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## IMPACT OF INFORMATION TECHNOLOGY ON LIBRARY SERVICES: A CASE STUDY OF CHUKA UNIVERSITY LIBRARY

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### ABSTRACT

Information technology has provided libraries with opportunities to share innovative practices and concepts by providing platforms where individuals can come together and collaborate. The study examined the impact of information technology on library services in Chuka University Library. The paper traces briefly the history of Chuka University Library. The study adopted the descriptive survey method. The questionnaire was used as instrument for collecting data. Results showed that use of information technology on library services assists develop the library by ensuring quick delivery, access and easy retrieval of information by users. Inadequate librarians' information technology skills, provision of information technology training programmes and infrastructure hinder the effective use of information technology in Chuka University library. Therefore, there should be adequate training and retraining of librarians to equip them with the required skills in modern technologies and injection of funds for infrastructural development for effective library services. This will result in the effective delivery of information services.

**Keywords:** ICT, Information retrieval, Librarians, Library infrastructure

### INTRODUCTION

The academic library has always been referred to as the heart of the university. Traditionally, the academic library was the place where scholarships occurred. It was the place where students and faculty went to do research, find a quiet place to study, to check out materials and to get assistance from a librarian in order to locate information hidden away on dusty shelves. Today much has changed; the academic library has evolved to a warehouse of technology, a center for digitization, a multimedia hub and a rejuvenated space for collaboration and exploration (Markgren, Carrie and Leah, 2010). In this respect, they have stood

unchallenged throughout the world as the primary source of recorded knowledge and historical records. However, today academic libraries in developing countries like Kenya seem to be facing daunting challenges in regard to their primary role of delivering information to their users. The reason as to why they are losing their supremacy in carrying out this fundamental role is due to the changing information environment and media landscape, technological innovations, user expectations, and various economic issues. Therefore academic libraries in developing countries including Kenya have no option but to adopt business-like approaches in information management practices (Ondiek, 2009).

### **HISTORY OF CHUKA UNIVERSITY LIBRARY**

The library was started in December 2005, after the establishment of Eastern Campus of Egerton University. The campus was later named Chuka University College through legal notice No. 161 of 2007 leading to inception of Chuka University library. The library was started with 78 titles borrowed from its mother University Egerton University. It was staffed with one trained librarian and one subordinate staff. The library was housed in a wooden building with sitting capacity of 100 users. The library has grown over the years.

In 2009 the library was turned to an ultra-modern library with a seating capacity of 500 users. The library collection has grown to about 15,000 titles and currently it has twenty trained librarians. The library carries basic function of acquiring. The library was started in December 2005, after the establishment of Eastern Campus of Egerton University. The campus was later named Chuka University College through legal notice No. 161 of 2007 leading to inception of Chuka University library. The library was started with 78 titles borrowed from its mother university, Egerton. It was staffed with one trained librarian and one subordinate staff. The library was housed in a wooden building with sitting capacity of 100 users. The library has grown over the years. In 2009 the library was turned to an ultra-modern library with a seating capacity of 500 users. The library collection has grown to about 15,000 titles and currently it has ten trained librarians. The library carries basic function of acquiring processing, organizing and disseminating the information in line with mission and vision of the university. The library automated its operations in January 2012. Chuka University Library is a member of the Kenya Library and Information Services consortium which facilitates access to Electronic resources.

### **REVIEW OF RELATED LITERATURE**

Like in all fields of human activity, with the advent of information technology, a radical transformation is taking place in the library. Researchers have indicated that effective IT adoption, diffusion and infusion are critical for organizations such as universities for the operation of their activities, including learning, teaching, research, communication and management (Aguila-Obra and Padilla-Meléndez 2006; Peansupap and Walker 2005; Yan and Fiorito 2007; Fink and Disterer 2006). As a result, without knowing it, modern libraries are embracing new software and other related hosting services to provide innovative products and services for preserving intellectual efforts (Leckie and Buschman, 2010).

