



August, 27 2023 Final Revised September, 04 2023 Published September, 13 2023

Author Notification

Information Technology Development's Impact On Library Services

p-ISSN: 2963-6078

e-ISSN: 2963-1947

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To cite this document:

Fauziyyah, S., Febriyanti, R.A., Nurtino, T., Huzaifah, M.L., & Kusumawardhani, A.R. (2023). Information Technology Development's Impact On Library Services. International Transactions on Education Technology (ITEE), 4(1) 23-29.

Abstract

The purpose of this study is to find out how library services will be affected by advances in information technology. This research examines the various services offered by the library as well as the facilities and technology used there. A descriptive qualitative method was used in this study. Direct observation and interviews were used as data collection methods in this study. In addition, there was an opportunity for the researchers to ask some questions regarding the research that had been conducted. The library director participated in this research. The services provided by the library are a combination of manual and technological services. The main way information technology affects library services is by making it easier for library staff to do their jobs, attracting more visitors, and modernizing the facilities offered by the library.

Keywords: Information technology, Library, Digital library

1. Introduction

In an increasingly advanced information age, information technology has undergone rapid development and has a significant impact on various aspects of human life, including in the field of library services [1]. The development of information technology has brought revolutionary changes in the way we access, manage and disseminate information. In the past, libraries were often identified with a collection of neatly organized physical books. However, with the development of information technology [2], libraries have transformed into more than just book storage spaces. They have become dynamic information hubs, where access to various digital resources can be obtained quickly and efficiently.

The use of information technology in library services has brought many benefits. First of all, the accessibility of information has increased significantly. Through the internet and electronic databases, library users can easily search and access various types of materials, including books, scientific journals, articles and other multimedia resources. This allows library users to obtain relevant information more effectively and efficiently [3].



In addition, information technology has also expanded the scope of library services. Now, users are not only limited to local visitors, but can also access library collections remotely. With online services, users can download e-books, browse the library catalog, submit loan requests, and even join library programs through virtual platforms. This makes the library more inclusive and accessible to a wide range of people.

Even though library services can be improved by adhering to current technological developments, information technology-based library services have not yet been fully integrated in the Library [4]. On the basis of this, researchers will look at how information technology advancements affect library services and what impact they have.

2. Research Method

This research uses qualitative methods. Sampling of data sources purposely and snowball, combined data collection techniques, inductive / qualitative data analysis, and emphasis on meaning rather than generalization are characteristics of qualitative research methods, namely research techniques based on the philosophy of postpositivism and used to research on natural object conditions [5].

Descriptive research is used in this study to describe and address issues with a phenomenon or event that occurs in the present, as well as to examine correlations and/or comparisons across numerous variables and phenomena based on single variables. In this study, interviews, observation, and literature reviews were used to obtain data. Using a tool called an interview guide, an interview is the act of asking and receiving questions and answers from participants in order to gather information for research objectives [6].

2.2 Literature Review

Information technology is the fusion of computer and telecommunications technology with other technologies like hardware, software, databases, network technology, and other pieces of tech.

The term Information Technology is derived from the phrase Information Technology. Essentially, information technology is made up of two words: technology and information. Technology is described in the Dictionary of Computer and Information Technology as a technical ability based on accurate science knowledge and technological processes. Technology is the science of utilizing science to benefit human wellbeing and comfort (Febrian Jack, 2007) [7].

In general, information technology includes communication technology in addition to computer technology. In other words, information technology combines computer technology with communication technology (Kadir, 2003: 2). The technology used to create, store, modify, and use information in all its forms is referred to as information technology (Supriyanto, 2008: 10).

The author can infer from the descriptions given above that information technology is a collection of instruments that make it easier to manage tasks involving data processing, information, and communication [8].

An action or activity that can be provided by one party to another is referred to as a service. In order to satisfy customers, producers must respond to their customers' needs and aspirations through the provision of service (Kotler, 2002: 83).

Library services, in the words of Lasa Hs (2007: 169), are empowerment initiatives that might take the form of offering circulation services, on-site reading, and library services. Providing circulation services, on-demand reading, referral services, literature searches, presentations of the most recent information, presentations of selected information, audio-visual services, internet services, user guidance, and library services are all examples of empowerment initiatives [9].

p-ISSN: 2963-6078

p-ISSN: 2963-6078 Vol. 2 No. 1 November 2023 e-ISSN: 2963-1947

3. Findings

The development of information technology has significantly changed the landscape of the library industry. One of the most striking impacts of the development of information technology is the increased accessibility to information. In the past, library users had to go to a physical library to find books or references. However, with the advent of computer-based library management systems and digital platforms, users can access library collections online from anywhere at any time. This allows individuals to obtain information quickly and efficiently [10].

