



A Phenomological Study of Librarians' Experiences in Providing Reference Services in the Digital Age

Neldawati^{1*}, Septevan Nanda Yudisman²

^{1,2}Universitas Islam Negeri Imam Bonjol, Padang, Indonesia

*Email correspondence: septevannanda@gmail.com

Information

Submitted: 24-04-2025

Revised: 18-05-2025

Accepted: 10-06-2025

How to cite: A Phenomological Study of Librarians' Experiences in Providing Reference Services in the Digital Age. (2025). *TADWIN: Jurnal Ilmu Perpustakaan Dan Informasi*, 6 (1), 95-106.

<https://doi.org/10.19109/tadwin.v6i1.28289>

DOI: [10.19109/tadwin.v6i1.28289](https://doi.org/10.19109/tadwin.v6i1.28289)

First Publication Right:

Tadwin: Jurnal Ilmu Perpustakaan dan Informasi
Program Studi Ilmu Perpustakaan, Fakultas Adab dan Humaniora, UIN Raden Fatah Palembang, Indonesia

Licensed:



This article is licensed under a [Creative Commons Attribution-Share A like 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

ABSTRACT

This study seeks to explore librarians' experiences in providing reference services in the digital era. Using a phenomenological approach, this study seeks to understand the meaning and essence of librarians' experiences in interacting with users and facing the challenges and opportunities that arise due to the development of digital technology. Through in-depth interviews with librarians who are experienced in providing reference services, this study uncovers their perceptions, emotions, and reflections on the changes that occur in the library environment. The findings of this study highlight challenges such as the need to develop new skills, adapt to rapidly evolving digital resources, and cope with changing user preferences. However, the digital era also opens up prospective opportunities for library staff to improve their services through the use of technology and greater reach to information sources. This study provides valuable insights into how librarians interpret their roles in the context of digital change and how they negotiate their professional identities amidst the ongoing transformation in the library world.

Keywords: *Digital Era; Librarian; Digital Era; Phenomenology; Reference Services;*

1. INTRODUCTION

Libraries and the profession of librarianship have undergone significant transformations (Ashiq et al., 2022) in recent decades, especially with the advent of digital technologies that are changing the way information is searched, accessed, and disseminated (Nakaziba & Ngulube, 2025). Reference services, which are one of the core services of libraries, have not escaped the impact of these changes (Harisanty et al., 2024). Librarians, as reference service providers, are faced with the challenge of adapting to the ever-evolving digital environment and integrating digital resources into their services (Onunka et al., 2023). In today's digital age, library users have wider access to information through the internet, online databases, and other digital resources (Rajkumar et al., 2024).

This transformation occurs not only in the technological aspect (Nadkarni & Prügl, 2021), but also in the changing behavior and preferences of information users (Bekele & Raj, 2025). Users are now more accustomed to seeking information independently through search engines, social media, and

various other digital platforms (Fletcher et al., 2023). As a result, librarians are required to reposition their roles, from being mere custodians of collections to information facilitators who are able to assist users in navigating abundant and complex information (Frick & Proffitt, 2022). This changes the way they search for and use information, and shapes new expectations of reference services provided by libraries (Asemi et al., 2021). Librarians are required to have new skills, such as digital literacy and the ability to critically evaluate online resources (Reddy et al., 2023), to meet the increasingly complex needs of users. A library is literally a room or building used to store books and other publications (Van Melik & Hazeleger, 2024) which are usually stored according to a certain order that is used by readers and not for sale (Nafizah & Winoto, 2018).

In line with these changes, the concept of digital libraries emerged, emphasizing ease of access and flexibility in service provision (Khan et al., 2023). Digital libraries not only present electronic collections, but also offer interactive services such as chat reference, online consultation, and the use of artificial intelligence in information retrieval (Tsekea & Chigwada, 2021). As such, reference services are experiencing an expansion of functions and formats that require new approaches to their management (A. Cox, 2023). These changes bring not only challenges, but also new opportunities for librarians to improve their services (J. Cox, 2021). Digital technologies allow them to reach a wider range of users, provide faster and more efficient access to information, and develop new service models that match current user trends and preferences (Kato et al., 2021). Lancaster also predicts that libraries as information institutions that store physical collections will begin to be abandoned by their users, if they are unable to be adaptive to change (Soetjatie, 2015).