Libraries are using the Information Technology to automate a wide range of administrative and technical process, build databases, networks and provide better services to their users. (Rasuland Sahu, 2011). IT applications in the library include computers, Internet-based facilities, printers, laminators, faxes and photocopiers. (Emojorho 2011; Mamafha 2013). These applications are widely used for library networking and resource sharing, eliminate duplication of efforts, improve the speed of operations, increase access to information resources and improve the quality of information services (Peyala, 2011) While new technologies have added value to library services by presenting new modes of collecting, storing, retrieving and providing information, they have also brought new challenges and aggravated some of the challenges that faced libraries before. The challenges relate to acquisition of IT, preservation of electronic information resources, maintenance and security issues, training of users, and general lack of awareness and commitment among library stakeholders (Emmanuel and Sife 2008). Resistance to change is another

challenge. There are many university librarians, researchers, readers and authors who have resisted the change to e-world. Some of them have no valid reason for this. Other librarians believe that if they embrace the electronic version completely, their jobs are at risk (Milimo, 2013).

Emorjoh and Adomi (2006), have made a useful study aimed at looking at the extent to which staff of Delta State University, Abraka, Nigeria, are acquainted with and use information technology facilities for academic pursuit. In the study a higher proportion of academic and senior non-academic staff are satisfied with the input of IT facilities. Despite the availability of various kinds of information technology facilities, there are some significant barriers to the extent to which the IT facilities can be used adequately they include electricity power outage, unreliable telecommunication infrastructure, internet traffic congestion, high internet service charges and unsatisfactory performance of internet service provider.

Marimuthu, and Paraman (2011), in a study conducted in some of the major universities and academic institutions in Kuwait, found that there is no area which has not been influenced by IT. Their paper was designed to measure the use of IT in the academic libraries of Kuwait and to establish some co-relation between quality in libraries and use of IT. Library professionals today need to acquire knowledge and skills in information and communication technology as the services of more and more libraries are now centering on IT, especially in educational institutions. Application of IT in academic environment in Kuwait has increased gradually in the recent decades. In the study they found out that IT mainly helps to provide timely information and facilitates real-time access to remote databases. The importance of information lies in its accessibility and utilization by users for productivity and decision making. Therefore Information Technology remains one of the primary drivers of change in the ways that people work, seek information, communicate, and entertain themselves. In an academic environment, no unit has been transformed by technology than the library.

### **Need for the study**

It is hard to imagine an institution of higher learning without a library. The academic library has a prominent role to play in supporting higher education and fulfilling the objectives of its parent institution. The librarians see it in terms of provision of and access to quality service than just physical space. Academic libraries today are faced with challenges on several fronts, making services engaging to patrons, handling research data management tools, demonstrating their value, digital data preservation and digital licensing are threatening their survival. With evolving technological innovations and information explosion, competition will continue to intensify for Academic libraries. The services in the library should match the needs of the users. Therefore this study highlights the application of IT in Chuka University Library.

### **Research objectives and Methodology**

Building on the previous works mentioned above, the research was designed to examine the impact of information technology on library services at Chuka University Library. However the more specific objectives are as follows:

- To investigate the benefit of Information Technology to the librarian and library users.
- To determine how skillful and knowledgeable the library staff are.
- To determine the challenges faced by Chuka University Library in relation to the application of information technology in its services

### **METHODOLOGY**

The research design used for this study is descriptive survey method. The population of study comprised of 60 respondents i.e. Library staff and students of Chuka University Library. Opinions were elicited using a structured questionnaire. Copies of the questionnaire were administered randomly by the researchers. A

total of 50 questionnaires were returned out of the 60 sent out. The data generated from the study were analyzed with the use of tables and simple percentages.

**Table 1.** Reveals the awareness of the existence of various information technologies by respondents in Chuka University Library

SN	IT facilities in the library	Number of respondents	Percentage of sample size
1	computers	20	40%
2	Printers	10	20%
3	Wireless Internet	15	25%
4	Barcode scanner	5	15%
	Total	50	100%

The study shows that most of the respondents know of the existence and availability of IT facilities in the Chuka University Library. 20 (40%) are aware of computers, 10(20%) are aware of printers, 15(25%) are aware of wireless internet and 5(15%) are aware of the Barcode scanner.

