for most people in developing countries. Reference services in academic libraries also play a key role in the provision of knowledge and information to the public. Libraries have devised several strategies to meet the challenge of remote access. One of these is virtual reference. Virtual reference is a type of electronic reference service that may or may not have real time operations. Tenopir (2001), in a survey of 70 academic libraries in the US, found that 99 percent were operating asynchronously. This means that the users may interact with the reference librarians by appointment or through email. Order (2001) found that only 29 percent of users could interact with reference librarians in real time by instant messaging and video conferencing. Email reference service may be adequate, since users can send queries to reference librarians 24 hours a day and seven days a week. Response to the queries may not be immediate, since librarians answer the queries only during working hours. One way to overcome this problem is a system that is interactive and can be accessed at any time of the day.

### **Research Methodology**

The study adopted a case study design. The sample size was 65 respondents. Simple random sampling was used to select 14 lecturers, 40 students, 8 non-teaching staff and purposive sampling was used to select 3 librarians. A descriptive case study method was used in the research where both qualitative and quantitative data was collected using questionnaire,



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interview schedule and observation method. Qualitative data was analyzed using descriptive statistics including percentages and frequency counts.

## **Data Presentation, Analysis and Discussions**

### **User Internet use and training**

The study dealt on the library reference internet usage and training. Respondents were asked how long they had been able to use the Internet on reference services in the library. In determining the period the respondents had used internet, the findings revealed that 35 (70%) have had accessed internet for one to three years, and 15 (30%) have had accessed for 4-6 years. The librarians reported that internet was installed in the library in 2014 that is why majority of users have had access to the internet reference services for 1 to 3 years.

### **Users of internet**

Respondents were asked to indicate who use the Internet in the library reference services and whether they have free access or pay access. The library only offered Internet reference services to their primary user population, namely students, staff, lecturers and this use tended to be free. 38 (76%) provided Internet use to students, 3(6%) to librarians, 4(8%) to lecturers, 5(10%) to Non-teaching staff in the library.

### **Various option used by users to access internet**

Respondents were asked to indicate through what option the library users access the Internet in the library. Majority of users who use the internet access it through, 25 (50%) via dedicated terminals, 3 (6%) via librarians, 10 (20%) via Wireless network laptop, 8 (16%) Smart phones and 4 (8%) reported using both modes of access.

### **Internet use**

Study participants were asked to indicate how frequently they use the Internet for reference related services. All respondents reported using the Internet for reference services. A majority of the respondents 22 (55 %) used the Internet “frequently” while 14(35%) used it “very frequently” and 4(10%) used it occasionally. None of the respondents reported using the Internet “rarely” or “never”.

### **Purpose for internet usage in library reference services**

Respondents were asked to indicate what they use internet for. The responses were 49(98%) respondents used the internet for educational purpose, 44(88%) respondents for research purpose, 38(76%) for communication purpose that is receiving and answering queries, document delivery SDI, CAS, while 18(36%) respondents admitted that they use internet for entertainment purpose, while 10 (20%) used it for searching OPAC to know the location of library resources.

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These responses indicates that majority of respondents mainly use the internet for educational purpose.

### **Librarians' Internet Use**

Librarians were asked to indicate how long they have had access to the Internet. The findings reveal that all librarians reported having used to the Internet. Three librarians indicated that they have had access to the Internet between four to six years (66.6%). Only one (33.3%) had access to the Internet for one to three years. If the researcher compares the length of access to the Internet between librarians and users, it seems that generally the librarians had access before users.