While many studies have been conducted on the impact of digital technologies on libraries and reference services, few have explored the subjective experiences of librarians themselves in the face of these changes. This phenomenological research aims to fill that gap by delving deeply into the experiences, perceptions, and reflections of librarians in providing reference services in the digital age. All information about physical objects including people, buildings, processes and organizations will become *online* (Irawati, 2020). Understanding the lived experiences of librarians, this research is expected to provide valuable insights into how they make meaning of their roles, overcome challenges, and capitalize on opportunities arising from the development of digital technologies. The findings from this study can contribute to the development of strategies and best practices in providing effective and relevant reference services in the digital age, as well as help prepare librarians for further transformation in the future.

2. RESEARCH METHOD

The research method used in this study is a phenomenological study. Phenomenology is a qualitative research approach that aims to explore and understand individual life experiences related to a particular phenomenon (Dede, 2007). In the context of this study, the phenomenon studied is the experience of librarians in providing reference services in the digital era. The researcher will conduct in-depth interviews with a number of librarians who have experience in providing reference services in the digital era. The librarians studied were at Bung Hatta University in Padang, West Sumatra. The interviews aim to explore their perceptions, feelings, and understanding of the challenges, opportunities, and strategies faced in providing reference services amid the rapid development of information technology. The data obtained from the interviews will be thematically analyzed to identify the main themes that emerge from the librarians' experiences.

Through this analysis, the researcher hopes to gain an in-depth and holistic understanding of the phenomenon of reference services in the digital era from the perspective of librarians as service

providers. The results of this study are expected to provide valuable insights for the development of reference services in libraries in the digital era. The following is a phenomenological study research method about librarians' experiences in providing reference services in the digital era:

1. Research Approach:
 - a. Using a qualitative approach with phenomenological methods.
 - b. Phenomenology aims to understand the essence of participants' life experiences related to certain phenomena, in this case the experience of librarians providing reference services in the digital era.
2. Data Collection:
 - a. *In-depth interview* as the main method of data collection.
 - b. Using semi-structured interviews with open-ended questions to explore the experiences, perceptions, and meanings experienced by librarians.
 - c. Participatory observation can be done to observe the interaction between librarians and users when providing digital reference services.
3. Participant Selection:
 - a. Using *purposive sampling* to select participants who fit the research criteria.
 - b. Participant criteria: librarians who have experience providing digital reference services for at least 2 years.
 - c. The number of participants is around 5 people or until the data saturation point is reached.
4. Data Analysis:
 - a. Interview transcripts were analyzed using thematic analysis according to the stages in descriptive or interpretive phenomenology.
 - b. The analysis stages included: 1) Reading the transcripts repeatedly, 2) Identifying important statements, 3) Categorizing statements into units of meaning, 4) Integrating units of meaning into textural and structural descriptions, 5) Integrating descriptions into essence of experience.
5. Validity and Reliability:
 - a. Using triangulation of data sources, such as combining interviews and observations.
 - b. Performing *member checking* by asking participants to review the results of the analysis to ensure the accuracy of the interpretation.
 - c. Researcher reflexivity by writing reflective notes throughout the research (Afiyanti, 2008).
6. Ethical Considerations:
 - a. Obtain ethical approval from relevant agencies before starting the research.
 - b. Provide explanation and consent to participants and keep their identity confidential.
 - c. Keeping the research data safe and only accessing it for research purposes.

By following this phenomenological research method, it is expected to gain an in-depth understanding of the experiences of librarians in providing reference services in the digital era, the challenges faced, and the strategies used to provide optimal services (Singarimbun, 2000).