The development of information technology has enabled libraries to store and provide access to extensive digital collections. Electronic books (e-books), electronic journals (ejournals), databases and other electronic resources are available to users with just a few clicks. These digital collections are not limited to the number of physical copies, so users have access to a richer and more diverse range of resources. Computer-based library management systems have made it easier to search and filter information. By using certain keywords or search parameters, users can find relevant resources quickly [11].

Along with the growth of digital libraries, numerous organizations, schools, and universities are vying for the privilege of running one. There were a lot of misconceptions when it was applied. Some libraries refer to their WEB public access facility as a "digital library." Because the library does not manage digital libraries that are handled systematically, it is discovered when the information is accessible that the contents are printed library catalogs and there is no access to the digital library database. Digital libraries that are maintained by information technology-based information systems are not managed by libraries [12].

With the advent of library automation, wherein library tasks are carried out with computer aid, computer-based services first became prevalent. When library automation first emerged, it was only used by major libraries, which dates back to the 1980s. In the 1990s, software became available that could virtually completely automate libraries, including circulation control, acquisition of library materials, collection administration, membership management, etc.

Information technology also enables collaboration and knowledge sharing between libraries and users. Modern libraries often have online platforms that allow users to interact, share reviews, recommend books or participate in discussions with other users. This creates a vibrant learning community and enriches the user experience of exploring and acquiring knowledge [13].

3.1 Problem

Libraries play a significant role in the rapid growth of information technology in many spheres. Libraries that formerly relied on human resources and conventional procedures are gradually being replaced with more advanced and useful technology. It is taken out and replaced with more advanced and useful technology [14]. With the introduction of the index catalog, information technology in libraries got its start. After then, using currently available technology, the management of library materials that was formerly done manually is now done. It has now been accomplished using current technology.

Although the development of information technology improves the overall accessibility of information, there are still inequalities in access to technology in some regions or communities. Some areas may not have adequate internet infrastructure or limited access to the necessary devices, leading to a digital divide and making it difficult for some communities to utilize technology-based library services [15].

While digital collections and electronic resources have increased the availability of information, libraries can face challenges when relying on electronic resources. Reliance on digital access licenses and subscriptions can limit user access and present financial sustainability challenges for libraries, especially if there are price increases or publisher policy changes. In the digital age, libraries collect and manage users' personal data, such as borrowing information and search history. Personal data protection is an important concern, and libraries should ensure that adequate privacy and security policies are implemented to protect users' personal information from misuse or data breaches [16].

With the development of information technology, the role of librarians has undergone significant changes. Librarians are not only responsible for managing physical collections, but must also have an understanding of information technology, ability to manage digital platforms, and skills in assisting users in utilizing electronic resources.

This online library was created to assist students in finding reference materials and to aid in their teaching and learning processes [17]. It is anticipated that finishing the digital collection will help the already-started e-learning process. According to the findings of the interviews that were conducted, this digital library also has a number of other goals, including transforming the library into a hub for supporting the teaching and learning process at the school through technology services, the use of information in library development, and enhancing the caliber of human resources to offer the best possible service.

In the realm of libraries, the ongoing advancement of information technology has spawned a new paradigm. The progress of technology in libraries is demonstrated by the existence of the Digital Library, a new innovation in every library. In libraries, there is evidence of technical advancement. According to its intended use, which is to provide a set of tools to make the management of tasks involving data processing, information, and communication easier. Information technology duties that relate to data processing, communication, and information help to streamline all aspects of the library's operations, including its services. enables the library's operations, especially its services, to be made more accessible to a larger audience. Many people can access it [18].