### **Internet training**

Respondent were asked whether there was Internet training offered to users. Respondents were also asked to indicate the way in which training is given to them. The library offered training on the Internet to users. 3 (6%) were instructed using one-on-one, 2(4%) printed guides on the Internet 27 (54) orientation session as part of general library instruction and 0 (0%) used computer-assisted instruction and finally 12 (24%) of respondents were not trained due to lack of awareness and they were familiar with internet use. The librarians indicated various combinations of user guide and learning from colleagues and self-taught efforts. The majority three (100%) were self-taught, 3 (66%) learned from colleagues and finally one (33%) learned using user guides. There was no formal training. An open-ended question was asked inviting further comments about user Internet use and training. This question was aimed at giving the respondents an opportunity to add anything pertinent that the previous questions in the section did not allow them. A total of nine respondents chose to comment further. They revealed that when the library opens the users literally raced to internet terminals

### **The effect of usage of the internet as information tool that reference librarian use**

Respondents were asked to indicate their level of agreement with statement indicated in a rating based on a likert scale of 1-5. Strongly (5) Agree (4) Not sure (3) Disagree (2) strongly disagree (1). Respondents were asked to provide their opinion on the effect of use of the Internet on reference librarians. They were asked if the Internet has increased their workload at the reference department. Out of 50 respondents, 37 (74%) disagreed that the Internet has increased their workload. However, 1 (2 %) of the respondents “agreed”, 7(14%) not sure, 4(10%) of respondents “Strongly agreed” with the statement. Next of the 50 respondents, 31 (62%) “Agreed”, 17(34%) “Strongly agreed” that the Internet has enabled them to work more effectively and efficiently, one respondent “disagreed” and one was not sure. Next 27 (54%) of the respondents “agreed” and 23(46%) “Strongly agreed” that the Internet has provided more options and abilities to reference librarians. The next Statement respondents were asked if they agree that the Internet has enhanced reference services a great deal. 26(55%) “Agreed” , 22(44%) respondents “Strongly agreed”, 2(4%) not sure with this statement.



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### **Users' behavior and attitude towards the internet usage on reference services**

The interview carried out on librarians, sought to find out the attitude towards internet usage on library reference services. The interviewer noticed a change amongst librarians and users. One interviewee reported that the Internet made it possible for users to do their own searches, and librarians were spending less time doing searches and more time on other library services. Two interviewees said that users have embraced internet usage as a solution to all questions.

### **Challenges of internet usage on reference services**

The findings indicate that, 90% of the respondents face challenges when using internet as a tool on reference services, whereas 10% did not face any challenge when using the internet. The results show that indeed, users and staff faced challenges in using internet to do their reference work. In supporting these findings on challenges faced, Yacob (2011) in his research findings in Nigerian universities, using twenty-five (25) library administrators who participated in this research established that; almost all of them reported that they faced challenges in the course of using the internet.

### **Solutions to the challenges encountered**

The respondents were asked to give their views and indicate how internet usage on library reference service could be improved in Lukenya University library. A significant number of respondents suggested that more computer terminals should be dedicated to reference purpose other than general internet search, the internet reference services need to, or must, be attached to someone's job description. In addition, the librarian recommended that the responsibilities need to be clearly defined because, at the moment, the job descriptions are saying, 'any other duties' they need to attend to user queries on time although it is difficult, because they have other duties to attend in the library like charging and discharging, search and retrieval etc. Library users should be trained on how to use internet reference services, the library should introduce interactive services and develop tutorials or step by step guide for the librarians to demonstrate and guide library users how to search electronic resources in the library with ease. Internet training is a continuous process as well the parent organization to offer internet course as a common unit. Time limits should be imposed on how to use the computers with the internet per day. Consequently, the university management should improve bandwidth and install UPS for each computer connected to internet to avoid power surge.

### **The future plans for internet usage on library reference services.**

The researcher wanted to know the future plans for internet usage on library reference services in the library, and below are the responses from Librarians. The librarian expressed that the library field is developing. "We have to open our eyes and see what is going on around us and adopt it, and increase bandwidth." The librarian express that the library need to set up a library reference section for the users, university management to employ reference librarians, add more

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computers to assist all users, schedule programs for information literacy, pay in advance subscribed database, e-journals, e-books and increase the bandwidth to serve faster the users, offer remote reference service.

The librarians also indicated that there were no proper records of general questions or questions from the Ask a librarian service, library should develop internet reference service policy document which will be used as a tool to guide librarians working with internet reference services. Library should give continuous training with content relevant to internet reference services to the librarians working with internet reference services. This training will give sufficient competencies to librarians to be able to work comfortably with internet reference services to assist users.