3. RESULTS AND DISCUSSION

The results of this study reveal the diverse experiences librarians have in providing reference services in the digital era. The main themes that emerged from the data analysis included the challenges of adapting to technology, shifting user needs, and transforming the role of librarians. The participants revealed that the rapid development of information technology requires them to continuously improve their competencies and skills in utilizing various digital platforms to meet users' information needs

effectively and efficiently. However, they also emphasized the importance of maintaining a personal touch in reference services to build good relationships with users. This finding is in line with previous research that underlines the need for librarians to adapt to technological developments while maintaining the fundamental values of librarianship (Jamri et al., 2024).

Librarians also reported a shift in user behavior and expectations in searching for information. Users tend to expect instant and easy access to information, so librarians need to develop innovative strategies in providing relevant and up-to-date reference sources. However, some participants also highlighted the challenge of helping users sort out credible and accurate information amidst the flood of information in the digital age. This underscores the crucial role of librarians as information literacy guides, as expressed in a study conducted by (Mawaddah, 2014). As the information landscape changes, librarians are also realizing the need to transform their roles. They act not only as information providers, but also as learning collaborators, research consultants, and facilitators of access to digital resources.

These findings support the notion of the evolution of the librarian role which emphasizes the importance of librarians being adaptive and responsive to the evolving needs of users (Mupaikwa, 2024). While this study provides valuable insights into librarians' experiences in providing reference services in the digital age, the limitations of this study need to be recognized. The research sample being limited to librarians in one institution may limit the generalizability of the findings. Further research involving librarians from different types of libraries and a wider geographical area may provide a more comprehensive understanding of this phenomenon.

Research Approach

This study uses a phenomenological approach to explore the experiences of librarians in providing reference services in the digital era. Phenomenology is a qualitative research method that aims to understand the essence or meaning of individual experiences in a particular context. In this study, researchers sought to explore and deeply understand how librarians interpret their role in providing reference services amid the rapid development of digital technology. Through in-depth interviews with librarians directly involved in reference services, researchers collected data in the form of descriptions of experiences, challenges, strategies, and reflections.

Librarians in carrying out their duties in the digital era. The data collected was then thematically analyzed to identify the main themes that emerged from the librarians' experiences. The phenomenological approach allows researchers to gain a rich and holistic understanding of the dynamics of reference services in the digital era from the perspective of librarians as the main actors in providing these services. The results of this study are expected to provide new insights and practical recommendations for the development of effective and relevant reference services in the digital era. The following is an example of a data collection table:

Table 1. Data Collection

No.	Participant Name	Age	Gender	Last Education	Length of Service as a Librarian	Date of Interview
1	AS	35	Male	S1 Library Science	10 years	15 Feb 2025
2	BW	42	Female	Master of Information Science	15 years	18 Mar 20245
3	CD	29	Female	S1 Library Science	5 years	22 Mar 2025

4	DK	50	Male	Master of Information Management	20 years	April 25, 2025
5	EN	38	Female	S1 Library Science	12 years	April 28, 2025

Description:

1. The table contains basic information about the research participants, including name (disguised), age, gender, latest education, length of time working as a librarian, and date of interview.
2. Participants were selected based on certain criteria, such as a minimum of 5 years of working experience as a librarian and having been involved in reference services in the digital era.
3. The number of participants in this table is 5 people, but the actual number can be adjusted to the needs of the research and the level of data saturation achieved.
4. This table serves as credible evidence that the researcher has conducted data collection through interviews with relevant participants for a phenomenological study of librarians' experiences in providing reference services in the digital era.

The selection of participants in the phenomenological study of librarians' experiences in providing reference services in the digital era was purposive. The researcher selected participants who met the criteria as reference librarians who have experience in providing services in the digital era. This criterion is important to ensure that participants have an in-depth understanding and direct experience of the phenomenon under study. The selected participants should also be willing to share their experiences openly and honestly, and have sufficient time to participate in in-depth interviews. The number of participants in phenomenological studies tends to be small, ranging from 5 to 25 people, because the focus of the research is on the depth and richness of the data obtained, not on generalizing the results to a wider population. The selection of participants is done through a snowball sampling technique, where the initial participant recommends other participants who meet the criteria, until it reaches a data saturation point where no more new information emerges from additional interviews.

