

Role Of Information Communication Technology (Ict) In Academic Libraries: A Study

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Abstract—The aim of this study is to know the effectiveness and uses of Information and Communication Technology (ICT) in the Library and Information Services. ICT has reshaped the library landscape by enabling digitalization, automation, and enhanced resource accessibility. It has empowered libraries to expand their collections beyond traditional print materials, embrace electronic resources, and provide remote access to users. The emergence of modern library advances in Information Communication Technology has opened up new ways of accumulating, regulating and disseminating scientific and technical information. ICT incorporates a range of technologies used to support communication and information. ICT includes both networks and applications. Networks include wireless and satellite telecommunications, broadcasting networks and well-known applications are the Internet, database management systems and multimedia tools. The integration of ICT resources is crucial in academic libraries as it facilitates resource sharing, improves service delivery, saves time, provides marketing opportunities for services, and ensures quick and easy access to information while keeping stakeholders updated.

Index Terms—Information Communication Technology, Academic libraries, Library Services, Digital literacy, Library Automation.

I. INTRODUCTION

Information and Communication Technology (ICT) has become an integral part of modern library systems, fundamentally transforming the way information is collected, processed, stored, and disseminated. Information and Communications Technology (ICT) have transformed Library and Information services globally. The integration of ICT

in libraries has significantly enhanced core library operations, including acquisition, cataloguing, circulation, and serials management. Automated library management systems enable faster processing of materials, enhanced record accuracy, and seamless resource sharing. Technological innovation has dramatically increased the rate of conversion of knowledge, information and data into electronic format. ICT has also reshaped library user services by promoting interactive and personalized information delivery. Digital reference services, online databases, e-books, e-journals, and remote access platforms empower users to retrieve information independently and efficiently. At the same time, libraries utilize ICT to conduct information literacy programs, helping users develop critical skills for searching, evaluating, and ethically using information in an increasingly complex digital landscape. ICT applications have been developed to meet the various needs of students and researchers because of these new technologies.

II. OBJECTIVES

The objectives of the present study are as follows:

- To know the awareness and usage of ICT for quick library operation
- To analyse the library professional regarding various workflow of housekeeping operation using ICT
- To provide a pathway on the different features of ICT for web cataloguing and classification
- To determine the Issues & Challenges in using ICT services by the users.

III. LITERATURE REVIEW

According to Haneefa (2007) reported that though the libraries in Kerala in southern India had hardware, software, and communication facilities to some extent, ICT-based resources and services were not reaching the users. A good number of the library users were not satisfied with the application of ICT in their libraries and indicated inadequate ICT infrastructure as the major reason for their dissatisfaction. They proposed a variety of measures of formal orientation and training on ICT to become more effective users.

According to Kumar and Singh (2018) argue that both librarians and users must be equipped with the skills to navigate digital platforms effectively. Their study, based on surveys of library users, revealed that inadequate digital literacy training limits the use of e-resources, particularly among older users and those in resource-constrained settings. This highlights the need for targeted training programs to ensure that ICT benefits are accessible to all users, thus fostering inclusivity in library services.

According to Patel et al. (2023) highlighted that unreliable Internet connectivity and outdated devices limit the adoption of ICT in libraries, exacerbating inequities in access to digital resources. Their qualitative study, based on interviews with librarians in rural areas, underscores the need for infrastructure improvements and equitable resource distribution to ensure that ICT advancements benefit all communities and not just those in well-resourced urban settings.

IV. WHAT IS INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)?

ICT stands for Information and Communication Technology. It includes a diverse set of technological tools and resources used to communicate, create, disseminate, store, and manage information. UNESCO defines informatics as the science dealing with the design, realisation, evaluation, use, and maintenance of information processing systems, including hardware, software, organisational and human aspects, and the industrial, commercial, governmental and political implications of these.

V. ICT CONSISTS OF THE FOLLOWING COMPONENTS

Information and communication technology is a term that describes all components and infrastructure that make modern computing possible.

- ❖ Devices (hardware)
- ❖ Software
- ❖ Data
- ❖ Wired networks
- ❖ Wireless networks
- ❖ Computer networks
- ❖ Communication technologies
- ❖ Cloud entities and services
- ❖ Communications protocols and interfaces

VI. ICT BASED LIBRARY SERVICES

Today, modern academic libraries are more depend on the ICT-based services. Information and communication technology (ICT) refers to all technologies that enable access to various types of information through communication. The revolution of ICT in the last few decades has brought tremendous changes in the concept, organization, working and management of the Library and Information Centers throughout the globe. The impact of these changes is affecting all the aspects of library operations, information resources and services, staff skill requirement and user expectations.

