

Internet and Web based library services provision among academic libraries in Zambia: a comparative study of the University Zambia and Copperbelt University libraries

Tuesday Bwalya
The University of Zambia
School of Education
Department of Library & Information Studies
bwalya.tuesday@unza.zm

ABSTRACT

This study sought to assess the extent to which the two big public university libraries in Zambia have implemented web library services by comparing and contrasting their web services. The paper further explored the challenges the two university libraries face in their quest to provide web based services to their users. The research was a qualitative comparative study in which a detailed study of web services provided by the two libraries was conducted. Data was collected through documents analysis. In addition, oral interviews were conducted with systems librarians from these libraries. The findings show that the concept of web library services provision in these two public university libraries is a far-fetched dream because many library services are not on the web. For instance, both the University of Zambia and Copperbelt University libraries do not provide on-line reference, self-circulation, and web inter-library loan services. However, both libraries provide web access to their institutional repositories. This research has also revealed that the Copperbelt university library has done far much better than the University of Zambia library as it provides WEBOPAC and on-line reservation to its users. Among the bottlenecks to web library services provision in Zambia identified include limited Internet bandwidth among these university libraries.

Keywords: Web library services; Library, University of Zambia Library; Copperbelt University Library

INTRODUCTION

The Internet and World Wide Web (W3) are among the technologies that have had a profound impact in the history of mankind. Since the liberalization of the Internet by the United States of America (USA) and birth of the W3 in the early 1990s, the way people live and work have changed. People have been ushered into a click dispensation; the digital era or information age. In this click society, some people work from their homes in what is commonly referred to as telecommuting. Others shop on-line from the comfort of their homes, hotel rooms and offices through what is called e-commerce. Communication in this click society has been simplified

with the coming on board of Web 2.0 applications such as Facebook, Twitter, Whatsapp and Skype. Indeed, there has been a paradigm shift in the way mankind live, work and socialize. This paradigm shift has equally affected libraries as their users are increasingly demanding libraries to provide an array of services through the Internet and W3. As Ahmad (2011) observes, before the advancement of information and communication technologies (ICTs), both the librarian and the user had to be physically present in the library in order to exchange the information. This made the library to be called the trinity of staff, user and document collections. This has however changed with the emergence of ICTs. The physical walls of libraries are melting like ice in an open environment. Ahmad (2011) further postulates that with the use of ICTs, users can search library catalogues (WEBOPAC) from anywhere at any time; Users can easily do the reservation of information sources; and perform self circulation. ICTs have revolutionized library services provision and helped in fulfilling Ranganathan's five laws of Library Science, especially the fourth law of saving the time of the reader as services are being provided to the user faster.

In this regard, many libraries are stretching their integrated library management systems by adding more modules that could attend to the new demands laid on them by the users. Other libraries are migrating from less robust to more robust and versatile library management systems that could enable them provide web base services to their clientele. For example, the Marine Institute of Technology, Anna University in India has migrated from dbase library management system to KOHA in order to avail web based library services to its users.

It is indisputable to say that many African libraries stand aloof from using the Internet and the web to provide services to their users. However, some university libraries have embraced these two technologies to better service provision. It was against this background that a comparative study be conducted to measure the extent to which the two main public university libraries in Zambia (University of Zambia and Copperbelt University libraries) have embraced the Internet and W3 in providing services to their users.

BACKGROUND INFORMATION

The Republic of Zambia is a landlocked country in Southern Africa shares borders with eight countries; namely Democratic Republic of the Congo (DRC), Tanzania, Malawi, Mozambique,

Zimbabwe, Botswana, Namibia, and Angola. Zambia's It attained its independence from Britain in 1964. Like many countries, Zambia has four types of libraries; namely *public, school, academic and special libraries*. Public libraries are run by both the Zambia Library Service (a department under the Ministry of Education) and Local Authorities (Councils). Government school libraries are supported by the Zambia Library services, while private school libraries are solely run by individual private schools. Special libraries are run by organizations which include government departments, State owned enterprises (parastatals), foreign missions (Embassies and Commissions), none-governmental organizations and private companies. On the other hand, academic libraries are run by higher institutions of learning such colleges and Universities. Zambia has now three public universities; namely the University of Zambia, Copperbelt University and Mulungushi University. Mulungushi University Library is not yet automated hence the decision not to include it in this comparative study. It is worthy also to mention that that Zambia has no national library. The National Archives of Zambia and the University of Zambia perform the functions of the National library in country.