**Table 2.** Benefits of using IT in the library

SN	Benefits	Number of respondents	Percentage of sample size
1	ICT application facilitate quick access to information	20	40%
2	ICT application improve quality of library services	15	30%
3	ICT application help to enhance knowledge and skills	10	20%
4	ICT application improve the status	5	10%
	Total	50	100%

The Table above shows that majority of the respondents 20(40%) agreed that the major benefit derived from IT is that it facilitates quick access to information. 15(30%) were of the view that the use of IT improves the quality of library services, 10 (20%) were of the view that IT enhances knowledge and skills and 5(10%) indicated that IT improves the status of the library.

**Table 3.** Percentages scores of the areas IT is used in the library

SN	Areas of application	Number of Library staff respondents	Percentage of sample size
1	Cataloguing, Classification and circulation services	4	40%
2	Reference services	3	30%
3	OPAC	3	30%
	Total	10	100

The table above shows that majority of the respondents agreed 4(40%) that the services and operations in library where IT is mostly applied is Classification, cataloguing and circulation services, this is followed by reference service 3(30%) and OPAC 3(30%).

**Table 4: Skills and knowledge of staff in the use of ICT resources**

SN	Area of IT Applications	Number of staff who can execute the IT application	Percentage of sample size
1	Computer Applications	8	80%

2	Programming	1	10%
3	Web design	1	10%
	Total	10	100%

The table above shows that majority of the respondents 8(80%) have computer Applications skills. 1(10%) of the respondents have knowledge in programming and web design respectively.

**Table 5:** Challenges faced in the library in relation to IT

SN	Challenges	Number of respondents	Percentage of sample size
1	Inadequate infrastructure	22	44%
2	Inadequate training in IT	10	20%
3	Lack of space	10	20%
4	Inadequate funding	8	16%
	Total	50	100%

The table above shows that majority of the respondents 22(44%) agree that inadequate infrastructure is the major problem against the use of IT in the library. 10(20%) of the respondents indicated inadequate skilled librarians, 8(16%) indicated lack of enough funding and 10(20%) indicated space constraint.

## DISCUSSION OF THE FINDINGS

- The findings from this study revealed that the library staff and users of Chuka University library are not only aware of the IT facilities available but make use of them. They are aware and make use of computers and wireless internet than they do others.
- The study shows that IT is effectively used in most of the library functions at Chuka University library such as reference services i.e. current awareness and selective dissemination of information.
- The study shows that the major reason why IT is used in Chuka University Library is it facilitates quick access to information and it improves the quality of library services.
- Challenges identified in other Academic institutions such as epileptic electricity power supply and lack of interest in IT was not found in Chuka University library. However it was found that inadequate infrastructure and the difficulties in using information technologies due to inadequately skilled librarians are the most important problems

## CONCLUSION AND RECOMMENDATIONS

Based on the research findings, observations, and respondents' standpoints, some suggestions and recommendations are made:

- The wide variety of services in academic libraries has increased the expectations of academic librarians. Retraining should not start and end with workshops/seminars, more formal and structured training should be designed to address the needs of the library staff and students
- Massive injection of funds and the provision of a special budget for development of information technology infrastructure should be considered by the parent organization management, the government and donor agencies.
- Information literacy on IT applications of new students should be carried throughout the semester.
- Communications and library skills should be taught to new students by academic staff in the field.

IT has tremendously changed the way information is stored and disseminated. The use of IT has aided in fast delivery of library services such as cataloguing and classification, processing, storage, retrieval and dissemination. The training and re-training of librarians in the necessary IT skills is a necessity for the benefits of library services to be impacted on academic libraries and their users.

To further enhance academic excellence, university authorities should introduce and organize in-service training programmes. If these recommendations are put into effect, then there would be a greater use of information technology facilities by library staff and users which would lead to them being more aware of the latest trends and developments and research in their areas.

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