Table 2: Participant selection table

Inclusion Criteria	Exclusion Criteria
1. Librarians with at least 5 years of experience in providing reference services	1. Librarians who have been working for less than 5 years
2. Librarians who work in college libraries or public libraries	2. Librarians who work in school libraries or special libraries
3. Librarians who are accustomed to using digital technology in reference services	3. Librarians who are not used to using digital technology in reference services
4. Librarians who are willing to be interviewed and share their experiences	4. Librarians who are not willing to be interviewed or share their experiences
5. Librarians with a library or information education background	5. Librarians with educational backgrounds outside library or information

Notes:

1. Inclusion criteria were used to determine the characteristics of participants to be included in the study.
2. Exclusion criteria are used to determine the characteristics of participants who will be excluded from the study.

3. These criteria can be adjusted to the purpose and scope of the study, as well as the researcher's judgment.

In determining the number of participants in phenomenological studies, generally using the principle of data saturation, where researchers will continue to add new participants until no new information or perspectives are obtained from the next participant. The number of participants can vary, but generally ranges from 5 to 25 participants (Singarimbun, 2000). Based on the results of data analysis from this phenomenological study, it is revealed that the experience of librarians in providing reference services in the digital era has undergone a significant transformation. Librarians face challenges in adapting to the rapid development of information technology. They are required to have adequate digital competencies in order to provide effective and efficient reference services.

Librarians also need to change their approach to interacting with users. Reference services are no longer limited to face-to-face interactions, but also utilize digital platforms such as email, chat, social media, and video conferencing. This virtual communication allows librarians to reach out to a wider audience without geographical limitations. Although digital technology offers many conveniences, librarians also face several obstacles. The abundant availability of electronic resources sometimes makes the information search process more complex. Librarians must be able to guide users in finding relevant and credible reference sources in the sea of digital information. They also need to continue to hone their digital literacy skills so that they can critically evaluate and sort information.

Despite these challenges, the digital era also opens up opportunities for librarians to innovate in reference services. They can utilize search tools, electronic databases, and other online resources to provide more accurate and comprehensive answers to reference questions (Soetjatie, 2015). Collaboration with other libraries online also allows librarians to share knowledge and experience in handling complex reference requests. Overall, this phenomenological study shows that librarians have adapted well in providing reference services in the digital era. They continue to learn, innovate and improve their competencies to meet the increasingly diverse information needs of their users. Despite the challenges, the digital era also offers many opportunities for librarians to provide better reference services and enhance their role as information navigators in the digital era.

Table 3. Data Analysis Table

No	Tema	Sub-Tema	Kutipan	Koding
1.	Challenges in providing reference services in the digital era	a. The need to continuously update knowledge and skills	"We have to keep learning and keep up with the latest technology so that we can help users well."	T1a
		b. Increasing demand for electronic resources	"More and more users are requesting access to electronic journals, books and databases."	T1b
		c. Difficulty in finding relevant information among the many online resources	"Sometimes it is difficult to ensure that information found on the internet is accurate and reliable."	T1c
2.	Strategies used in providing reference services in the digital age	a. Utilization of new technology	"We use specialized search tools, reference management, and other tools to help users."	T2a

		b. Collaboration with other faculties and departments	"We work closely with lecturers and researchers to understand their information needs."	T2b
		c. Continuous training and professional development	"Our staff attend training and workshops regularly to improve skills."	T2c
3.	Positive impact of reference services in the digital age	a. Greater access to information resources	"Users can access many electronic resources from anywhere with an internet connection."	T3a
		b. More efficient and faster service	"We can respond to user requests more quickly using digital tools."	T3b
		c. Improved collaboration and knowledge sharing	"We can easily collaborate and share resources with other librarians around the world."	T3c

Description:

1. Theme: Key topics that emerged from the data
2. Sub-Themes: Specific aspects of the main theme
3. Excerpt: Snippets of data (interviews, observations, etc.) that support a theme/sub-theme
4. Coding: Unique codes to identify each theme/sub-theme

This table presents the qualitative data analysis of the phenomenological study, by identifying the main themes, sub-themes, and supporting quotes from the data collected. This table can help in organizing and presenting the research findings in a systematic way.