The University of Zambia (UNZA) library is the oldest and largest academic library in Zambia and puts on the hut of a national library. It was established in 1966 and officially launched in 1969 to support the teaching and learning at the University of Zambia. The Library is located in Lusaka. It has a holding of over 300,000 volumes and has a sitting capacity of 1,650 readers. It has two branches namely; the University of Zambia Medical Library and Samora Machel Veterinary Library.

The Copperbelt University (CBU) library on the other hand began as a branch library of the University of Zambia library serving students from the Northern, Copperbelt and Luapula regions that were pursuing their studies at the University of Zambia at Ndola Campus. It was however turned into a full-fledged university library in 1987 by an Act of Parliament when the Ndola Campus of the University of Zambia was turned into a full-fledged university (Copperbelt University). Copperbelt University is located in Kitwe on the Copperbelt Province. Currently, the Copperbelt University library has a collection of about 25,000 volumes

STATEMENT OF THE PROBLEM

As articulated in the introduction, the birth of the Internet and Web has given libraries an opportunity to provide web based library services to their user. In this vain, the two big public university libraries in Zambia have made efforts to make available their library services on the web as way to improve library service provision to their users. This has been characterized by upgrading their integrated library management systems by adding more features to them so that they could provide web based libraries services that the 21st Century library users are craving for.

OBJECTIVES

The main objective of this paper was to compare and contrast the extent to which the two public university libraries in Zambia (The University of Zambia and Copperbelt University libraries) use the Internet and Web to provide web based library services to their uses. In so doing , the study sought:

- to establish the automation software being used by the University of Zambia and Copperbelt University libraries
- to find out if the University of Zambia and Copperbelt University libraries do provide WEBOPAC
- to find out if the University of Zambia and Copperbelt University libraries provide full-text access to their e-resources through the Internet and Web.
- to establish whether or not the University of Zambia and Copperbelt University libraries do provide web based self circulation
- to ascertain if the University of Zambia and Copperbelt University libraries do provide on-line reservation of information resources to their users
- to find out if the University of Zambia and Copperbelt University libraries do provide on-line reference services to their users
- to determine if the University of Zambia and Copperbelt University libraries provide web based current awareness services to their users

- to establish if the University of Zambia and Copperbelt University libraries do provide on-line inter-library loan services to their users.

DEFINITION OF CONCEPTS

A number of terms need to be defined. These include Information and Communication Technologies (ICTs), the Internet and Web. Information Communication Technologies (ICTs) have been defined as any electronic means used for collection processing, storage and communication or dissemination of information (Hutchinson and Stacey, 2000). ICTs are technologies that are used in the manipulation and communication of information. ICTs include both telecommunication and computer technologies. Computers and various computer-based networks such as Local Area Network (LAN) and Wide Area Network (WAN)- the Internet are all good examples of ICTs. Radio and television communication devices are also examples of ICTs.

The term internet is defined by Uttam (2012, p.4) as a global system that consists of millions of public, private, academic, business and government networks of local to global scope. It is simply a network of computers that are linked together through telecommunication technologies. The Internet is therefore a public information infrastructure which facilitates information exchange.

The World Wide Web (W3) is a collection of huge amount of web pages grouped in a form of Web sites and hosted on Web servers (Ralpha and Savaliya, 2013, p.19). The Web therefore refers to various documents and multimedia resources that are found on various computer servers that are accessed through the Internet. It can be safely deduced that the Web is basically a repository of information resources that are accessed via the Internet.