3.2 Research Implementation

In the realm of libraries, the ongoing advancement of information technology has spawned a new paradigm. The existence of Digital Library Digital Library, a brand-new innovation in every library, is proof that technology has advanced in libraries. In libraries, there is evidence of technical advancement. According to its intended use, a set of tools that make it easier to manage duties related to information technology, information and communication, and data processing. Information technology duties that relate to data processing, communication, and information help to streamline all aspects of the library's operations, including its services [19]. enables the library's operations, especially its services, to be made more accessible to a larger audience. many people are able to access it



Picture 1. Discussing the digital library plan

The implementation of the digital library is scheduled to start in 2016 according to the suggested digital library development. The actual planning integration will be completed in 2021, but will only include designing the display and purchasing the appropriate hardware. The digital library will then be ready for use by users in 2023 [20].

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to deliver the best possible services [21].

This online library was created to assist students in finding reference materials and to aid in their teaching and learning processes to help their teaching and learning efforts and as reference books. The beginning e-learning process is anticipated to be supported by the completion of the digital collection. Additionally, based on the findings of the interviews that were conducted, there are a number of goals for the digital library, one of which is to transform the library into a hub for services that support the teaching and learning process at the school by utilizing technology and information. Enhancing the educational process at school through the use of technology, informational library development, and human resource development

The impact of information technology development on library services The availability of information technology facilitates the development of services offered by librarians, such as photocopiers [22]. In order to duplicate an important section of a book, photocopiers are used in photocopying services, as are computers for internet services so that users can search the internet for information. Librarians have also developed services like photocopying services and internet services. Users can browse the online public access catalog to look for digitally based information. The online public access catalog (OPAC) provides information to make it simpler for library patrons to locate materials without having to search the shelves one by one[23].

Positive results information technology has a positive effect on library services by increasing user interest, relieving staff workload, assisting with library resource searches, and saving time and resources both consumers and librarians can save time and energy by searching for library materials librarians [24], [25].

4. Conclusion

The development of information technology has had a significant impact on library services. In the past, libraries only focused on printed book collections and limited access. However, with the advancement of information technology, the accessibility of information has increased drastically. Library users can now access library collections online from anywhere at any time. This allows them to get information quickly and efficiently, without having to physically visit the library. Library collections have become more diverse and extensive. With the advent of digital collections such as e-books, e-journals and other electronic resources, users have access to richer and more relevant resources.

References

- [1] T. Mathar, Hijrana, Haruddin, A. K. Akbar, Irawati, and Satriani, "The Role of UIN Alauddin Makassar Library in Supporting MBKM Program," ... on Social and ..., no. July 2022, pp. 215–224, 2021, [Online]. Available: https://proceedings.uin-alauddin.ac.id/index.php/sis/SIS2021/paper/view/163
- [2] S. Purnama and C. Sriliasta, "Independent Learning and Blended Learning Information System Student," vol. 1, no. 2, pp. 144–150, 2023.
- [3] A. Buana and U. Linarti, "Measurement of Technology Acceptance Model (TAM) in Using E-Learning in Higher Education," *Jurnal Teknologi Informasi dan Pendidikan*, vol. 14, no. 2, pp. 165–171, 2021, doi: 10.24036/jtip.v14i2.471.
- [4] A. Dudhat, "Application of Information Technology to Education in the Age of the Fourth Industrial Revolution," vol. 1, no. 2, pp. 131–137, 2023.
- [5] I. D. Girinzio, D. B. Saputra, A. Ramadan, and G. Mustika, "Improve Critical Thinking Students In Indonesia For New Learning Management System," vol. 1, no. 2, pp. 111–121, 2023.
- [6] R. Widayanti and L. Meria, "Business Modeling Innovation Using Artificial Intelligence Technology," vol. 1, no. 2, pp. 95–104, 2023.

p-ISSN: 2963-6078

[7] C. Lukita and O. Jayanagara, "Evidence from SMA Students' Performance on the Impact of Physics Education Technology (PhET) Simulations," vol. 1, no. 2, pp. 105–110, 2023.

