



# Information Technology a Tool for Effective Management of Educational Resources: An Appraisal

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**Abstract:** *Today, Information and Technology have redefined how communication is carried out and further pushed the envelope on how information is disseminated, especially in learning institutions. The implementation of Information Technologies in library systems over the years has been enormous; however, there is limited understanding of users' experiences in utilizing the Information technology implementations. This study appraised Information Technology implementation and performance at the Library system of Ramat Polytechnic Maiduguri among eighty-three participants using stratified random sampling. Data are collected using survey-questionnaire developed for the study. The research findings show participants are optimistic about Information technology implementation services; however, several issues identified impede effective service delivery. Recommendations were also made, including regular re-training of the personnel to manage e-library and information technology devices and provide a good electricity power back-up to avoid power failure during the facilities' operation the library. The provision of modern equipment's for easy, fast access to the resources in the e-library for useful research was also recommended.*

**Key words:** Information technology, library, educational resources, management, appraisal

## Introduction

The advancement in Information Technology has been a significant benefit to every segment of society. As a general-purpose technology, using a computer is necessary to increase any business operation's productivity. Higher education is being redefined due to the introduction of Information Technologies, particularly in delivering awareness, preserving and transferring information from one location to another (Imhonopi et al, 2017). Library provision in the higher education sector is primarily impacted and strengthened by providing services and has defined maximum improvements. The old methods of managing library resources and services are no longer dynamic and effective. To quickly retrieve and disseminate information and enhance customer service, the

introduction of digital methods using computers and information technology has become completely important (Husain & Nazim, 2015).

A properly computerized and networked library can provide users with fast and prompt support. Library automation refers to the mechanization and automation of library housekeeping processes such as acquisition control, serial control, catalogue classification and circulation control (Li & Zheng, 2016). It also offers an ability to incorporate and exchange different services, tangible and intangible, with other libraries and knowledge providers through proper networking. Access to information has generally been in the library room in the past decades, and as technology progresses, access is now being made online. In recent years, the library has experienced several advances from the traditional library to the new library, where the material is in digital form (Bhoi, 2017; Xu, 2014). Today smart technologies have transformed the library's perspective as technical advancements systematically transform how the learning resources are deployed and accessed.

The initiatives and implementation of Information technologies in library system over the years at the library complex of the Ramat Polytechnic Maiduguri employed the presence of information technology which is very important in the various divisions of the library to promote the best quality services for the library and its' effectiveness to the users. However, the appraisal of such implementation is long overdue to understand its' impact, challenges and strategy for future implementation. Moreover, with the increasing development of emerging smart and mobile technologies in every human endeavor; there is the need to explore its implementation to draw a strategic plan and future implementation. Further, there is limited understanding of users' experiences in utilizing the Information technology implementations in the library system. The purpose of this study is to understand user's experiences to draw findings and recommendation for the overall development of the Information Technology implementation decision by the Management and stakeholder in the library hierarchical system with the following research questions:

- i. Does the library identify with information technology?
- ii. Does the library have a computer network and internet facilities?
- iii. Does information technology improve quality service to users?
- iv. Does the user benefit from information technology implementation in the library?
- v. Do you support the idea of introducing e-library in Ramat Library?

The research believed that addressing these research questions will provide insights into users' experiences to offer overall plan and strategy for implementing Information Technologies utilization library system and help Management and stakeholders in strategic planning, policies and framework for effective implementation.

### **Related Works**

Several related works have been conducted on using information technology as a catalyst for managing library services and resources. Jibia, Mubaraka & Michael (2013) investigated the design requirements for an automated library management system. The research used

a prototyping approach to build a system for library utilization. The prototype fulfilled many of the goals by allowing library personnel to keep track of their customers and services. Searching for reading content has been made simpler since various standards can be applied. The researchers suggest the continuous construction of this system to consider other libraries services that include the management of serials and periodicals, bookings, automated email etc., to enhance educational resources access.

Similarly, Hundu & Anaele (2014) appraised Information Technology's implication on library professional training to understand the extent and challenges of implementation. The authors seek to understand what a successful, relevant and dynamic library and information professional needs to be in this Information Age. The authors recommended the development of the 21st-century library and information systems. Moreover, Aliyu (2015) investigates the appropriate Information Technologies to improve library service system delivery. The author concluded that it is a matter of urgency, Nigerian Libraries and Information Centers should fully embrace ICT to avoid breeding information apathy in the country.

Moreover, Li & Zheng (2016) appraised information technologies' roles in a library management system. The authors argued that with the ongoing advancement of science and technology, information technology is facing the development of several fields. As the primary provider of social and economic changes, Library Management offers a place to advance computing technology that needs excellent service delivery. Also, Mshelia, Gambo, Dawha & Camble (2019) investigated and proposed a model for smart library management based on emerging technologies. The model described how users could utilize their mobile devices on the cloud as an additional source to preserve the network's use through a local server; cloud storage offers flexible facilities and is available at any time when services are needed.

The review of the related works shows that Information technology in the library system is not an option—still, a matter of urgent action to help in institutions' smooth operations. However, there is limited understanding of users' experiences in utilizing the Information technology implementations to understand if these implementations are effective and challenge influencing effective deployments.