The term library is defined by the American Library magazine (2013) as a collection of resources in a variety of formats that is organized by information professionals or other experts who provide convenient physical, digital, bibliographic, or intellectual access and offer targeted services and programs with the mission of educating, informing, or entertaining a variety of audiences and the goal of stimulating individual learning and advancing society as a whole. In this regard, a university library entails an academic library which is attached to a university that serves the teaching, learning and research activities of the university community.

On the other hand, the term Internet/web based library service mean a lot of things depending on the context in which it is used. In this paper, the term internet/web library service has been used to refer to any service that is provided and accessed through the Internet and World Wide Web.

LITERATURE REVIEW

As already alluded to, the birth of the Internet with the Web has presented tremendous opportunities for libraries that are ready and willing to make use of them in improving service provision to their users. As Sarojanand (2013, p. 334) observes that the Internet is a wonderful information technological tool which provides information faster beyond imagination. Sarojanand (2013) further postulates that the Internet provides on-line access to information and has become a necessity for every library. True to the sentiments expressed above by Sarojanand, many libraries have embraced the Internet and Web in their service provisions. They look at the Internet and Web as an enablers not as competitors to their services provision because they enable libraries to provide services in an efficient and effective manner. The Internet and Web have indeed strengthened the hands of many libraries as regards services provision.

It is indisputable to say that for any library to provide Internet and Web-based library services, it has to automate its operations. In this regard, libraries world over have automated their operations with Integrated Library Management Systems and have built digital libraries using Digital Library Systems which are in turned linked to the Internet so that library services could be accessed remotely through the Internet and Web. To automate library's activities, both proprietary software such as Liberty and Unicon and Open Source Software such as Koha, Evergreen and ABCD are used used For creating digital libraries or institutional repositories software such Digiboard (propitiatory), Dspace, Greenstone and e-prints (Free and Open source software) are used.

As already highlighted in the introduction, libraries are taking library services closer to users. The Internet and Web have provided a platform for them to provide an array of services. One of the innovative library services that have been hatched by the Internet and the Web is WebOPAC. ICTs has made library to transform their traditional catalogues such as card into catalogues that can be accessed by the users on line. Bibliographic records of many libraries are now accessible online. With the birth of the Internet and World Wide Web, libraries are having web- based

catalogues which are referred to as Web OPACs; that are accessible by library users through the Internet and Web. According Ganaie (2013), OPAC allows searching the entire catalogue online, conveniently and quickly, using one or more search criteria. One can search by author, title, keywords, class number or one or more of these combined together. OPAC even shows the current status of a book, whether it is loaned out, available on the shelf or lying elsewhere. Online catalogue service has been widely implemented in many libraries operating in both developed and developing countries. For example, on grand scale, the Danish government in 2000 launched a national WebOPAC called bibliotek.dk. This WebOPAC is an amalgamation of various public and research libraries catalogues that are accessible by the users through the Internet and Web. According to Sethunath and Ganesh (2012), through this Web-based union catalogue, users in Denmark can order what they want and collect it at the library of their presence. In Africa, the Africa University in Zimbabwe is among universities that provide electronic bibliographic services which are accessible through both LAN and WAN (internet). Chisenga (2006) however observes that effective implementation of OPAC in sub-Saharan Africa is dogged by unreliable internet services as libraries are struggling to acquire sufficient bandwidth and constant power outages being experienced by these countries.

The implementation of library automation world over has enabled libraries to provide full -text access to their electronic information resources stored in their repositories. Apart from showing what information resources available in the library through Web OPAC, libraries do provide full-text access to library e-resources. In many developed countries, library users do not need to be in the library to access e-resources but they can access such materials anywhere through the Internet and Web as long as they have library user accounts. Michigan State University and Oxford University libraries, just to mention a few are providing full-text access to e-resources such as journals on the Internet and Web. For information resources such as thesis and other none- journal resources that are kept in institutional repositories, many libraries have implemented open access philosophy to them. It is encouraging to note that some libraries in Africa have made resources in their institutional repositories available to users freely on the Internet and Web. Mutula (2012) reports that some university libraries in Sub-Saharan Africa such as the University of Namibia are preserving and making available through the Internet and

Web their academic works such as thesis and other academic papers that are stored in their institutional repositories such as D-space.