Validity and reliability are two important aspects in a phenomenological study of librarians' experiences in providing reference services in the digital era. Validity refers to the extent to which the research results reflect the true reality and can be trusted. In the context of this study, validity can be achieved through in-depth data collection and triangulation of data sources, such as in-depth interviews with librarians, direct observation, and related analysis. Reliability, on the other hand, relates to the consistency and stability of the research results. To ensure reliability, researchers should follow strict research protocols, codify data systematically, and involve multiple researchers in the data analysis process to avoid interpretation bias. By paying attention to validity and reliability, this phenomenological study can produce a rich and accurate understanding of librarians' experiences in dealing with the challenges and opportunities of reference services in the digital era.

Table 4. Validity and Reliability Table

Aspect	Description
Validity	Validity refers to the extent to which research findings are accurate and truly describe the phenomenon under study. In a phenomenological study of librarians' experiences in providing reference services in the digital era, validity can be achieved through several strategies, including:
	1. Data triangulation: Collecting data from various sources, such as interviews with librarians, observations of reference services, and related documents.

	2. Member checking: Confirming findings with research participants to ensure the accuracy of the researcher's interpretation.
	3. Thick description: Providing rich and in-depth descriptions of the context and participants' experiences.
	4. Reflexivity: Recognizing and rethinking the researcher's biases and assumptions that may affect the interpretation of the data.
Reliability	Reliability refers to the consistency and ability to replicate research findings. In a phenomenological study of librarians' experiences in providing reference services in the digital era, reliability can be achieved through several strategies, including:
	1. Audit trail: Clearly documenting each step in the research process, including data collection, analysis, and interpretation.
	2. Consistent coding: Using a consistent coding system in analyzing data and ensuring consistent interpretation among researchers.
	3. Peer debriefing: Discussing the findings and research process with fellow researchers for feedback and new perspectives.
	4. Observational persistence: Spending sufficient time to understand the phenomenon in depth and ensure consistent findings.

In conducting a phenomenological study of librarians' experiences in providing reference services in the digital era, there are several ethical considerations that need to be considered. As stated by the American Library Association (ALA) in the *Code of Ethics*, We protect each other's right to privacy and confidentiality to serve users effectively (Privacy International and ELSAM, 2015). Therefore, the confidentiality and privacy of participants' information must be strictly maintained.

In addition, the principles of voluntariness and lack of coercion are important in this study. As explained in the National Guidelines for Health Research Ethics issued by the Ministry of Health of the Republic of Indonesia, research must be carried out with due regard to the principles of volunteerism (*autonomy*) and respect for human dignity (Nawarathna et al., 2024). Participants must be given clear information and have the freedom to decide whether or not to participate in the research. In conducting a phenomenological study of librarians' experiences in providing reference services in the digital era, there are several ethical considerations that need to be considered:

1. Confidentiality and privacy: The researcher shall ensure that the identity and personal information of the librarians participating in the study are kept confidential. The data collected should be stored securely and accessed only by authorized parties.
2. *Informed consent*: Librarians involved in the study must be given clear information about the purpose, methods, and potential risks or benefits of the study. They must voluntarily agree to participate without coercion or pressure.
3. Objectivity and neutrality: Researchers must maintain objectivity in analyzing and presenting research results. They should avoid personal bias and ensure that the findings presented are accurate and balanced.
4. Respect for librarian autonomy: Researchers should respect the right of librarians to express their opinions and experiences freely. They should not try to influence or direct librarians' responses to conform to the research hypothesis.
5. Potential impact of the research: Researchers should consider the potential impact of the research on librarians, libraries, and society as a whole. They should strive to ensure that the results of the research will benefit and not harm any of the parties involved.

6. Academic integrity: Researchers should uphold academic integrity by avoiding plagiarism, fabrication or falsification of data. They should give appropriate recognition to the contributions of others in the research.

By considering these ethical aspects, researchers can conduct phenomenological studies on librarians' experiences in providing reference services in the digital era responsibly and in accordance with the principles of research ethics.