## **Summary of Findings, Conclusion, Recommendation and Suggestions for Further Studies**

### **User Internet usage and Training**

The first objective of this study was to identify users' internet usage to and are they given training on how to use the internet in the library reference service.

#### **Internet usage**

The study revealed that Lukenya University library has used internet on reference service for about of 4 years and majority of users have used the internet for an average of 3.5 years. Lukenya University library offer internet majorly to students, few staff because most of them have computers connected to internet in their offices and few lecturers use the internet because most of them are part time lecturers. The study revealed that majority of users use the internet via dedicated internet terminal which were insufficient and general to all users, others via laptops, smart phones due to availability of LAN WIFI. This study found that the Internet was used for academic rather than recreational purposes. Academic use included mostly downloading information, database access, search engine searches, specific URL's and to access student portal. Non-academic use included searching for job advertisements, current affairs, and entertainment. While librarians report that they are seeing more users who are confident in using the advanced technology and do not want the help of librarians, there are some users who do not have basic computer skills.

#### **Training**

The study revealed that the library provided Internet training to their users. However, training was provided mostly on orientation session, one-on-one basis and printed guide to users. The trend is that Internet training was provided mostly on orientation session as part of library instruction. This trend is supported by the study findings. Only 54% of the respondents indicated that they were orientated on library. However, this included only very basic instruction. Some of the patrons were not trained due to lack of awareness and inadequate personnel and a few were already familiar with internet use.

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### **Effect of usage of the internet as an information tool that reference librarian use**

The second objective of the study was to assess the effect of Internet usage as an information tool that reference librarians use daily. Two research questions were derived from this objective, namely, Effect of internet usage for reference librarian, and users' attitude towards the internet usage.

### **Effect of internet usage on reference services**

The study revealed that participants felt that the Internet use has contributed positively in providing quality reference services and has improved daily reference work. The study revealed that despite acknowledging the useful role of the Internet in today's reference work, a considerable number of respondents felt that the Internet could not completely replace the traditional reference tools. It might be due to their greater familiarity with printed reference tools for answering certain type of queries

### **Librarians and users' attitude towards the internet usage**

The study revealed that all of the interviewees had a positive attitude toward the Internet. They identified internet use as a solution to all questions and vast amount of the information found on the Internet, the speed of retrieval and the availability of full text and the constant availability of the Internet as benefits to users.

### **Challenges and solution of internet usage on reference services**

The study finding revealed that respondents agreed that they faced a number of challenges when using the internet on their reference functions. The key among them was the slow internet and download speed because of inadequate bandwidth, unstable power supply, inadequate space, lack of a designated reference librarian, lack of adequate training, information overload, and lack of longevity of sources on the Internet, inadequate facilities (computer workstation, less ports, USP, dedicated internet terminals), some users taking long on internet terminals doing non-academic work. However, majority of respondents stated that, though challenges existed, they could be overcome. They indicated that university management was to play a key role in ensuring that majority of the challenges mentioned were overcome.

### **Conclusion**

Based on the study findings, the following conclusions were made as guided by the research objectives. The first objective focused on identifying users' internet usage to and are they given training on how to use the internet for reference service. From the study findings, the results showed that Lukenya University library had Internet access for more than 4 years and majority of users have used the internet for an average of 3.5 years, most of them had accessed internet through dedicated internet terminals, laptops and their smart phones. Users seemed to be using the Internet mostly for academic purposes.

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The second objective sought to identify the effect of internet usage as an information tool that reference librarian use. From the study findings, the internet has emerged as the single most powerful vehicle for providing access to unlimited information. The internet is inseparable part of today's reference services. The dependency on the internet and its service is increasing day by day and the Internet use has contributed positively in providing quality reference services and has improved reference work, immediacy and vastness of the information available on the Internet

The third objective sought to identify the challenges and solutions of internet usage on the reference service. Conclusions drawn from the results are that; there are a number of challenges experienced as far as use of internet is concerned. However, there were possibilities that these challenges could be overcome if university management intervened.

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