Another Internet and Web innovative library services is self circulation of information resources. According to Ahmad (2012), one of the benefits of ICTs is that users can do self circulation of library resources. This entails that library users can log onto the Library Management System, search for an information resource, and borrow it if it is available and present to the issue desk for stamping by library staff. In some situations where the library user is off site, library staff has to deliver the borrowed information resource to the client at a fee. For e-resources, the borrowed resource could be downloaded to the computer terminal of the borrower through programs such as *Kindle* where it is used until the expiry date. Amazon.com (2013) reports that there are more than 11,000 libraries in the United States that offer public library books for Kindle, which allows user to borrow e-books that are sent directly to users Kindle device or reading applications where they will be available for a specified period of time like a regular library book. Public library books for kindle provide the same features as kindle books, including ability to highlight certain portions of the text. The practice of self-circulation is rife in libraries in developed countries. For example, UC DAVIS University Library in the United States of America uses the Internet and Web to provide self-circulation of information resources to its users.

ICTs have made library patrons to reserve information resources on-line; without them going to the library. All they need to do is to login into the Library Management System of their library, search for material, and place it on hold if it is being used other users so that when it is returned, the library staff will inform the user to go and collect it. In some developing countries such Bangladesh and Sub-Saharan Africa, this service is not feasible in libraries. For example, Rajshahi and Mahakhali in 2007 conducted a research on the use of ICTs in University libraries in Bangladesh, the results show that among the surveyed university libraries only one library provides electronic reservation of information resources. Reasons cited for this include the reluctance of library personnel to accept new technologies and lack of ICTs infrastructure in libraries.

The birth of the Internet and Web has changed the way libraries provide current awareness services to their users. Today, libraries can inform their users about the new materials acquired, notify users about change may be in the time a service is provided or inform them about other services available through ICTs facilities a such as e-mails and Short Text Message (SMS). In addition, libraries can inform their users through RSS (Rich Site Summary). Many libraries have incorporated RSS service into their websites. Library users with RSS reader software installed on their Personal computers and mobile phones are able to receive updated information from the library. Years back, library staff had to wait for the users to come to the library before they could inform them about library services and activities. Social networking tools, such as facebook and Twitter also help libraries to inform their users on their day-to-day operations (Cornell University Library: 2013). In this regard, a library operating in this century need to have Facebook and Twitter accounts where it should be posting announcements to the users. Many libraries are providing online current awareness; these include Nanyang University of Technology in China and Cornell University library in the USA. A quick scan of some Sub-Saharan African University libraries' websites on the Internet reveals that many do provide current awareness to their users through e-mails and social networking media such as Facebook and Twitter. For instance, University Botswana, University of Cape Town and University of Nairobi libraries do provide on-line current awareness to their users.

Electronic inter-library loan as the name suggest is the service in which library users borrow an information resources from another library that is participating in the library co-operation electronically. Inter-library loan service allows users to obtain materials which are not readily available locally (<http://www.hw.ac.uk/is/ill.html>). In this case, partner libraries have harmonize their Online Access Catalogue (OPAC) so that if the users searches for the material from the home library and it is not available, the system will automatically allow them to search the catalogue of other libraries. With Integrated Library Management Systems like Liberty, libraries participating in library co-operation can synchronize their catalogues and users can search and borrow the materials from partner libraries.

RESEARCH DESIGN AND METHODOLOGY

This study was qualitative and employed a comparative descriptive research approach. In this regard, two elements (the University of Zambia and Copperbelt University) library services were studied in order to establish the Internet and Web-based library services they offer to their users. More importantly, similarities and differences in the manner in which the two big public university libraries in Zambia use the Internet and web to provide library services to their users was studied. This design was chosen because it provides an in-depth comparison of the two university libraries and helped to describe their web based library services provision.