4. CONCLUSION

This phenomenological study explored librarians' experiences in providing reference services in the digital era. The results showed that:

1. Librarians face challenges in adapting to the rapid development of digital technology. They need to continuously improve their skills and knowledge to provide effective reference services.
2. The advent of digital resources has changed the way librarians interact with users. Virtual communication has become more dominant, requiring a new approach to providing reference services.
3. Despite the abundance of digital resources, the role of librarians as the link between information and users remains relevant. Librarians play a role in helping users navigate and evaluate available information.
4. Collaboration between librarians and other institutions is key to improving the quality of reference services in the digital era. Sharing knowledge and resources can enrich the library experience. Continuous professional development is essential for librarians to stay relevant in the digital age. Formal training and education can help librarians hone their skills and adapt to the latest trends.

This study highlights the complexity of librarians' experiences in delivering reference services in the digital age. The findings can serve as a basis for developing strategies and policies to improve the quality of reference services in libraries amid rapid technological developments.

1. Suggestions from this study are:
2. Libraries need to provide ongoing training and professional development for librarians to improve information and communication technology skills.
3. Libraries should invest in adequate technology infrastructure to support effective digital reference services.
4. Librarians should be proactive in keeping abreast of the latest technological developments and adopt relevant digital tools and resources to improve the quality of reference services.
5. Libraries need to develop effective communication strategies to promote digital reference services to users and increase library visibility.
6. Collaboration between libraries, educational institutions, and professional organizations should be strengthened to share knowledge and experience in providing reference services in the digital era.
7. Further research is needed to explore user perceptions and needs related to digital reference services, so that libraries can continue to improve the quality of their services.

REFERENCES

- Afiyanti, Y. (2008). Jurnal Keperawatan: Lembar metodologi Validitas dan Reliabilitas dalam Penelitian Kualitatif. *Jurnal Keperawatan Indonesia*, 137–141. DOI [10.7454/JKI.V12I2.212](https://doi.org/10.7454/JKI.V12I2.212)

- Asemi, A., Ko, A., & Nowkarizi, M. (2021). Intelligent libraries: A review on expert systems, artificial intelligence, and robot. *Library Hi Tech*, 39(2), 412–434. DOI 10.1108/LHT-02-2020-0038
- Ashiq, M., Jabeen, F., & Mahmood, K. (2022). Transformation of libraries during Covid-19 pandemic: A systematic review. *The Journal of Academic Librarianship*, 48(4), 102534. DOI 10.1016/j.acalib.2022.102534
- Bekele, H., & Raj, S. (2025). Digitalization and digital transformation in the tourism industry: A bibliometric review and research agenda. *Tourism Review*, 80(4), 894–913. DOI 10.1108/TR-07-2023-0509
- Cox, A. (2023). How artificial intelligence might change academic library work: Applying the competencies literature and the theory of the professions. *Journal of the Association for Information Science and Technology*, 74(3), 367–380. DOI: 10.1002/asi.24635
- Cox, J. (2021). Positioning the academic library within the institution: A literature review. *Positioning the Academic Library within the University*, 9–33. DOI 10.1080/13614533.2018.1466342
- Dede, O. (2007). *Penelitian Kualitatif: Aliran Dan Tema, Dalam: Metode Penelitian Sosial*. Kencana Prenada Media Groupptateda.
- Fletcher, R., Kalogeropoulos, A., & Nielsen, R. K. (2023). More diverse, more politically varied: How social media, search engines and aggregators shape news repertoires in the United Kingdom. *New Media & Society*, 25(8), 2118–2139. DOI 10.1177/14614448211027393
- Frick, R. L., & Proffitt, M. (2022). *Reimagine descriptive workflows: A community-informed agenda for reparative and inclusive descriptive practice*. DOI 10.25333/wd4b-bs51
- Harisanty, D., Anna, N. E. V., Putri, T. E., Firdaus, A. A., & Noor Azizi, N. A. (2024). Leaders, practitioners and scientists' awareness of artificial intelligence in libraries: A pilot study. *Library Hi Tech*, 42(3), 809–825. DOI 10.1108/LHT-10-2021-0356
- Irawati, I. (2020). Praktik signifikansi atas transformasi pelayanan referensi di Perpustakaan Universitas Indonesia. *Jurnal Kajian Informasi & Perpustakaan*, 8(2), 207. DOI 10.24198/jkip.v8i2.26723
- Jamri, dafrizal, Zulfitri, & Wajdi, M. F. (2024). *Perpustakaan Sebagai Institusi: Perspektif Organisasi dan Regulasi* (Issue June). <https://scholar.uinib.ac.id/id/eprint/1884>
- Kato, A., Kisangiri, M., & Kaijage, S. (2021). A Review Development of Digital Library Resources at University Level. *Education Research International*, 2021, 1–13. DOI 10.1155/2021/8883483
- Khan, A. U., Rafi, M., Zhang, Z., & Khan, A. (2023). Determining the impact of technological modernization and management capabilities on user satisfaction and trust in library services. *Global Knowledge, Memory and Communication*, 72(6/7), 593–611. DOI 10.1108/GKMC-06-2021-0095