### **Methodology**

#### ***Research Instruments***

This study is a descriptive survey aimed to understand the extent of Information Technology implementation in the library services to enhance services delivery (Ghuloum, 2012; Creswell, 2012). The descriptive-survey provides the researcher with the opportunity to accommodate a large sample for the study at hand. The descriptive-survey method investigates participants' perception using dichotomous *questions*-Yes or No format (Creswell, 2012).

**Research Participants and Sampling Process**

The study was conducted among eighty-three participants, including students, academic staff, and Ramat Polytechnic Maiduguri staff, using purposively and stratified random sampling. This method is used to ensure that different population segments are equally represented (Creswell, 2012).

**Data Analysis**

Descriptive statistics are also classified using mean, ratio, standard deviation and percentages (Creswell, 2013 & Gjermeri, 2016). The use of descriptive statistics such as mean and percentages provides a descriptive overview of the extent of the implementation of Information Technology for a strategic decision-making process. Thus, using this approach, the findings can provide insights into the issues at hand for an effective decision-making process.

**Findings**

**Q1: Does the library identify with information technology?**

Table 1 clearly shows that respondent signifies that they are involved in the adoption of information technology. Since 100% of the responses indicated library involvement in the utilization of information technology, there is every suggestion that the role of information technology in modern library centres or area cannot be overemphasis.

**Table 1. Respondent Perceptions of Information Technology Focus**

RESPONSE	NUMBER OF RESPONSE	PERCENTAGE (%)
Yes	83	100
No	0	0
Total	83	100

**Q2: Does the library have a computer network and internet facilities?**

Table 2 demonstrates that 33 or 40% of the respondents agreed that their library enjoys computer network and internet facilities. However, 50 or 60% of the respondents disagreed. This result indicates that the majority of staff and student of Ramat library do not enjoy computer network and internet facilities

**Table 2: Respondent Perceptions of Information Technology Resources**

RESPONSE	NUMBER OF RESPONSE	PERCENTAGE (%)
Yes	33	40
No	50	60
Total	83	100

***Q3: Does information technology improve quality service to users?***

Table 3 clearly shows that 83 or 100% of the respondents confirmed that information technology utilization helps their library in quality service delivery to their users.

**Table 3. Respondents Perceptions of Services Quality**

RESPONSE	NUMBER OF RESPONSE	PERCENTAGE (%)
Yes	83	100
No	0	0
Total	83	100

***Q4. Does the user benefit from Information technology implementation in the library?***

Table 4 may rightly agree that the students or users benefit enough from information technology in the library.

**Table 4. Respondent Perceptions on Benefits of Information Technology in Library**

RESPONSE	NUMBER OF RESPONSE	PERCENTAGE (%)
Yes	83	100
No	0	0
Total	83	100

***Q5. Do you support the idea of introducing e-library in Ramat Library?***

Table 5 shows that 100% of the respondents support introducing an e-library in at the library.

**Table 5. Respondents Perceptions on Introducing e-library**

RESPONSE	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Yes	58	100
No	0	0
Total	58	100

### Discussion and Limitations of the Study

This study's findings show that Information technology implementation is key to institutional library transformation for effective service delivery and educational resources management. The related works clearly show that Information Technology implementation is increasing using various emerging technologies to support services delivery and meet users' needs. Library at various learning institutions in implementing such imitative to meet the global challenges and increasing user need. Thus, findings from this study is an essential step towards improving services delivery.

First, it is agreed by the entire respondent that their library identifies both information technology. Thus, they confirmed the availability of Information technology resources. However, most respondents confirmed that their library does not enjoy computer network and internet service facilities because of interruption in the power supply. Secondly, it was found that employment of computer for e-library technology brings a lot of benefit to a library, some of the use highlighted by the respondents consist of fast access to new business opportunities, improvement in quality service of the internet service to the library users and enhancement of the competitive ability of the library.

However, despite the findings, this study limited in scope and number of participants. There is a need to increase the participants in a future study to validate the population. Secondly, the utilized survey, there is a need in future to adopt mixed to understand user's voices in the services delivery. A better analysis using inferential statistics can be employed in future to test some hypotheses for a better decision-making process.

### Implication of the Study

The penetration of new technologies in developed countries is sufficient to implement application technology to educational institutions and other related organizations. However, developing countries are still lagging in bridging the digital gap. The importance of this study calls for an extended broadband network and a discounted system. For example, managers can prepare workshops to assist a user with best practices in using information technology. The institution can also ensure that the program they implement is readily available, reliable, and offers practical information to enhance students' learning environment. Useful resources and planning could also be provided, not just for teachers, but also for students, which will improve student participation. This study calls for educational leaders' action to address issues relating to the successful utilization of such technology in an educational institution, especially in the library system.

## Conclusion and Recommendations

Computer manufacturers should have the interest of end-users of their product at the back of their mind wherever they are developing new information technology systems. They should make it possible for computer users to adopt new technology at the least cost with minor adjustment on their existing system rather than a situation that would render the current system absolute.

Based on the foregone findings in this project, information technology played a vital role in Ramat Polytechnic Library. This research recommends that Ramat Polytechnic Maiduguri's authority improve the library's qualities to meet the international standard. They should provide a standby power plant to avoid interruption of library use by users and researchers at the library. It should also improve on modern machines so that students and other users may have access to their research material in good time. Finally, the library should be expanded to accommodate more users.

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