A library can be automated to achieve more efficient and effective functioning and for providing excellent library and information services. Electronic information resources are becoming increasingly important to all types of libraries. Internet has entirely changed the traditional type of reference service. Now a split of seconds trillions of documents such as e-encyclopaedias, e-dictionaries, e-maps, e-books etc. are accessible. Most of these are free and some are accessible on payment. Now the reference librarian will have to be aware of e-resources so that they can guide the needy students and researchers. Digital reference services are very helpful to users as it serves the needs of users virtually without any geographical barrier. An ICT based service provides remote users with access to information organized in a database with greater flexibility, precision and speed as compared to print resources.

VII. ADVANTAGES OF ICT IN LIBRARIES:

Information and Communication Technology (ICT) has transformed library services globally. ICT has made access to the library very convenient and easy. With the invent of e-libraries, access to the library has been brought even to the most remote areas and has brought learning to the feet of everybody.

- ✓ ICT makes library work easier, faster, cheaper and more effective.
- ✓ Helps to manage information overload as information retrieval is made easier in computerized systems.
- ✓ Remote access is enabled through networked systems
- ✓ Computerization saves space and reduces paper.

VIII. CHALLENGES OF USING ICT IN LIBRARIES

Innovative services often require advanced IT infrastructure, including high-speed internet, secure servers, and updated hardware. Ensuring that the library's infrastructure can support new technologies can be a significant hurdle.

- Poor funding of ICT infrastructures
- Constant change of software and hardware
- Erratic power supply
- Insufficient bandwidth
- Lack of technical IT knowledge by library staff
- Copyright and intellectual property rights management

IX. IMPACT OF ICT ON LIBRARIES

Traditional libraries are changing their role and functions according to the new trends in the society. Library is providing information through the computers and internet. It can be said that without the help of the computers and internet any library information Centre cannot satisfy the users. The use of ICT in libraries fosters greater interaction between librarians and users. Online reference services, virtual libraries, and mobile applications offer convenient ways for users to engage with library services. These tools enhance user satisfaction by providing personalized support, easy access to resources, and interactive learning opportunities.

ICT has impacted on every sphere of academic library activity especially in the form of the library collection development strategies, library building and consortia. A key impact of ICT on library and information services is the digitization of resources. Libraries now offer digital collections comprising e-books, e-journals, and digital archives, providing users with instant access to a wealth of information from anywhere at any time. This shift has not only expanded the scope of available resources but has also made it easier for libraries to manage and preserve their collections.

X. CONCLUSION

Information communication technology is not only a technology but also it manages with the library objectives with the adoption of ICT, libraries can face the new and modern information techniques. The study found that respondents use various ICT tools and technologies in their education and research work as it is helpful in better and faster access of information and helps the students. The information professionals should acquire technological system thinking, commitment to continuous improvement of skills and strategies and sensitivity to network environment.

REFERENCES

- [1] Abubakar, M. K. (2010). ICT knowledge and skills among Students of Library and Information Science in Umaru Musa Yar'adu University, Nigeria. *Information Manager (The)*, 10(1-2), 40-47.
- [2] Adetimirin, A. E. (2012). ICT literacy among undergraduates in Nigerian universities. *Education and Information Technologies*, 17(4), 381-397.
- [3] Deshmukh, Vijay. M, (2010). 'ICT and College Library, Role of College Librarian in the information Network Era proceedings. UGC sponsored state level conference, Nagpur : V.M.V. Commerce, J.M.T. Arts & J.J.P. Science College, 6th September, pp 26-27.
- [4] Haneefa, M. (2007). "Application of information and communication technologies in special libraries in Kerala (India)", *Library Review*, Vol. 56 No. 7, pp. 603--20

- [5] Hasin, I. & Nasir, M.K.M. (2021). “The Effectiveness of the use of information and communication technology (ICT) in rural secondary schools in Malaysia”. J. Edu. e-Learning Res. 8(1), 59-64.
- [6] Islam, Md. Shariful and Islam, Nazmul Md. (2006). “Information and Communication Technology (ICT) in Libraries: A New Dimension in Librarianship.” Asian Journal of
- [7] Information Technology. 5(8), 809-817.
- [8] Jain, P.B., (2010). ‘ICT & Its Impact on Academic Libraries, Role of College Librarian in the information Network Era proceedings.
- [9] Kumar, R. & Singh, P (2018). Digital literacy and its impact on library services, International Journal of Information Studies, 10(1), 20–28.
- [10] Patil P (2018). Impact of Information Communication Technology (ICT) on Academic Library Services. Int J Sci Res Multidiscip Stud. 4(1), 24-7.
- [11] Patel, A.; Kumar, S. & Sharma, R. (2023). Bridging the digital divide in library services, Global Library Journal, 19(2), 15–29.