Data for this study was collected from two sources; namely primary and secondary sources.

To get accurate information on the operations of the two public university libraries, key informants were identified and interviewed. These were System Librarians for the University of Zambia and Copperbelt University Libraries. Oral interviews were conducted with the two system librarians for the universities under study. The Systems librarians were selected for interviews because they are in charge of ICTs in these libraries; therefore it was believed that they fully understand the use of the Internet and Web in their libraries and could provide the much needed information for the research. Secondary data on Internet and web services being provided by the two public university libraries was collected from documents that relate to the operations of these libraries such as web pages, brochures, policies, reports and other documents. These documents were studied carefully in order to decipher the services which are being provided by the two public universities nonlinear.

DATA ANALYSIS

Data for this study was analyzed qualitatively and findings were presented in textual tables.

PRESENTATION OF RESEARCH FINDINGS

To start with, the research sought to find out the library systems in use among the two public university libraries. It was discovered that the University of Zambia library uses *Unicon* (SirsiDynix Symphony) while the Copperbelt University library uses *Liberty 5*. This implies that both libraries use proprietary Integrated Library Management Systems which are not free. The libraries are paying vendor to use the software. Unlike Free and Open Source Software (FOSS),

the two public universities have no rights to modify and re- distribute the software. It was also discovered that these software are fully integrated library management systems with all the features needed for a library to fully automate its operations. It was however discovered both the University of Zambia and Copperbelt universities libraries use Dspace for their institutional repositories

Table 1: Library Automation Systems in use

Name of the Library	Library Automation Systems in use
Copperbelt University	Liberty 5 and Dspace
The University of Zambia	Unicon and Dspace

On whether or not the libraries under study provide Web based Online Access Catalogue (WebOPAC), a visit to the websites of the two public university libraries at <http://liberty.cbu.ac.zm:8080/liberty> and <http://e-library.unza.zm/uhtbin/cgisirsi.exe/x/0/0/49> respectively and follow up oral interviews with Systems Librarians revealed the following below results.

Table 2: Availability of WebOPAC

Name of the Library	Availability of WebOPAC
Copperbelt University	Yes
The University of Zambia	No

These findings show the University of Zambia does not provide WEBOPAC to its users. It only provides OPAC that is accessible on the University campus; users off campus cannot access the catalogues through the Internet and Web. It is only accessible on the university local area network. On the other hand, the Copperbelt University Library has a functioning WebOPAC which is accessible on both the local area network and the Internet and Web. This makes its users to search for the materials in the library regardless of the location where they are as long as they have access to the Internet.

On the ability of the two public university libraries' to provide access to full-text e-resources on the Internet and Web, it was discovered that both libraries are providing access to e-resources particularly thesis and other academic papers that are kept in the institutional repositories.

Table 3: Access to full-text e-resources on the Internet

Name of the Library	Full-text e-resources on the Internet
Copperbelt University	Yes
The University of Zambia	Yes

These resources can be accessed by any person; an open access policy has been implemented by the two libraries. The study further revealed that on their Web-pages, the two public university libraries provide links to many Open Access Journals. The research however discovers that the both the University of Zambia and Copperbelt universities libraries do not provide full-text access to commercial journals which they have subscribed to. These journals could only be accessed if one is on campus; using the university local area network.

As captured in the literature review, many libraries are using the Internet and Web to allow library users to lend themselves information resources with less involvement of library staff. On the available of self circulation service among the two studied libraries, it was discovered both libraries do not provide such a service to their users. Therefore, users still have to go to the library to borrow and renew the library materials. The study however discovered that the systems (Liberty 5 and Unicorn) being used by all the two public university libraries have functionalities or features that support self circulation. At the moment, these features have been disabled. When the system Librarian for instance for Copperbelt university library was asked to explain why this important feature is disabled, he said that the library believed that the library users were responsible enough to be entrusted with such a responsibility.