- [8] A. Saleem, S. Tabusum, and M. Sadik Batcha, "Application and Uses of Information Communication Technology (ICT) in Academic Libraries: An Overview," *International Journal of Library Science*, vol. 2013, no. 3, pp. 49–52, 2013, doi: 10.5923/j.library.20130203.01.
- [9] A. Rakha, "Mobile Library Application in Indonesia's Digital Libraries," *Journal of Education Technology*, vol. 6, no. 1, pp. 149–155, 2022, [Online]. Available: https://dx.doi.org/10.23887/jet.v
- [10] M. Bagchi, "Conceptualising a library chatbot using open source conversational artificial intelligence," *DESIDOC Journal of Library and Information Technology*, vol. 40, no. 6, pp. 329–333, 2020, doi: 10.14429/djlit.40.6.15611.
- [11] J. Arora, "Building Digital Libraries: An Overview," *DESIDOC Bulletin of Information Technology*, vol. 21, no. 6, pp. 3–24, 2001, doi: 10.14429/dbit.21.6.3547.
- [12] Y. Ariyanto, B. Harijanto, A. Setiawan, S. Adhisuwignjo, and E. Rohadi, "Integration of digital library server with Service Oriented Architecture (SOA) based on cloud computing using proxmox server," *J Phys Conf Ser*, vol. 1402, no. 7, 2019, doi: 10.1088/1742-6596/1402/7/077054.
- [13] U. M. D. E. C. D. E. Los, "No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title".
- [14] J. Ren, "An Empirical Study of Evaluation of Library WeChat Micro Service by Mobile Information Network Technology," *J Phys Conf Ser*, vol. 1952, no. 3, 2021, doi: 10.1088/1742-6596/1952/3/032018.
- [15] Z. Abidin, I. Zulaikha, D. W. Wicaksono, K. Umam, and A. F. Aulia, "Development of postgraduate school's digital library as a repository of digital collections," *J Phys Conf Ser*, vol. 1918, no. 4, 2021, doi: 10.1088/1742-6596/1918/4/042019.
- [16] E. Garoufallou and P. Gaitanou, "Big data: Opportunities and challenges in libraries, a systematic literature review," *Coll Res Libr*, vol. 82, no. 3, pp. 410–435, 2021, doi: 10.5860/crl.82.3.410.
- [17] C. N. Nakanduungile, "Student adoption and perceptions of the library and information mobile services at the University of Namibia." 2020. [Online]. Available: http://hdl.handle.net/11427/32931
- [18] A. U. Rahman and F. A. Alhaidari, "The digital library and the archiving system for educational institutes," *Pakistan Journal of Information Management and Libraries*, vol. 20, no. March, pp. 94–117, 2018, doi: 10.47657/2018201453.
- [19] J. Friday, O. Chidozie, and L. Chukwuma, "Social media and library services: a case of COVID-19 pandemic eraNANo ranking found for 'Academia Letters," *Academia.Edu*, vol. 7, no. 10, p. 10, 2020, [Online]. Available: https://www.academia.edu/download/64886041/IJRR0031.pdf
- [20] T. Krick, K. Huter, D. Domhoff, A. Schmidt, H. Rothgang, and K. Wolf-Ostermann, "Digital technology and nursing care: A scoping review on acceptance, effectiveness and efficiency studies of informal and formal care technologies," *BMC Health Serv Res*, vol. 19, no. 1, pp. 1–15, 2019, doi: 10.1186/s12913-019-4238-3.
- [21] A. Hinze, N. Vanderschantz, C. Timpany, S. J. Cunningham, S. J. Saravani, and C. Wilkinson, "A Study of Mobile App Use for Teaching and Research in Higher Education," Technology, Knowledge and Learning, no. 0123456789, 2022, doi: 10.1007/s10758-022-09599-6.
- [22] H. Liu, "WeChat Mobile Library Service in Chinese Academic Libraries," *International Journal of Library and Information Services*, vol. 10, no. 1, pp. 32–47, 2020, doi: 10.4018/ijlis.2021010103.
- [23] F. Sufyan and A. Banerjee, "Comparative analysis of network libraries for offloading efficiency in mobile cloud environment," *International Journal of Advanced Computer Science and Applications*, vol. 10, no. 2, pp. 574–584, 2019, doi: 10.14569/ijacsa.2019.0100272.

p-ISSN: 2963-6078

Vol. 2 No. 1 November 2023 e-ISSN: 2963-1947

p-ISSN: 2963-6078

[24] M. Rafiq, S. H. Batool, A. F. Ali, and M. Ullah, "University libraries response to COVID-19 pandemic: A developing country perspective," *Journal of Academic Librarianship*, vol. 47, no. 1, p. 102280, 2021, doi: 10.1016/j.acalib.2020.102280.

[25] M. Alipour-Hafezi, "Semantic integration in Iranian digital libraries: A proposing model," *Iranian Journal of Information Processing Management*, vol. 31, no. 2, pp. 455–482, 2016.