Table 4: Availability of Self (Online) Circulation

Name of the Library	Self (Online) circulation
Copperbelt University	No
The University of Zambia	No

On the issue of Internet/web based reservation of information resources, the study discovered that the Copperbelt University library does provide such service to its users while the University of Zambia library does on-line reservation of library resources service to its users. Further, it was discovered that even if the users are using the Local Area Network, they can not reserve the materials because this service does not simply exist.

Table 5: Availability of Internet/Web reservation

Name of the Library	Internet/Web reservation service
Copperbelt University	Yes
The University of Zambia	No

These findings therefore imply that University of Zambia library users who are way from the campus cannot use can not reserve library materials services. They have to be physically in the library if they have to do so.

The research on web-based current awareness service discovered that both the Copperbelt University and University of Zambia libraries do provide web based current awareness services to their users. These libraries use media such as e-mail, social networking media such as Facebook and Twitter to alert users for the new services or any change in the library operations. In addition, these two libraries use mobile phones to inform users.

Table 6: Availability of Online current awareness service

Name of the Library	Online current awareness service
Copperbelt University	Yes
The University of Zambia	Yes

The research however revealed that the University of Zambia library does not effectively make use of this service available in its Integrated Library Management System. The system librarian acknowledged the fact the on-line current awareness service was currently under utilized at the University of Zambia library.

A major mirror that reflects modernity in libraries is virtual or online reference service. It is widely implemented in many libraries today. The study on the two universities revealed that both

the University of Zambia and Copperbelt University libraries do not offer such a service. There are no virtual references offices created by these libraries where users can cable their reference queries.

Table 7: Availability of Online (Virtual) reference service

Name of the Library	Online (Virtual) reference service
Copperbelt University	No
The University of Zambia	No

Users of these libraries still have to go to the reference librarian's office or reference section to receive reference services. The study however discovered that Copperbelt University Library has links to on-line reference resources such as dictionaries. This gives users access to on-line reference materials such as dictionaries encyclopedia and almanacs.

Library users today can borrow electronically from another library that is in co-operation with their library. In this regard, the study also sought to find out whether or not the two public university libraries in Zambia do provide such a service to their users. The results show that none of the studied university libraries provide such a service.

Table 8: Availability of online interlibrary loan

Name of the library	Availability of online interlibrary loan
Copperbelt University	No
The University of Zambia	No

It was however observed that both systems being used the public universities libraries have modules support Inter-library Loan. They modules are just not configured; therefore, library users can not use this facility to borrow electronically from Copperbelt university and the University of Zambia libraries' partners.

DISCUSSION OF THE RESEARCH FINDINGS

The study has shown that the public university libraries in Zambia have not fully utilized the Internet and Web to provide web (online) library services as many library services are still not available on the Internet and Web. For instance, the two university libraries in Zambia have continued not to allow their users to have access to commercial Journals off campus through the

Internet. Access to these important e-resources is through their local area networks. They are still sorting out the issues relating the IP addresses to server databases where the e-journals are hosted. Many libraries world over allow users to access e-journals off campus by the use of proxy servers or virtual private network where user's login details are authenticated.

The study also reveals that the all the two public libraries completely do not provides internet based inter-library loan facilities. They also do not avail to their users on-line or virtual reference services. Further, they do not provide self on-line circulation services to the users. As Chisenga (2006) observed that libraries in Africa use ICTs in a restrictive way just to automate some library operations, the findings of the study confirm and affirm Chisenga's findings as the two big public universities libraries in Zambia do not provide most of their services on the Internet and Web. Many library services are still being provided in a traditional way; where users have to be physically in the library.

This is unfortunate because many academic libraries such as Indian Institute of Technology in India provide Internet and web-based library services to their users so as to provide efficient and convenient services. Any library worth its salt should strive to provide its services online so as to serve the user's time of going to the library as propounded by Professor Langanathan. Times have changed; today's library users are asking for services closer to their door steps through the use of the Internet and Web. Libraries especially academic libraries should be tune with these changes so that they continue to provide services that meet the needs of their users.

On a positive note however, the two university libraries have managed to put on the Internet and web their institutional repositories. These repositories are accessible and one can download full-text of the thesis and other academic papers. This fulfills the philosophy of open access to academic works.

Taking a closer look at the findings above, one could be haste to say that the Copperbelt university library has done much better than the University of Zambia Library in providing web based library services to its users. The Copperbelt University library has a considerable amount of library services on the Internet and Web. Among these services include on-line access to the bibliographic records of the library through WebOPAC, current awareness and electronic reservation of information resources. However, the University of Zambia still has a bulky of its services off the Internet and Web. For instance, the library users can not access the library

catalogue if they are not on campus. This is because the bibliographic records of the libraries are stored on a local server which is not connected to the Internet and Web. Other vital services such as online reservation and online current awareness are not feasible at the University of Zambia Library. The online current awareness it claims to be providing is just on paper. It is inactive and users are not notified about the new information materials and any other library activities through Internet based communication technologies such as electronic mails and social media such as Facebook and Twitter. The inability of the University of Zambia library to provide many of its critical services on the Internet subtracts greatly from its reputation as the mother of libraries in Zambia as it wears also the hut of a National library for Zambia.

This study as has also shown that the two academic libraries have installed Library Management Systems that are capable of powering them to provide full- fledged web based library services. It was discovered that the two libraries have not fully utilized these installed library systems. The infrastructure or the systems are being under utilized as management of the two libraries have not either enabled or not paid for some modules that could enable these libraries provide many web-based services. For instance, the University of Zambia Library Management System called Unicon has WebOPAC module This module however is not being fully utilized as these because it is only accessible on the Local Area Network

There are a number of factors observed in this study that inhibit libraries from providing internet /web based library services in Zambia. These include limited internet bandwidth and inadequate training among library staff. The issue of slow internet connectivity has been dogging the Copperbelt University and the University of Zambia for many years now. Internet has been unreliable and slow. This has been cited as a major bottleneck to the provision of web library services among the studied public university libraries in Zambia. Tuesday (2010) observed that internet connectivity in Zambia was still a challenge as it was characterized by low (limited) bandwidth and high cost of subscription fees. The system librarians interviewed from the two public universities cited limited internet bandwidth as major factor inhibiting them from putting many library services on the Internet and Web. For instance, the University of Zambia library's OPAC ais not accessible on the Internet for fear of clogging the already congested network. The computer Center (the unit managing the university network) has not allowed OPAC and other services to be on the Internet and Web.

The problem of poor internet connectivity is however changing with the launch of Zambian Research Education Network (ZAMREN); an Internet Service Provider for all the Public universities in Zambia. This project has started providing internet services to public universities. The issue of inadequate ICTs training is also another factor contributing to low provision of web library services among public university libraries in Zambia. Like the Head Collection development ; who at the time of the interviews was acting system librarian at the University of Zambia library observed that there is general lack of training among library staff on how to use Integrated Library Management Systems to provide web-based library services. Therefore, library systems in use in these libraries especially the University of Zambia are under-utilized.

CONCLUSION

From the study conducted, it is evident that the two public university libraries in Zambia have not fully embraced the Internet and Web in providing on-line library services. This is evident by the fact that the two libraries do not provide access to e-journal off campus, on-line reference services, web inter-library loans and self circulation. However, the Copperbelt university library is better than the University of Zambia library in using the Internet and Web to provide services to its users. It provides WEBOPAC to its users. Further, it provides on-line reservation of information resources and web based current awareness services. On the contrary, the University of Zambia Library has a large portion of its services off the Internet and Web.

RECOMMENDATIONS

In view of the above findings, the following recommendations should be considered for implementation among the concerned university libraries if they have to fully provide electronic library services to their users:

- The two university libraries (Copperbelt University and University of Zambia libraries) should quickly sort out the issues regarding off campus access to e-commercial journals.
- Management of the Copperbelt University and University of Zambia libraries should ensure that they fully make use all the modules available in their integrated management systems to provide on-line library services to users.

- University management of the two libraries should ensure that internet provision is enhanced to ensure efficient web based library services provision.
- Library management should train their staff on the use of ICTs in providing web-based library services.

REFERENCES

1. Adeniji, A. (2012). "Availability and use of ICT in Olabisi Onabanjo". PNLA Quarterly. Available online at <http://unllib.unl.edu/LPP/PNLA%20Quarterly/adeniji-adeniji-oguniyi75-3.htm>. Accessed on 11/01/2014.
2. Amazon.com (2013). *Public Library Books for Kindle*. Available Online at <http://www.amazon.com/gp/help/customer/display.html/?nodeId=200747550>. Accessed on 12/17/13
3. American Library magazine (2013). *Meaning of a Library*. Available Online at <http://americanlibrariesmagazine.org/ask-ala-librarian/what-library>. Accessed on 29/12/13
4. Balasubramanian, P. (2011). *Library Automation and Networking*. New Delhi: Deep & Deep Publications Ltd
5. Badhusha, K. N. (2008). *Digital Library Architecture*. New Delhi: Anne Books India, 206-207p.
6. Chisenga, J. (2006). "Information and Communication Technologies: opportunities and challenges for national and university libraries in Eastern, Central and Southern Africa". Available Online at <http://eprints.rclis.org/9579/>. Accessed on 07/01/14.
7. Cornell University Library (2013). *Current Awareness Services*. Available Online at <http://www.library.cornell.edu/resrch/current>. Accessed on 03/05/13.
8. Copperbelt University Library. (2013). *Copperbelt University Library Home Page*. Available Online at <http://liberty.cbu.ac.zm:8080/liberty/libraryHome>. Accessed on 07/01/14.
9. Ganaie, A. S. (2013). "A glimpse of information technology enabled library services". *International Journal of Digital Library Services*, Vol.3, Issue no. 1, pp 78-82
10. Jha, S. (2013). *UGC-NET/JRF/SET Library and Information Science: paper II & III*. New Delhi: Upkar's

11. Los Angeles University Library (2013). *Renew your Books*. Available Online at <http://library.ucla.edu/service/renew-your-books>. Accessed on 05/01/2014.
12. Heriot-Watt University Library (2013). *Information Services*. Available Online at <http://www.hw.ac.uk/is/ill.html>. Accessed on 05/12/2012.
13. Hutchinson, S. E. and Sawyer, S. C. (2000). *Computers, Communications and Information*. London: McGraw-Hill Education.
14. Islam S and Islam, N .(2007). *Use of ICT in Libraries: An Empirical Study of Selected Libraries in Bangladesh*. Available Online at <http://www.webpages.uidaho.edu/~mbolin/shariful.htm>. Accessed on 05/01/2014.
15. Mutula,S.M (2012). “Library sub-Saharan Africa: A case Study of Botswana University.” *Emerald Journal of Electronic Library Services*. Vol. 46 No. 3, pp 292-307
16. The University of Zambia Library (2014). *Library Home Page*. Available Online at http://www.unza.zm/index.php?option=com_content&task=view&id=14. Accessed on 12/11/2014.
17. Okiy, R. B .(2010). “Globalization and ICT in Academic Libraries in Nigeria: The Way Forward”. Available Online at <http://unllib.unl.edu/LPP/okiy.htm>. Accessed on 08/01/14.
18. UC DAVIS University Library (2013). *Borrowing and Circulation*. Available Online at <http://www.lib.ucdavis.edu/dept/circ/circservices.php> . Accessed on 08/01/14.
19. Nanyang University Library (2014). *Reservation of Library Materials*. Available Online <http://www.ntu.edu.sg/library/loanscirculation/Pages/ItemReservation.aspx>. Accessed on 19/01/14.
20. Sivadas, K. K. (2012). *Library Management*. New Delhi: A.P.H Publishing Cooperation, 158-162p.
21. Tiwary, P.(2012). *Organization and Development of Libraries*. New Delhi: A.P.H Publishing Cooperation

Follow us on: [IRJLIS](#), [Facebook](#), [Twitter](#)