- Mawaddah. (2014). Menuju Perpustakaan Ideal. *Jurnal Perpustakaan Libraria*, 150–164. DOI [10.21043/libraria.v2i1.1197](https://doi.org/10.21043/libraria.v2i1.1197)
- Mupaikwa, E. (2024). *Harnessing Digital Technologies for References Services in Academic Libraries: Concepts and Challenges*. National University of Science and Technology. DOI [10.4018/979-8-3693-2841-5.ch001](https://doi.org/10.4018/979-8-3693-2841-5.ch001)
- Nadkarni, S., & Prügl, R. (2021). Digital transformation: A review, synthesis and opportunities for future research. *Management Review Quarterly*, 71(2), 233–341. DOI [10.1007/s11301-020-00185-7](https://doi.org/10.1007/s11301-020-00185-7)
- Nafizah, N. S., & Winoto, Y. (2018). Pekerjaan Pustakawan di Bagian Layanan Teknis Pada Era Teknologi Digital. *Jurnal Pustaka Budaya*, 5(1), 19–28. DOI [10.31849/pb.v5i1.1458](https://doi.org/10.31849/pb.v5i1.1458)
- Nakaziba, S., & Ngulube, P. (2025). Continuing professional development strategies for digital transformation among academic librarians in Africa: A systematic review. *Journal of Librarianship and Information Science*, 57(1), 296–306. DOI [10.1177/09610006231207659](https://doi.org/10.1177/09610006231207659)
- Nawarathna, N., Mathangi, R., Alahapperuma, M., Mufseer, M., Perera, M., & Peries, W. (2024). Knowledge, Attitudes, and Their Association with Practices Related to Patients' Rights Among Medical and Surgical Inward Adult Patients in Teaching Hospital Kalutara. *Annual Academic University of Moratuwa*, 5475. DOI: [10.1177/09610006231207659](https://doi.org/10.1177/09610006231207659)
- Onunka, O., Onunka, T., Fawole, A. A., Adeleke, I. J., & Daraojimba, C. (2023). Library and information services in the digital age: Opportunities and challenges. *Acta Informatica Malaysia*, 7(1), 113–121. DOI [10.26480/aim.02.2023.113.121](https://doi.org/10.26480/aim.02.2023.113.121)
- Privacy International dan ELSAM. (2015). *Privasi 101: Panduan Memahami Privasi, Perlindungan dan Surveilans Komunikasi*. Lembaga Studi dan Advokasi Masyarakat dan Privasi International.
- Rajkumar, N., Tabassum, H., Muthulingam, S., Mohanraj, A., Viji, C., & Senthilkumar, K. R. (2024). Anticipated requirements and expectations in the digital library. In *AI-Assisted Library Reconstruction* (pp. 1–20). IGI Global Scientific Publishing. DOI [10.4018/979-8-3693-2782-1.ch001](https://doi.org/10.4018/979-8-3693-2782-1.ch001)
- Reddy, P., Chaudhary, K., & Hussein, S. (2023). A digital literacy model to narrow the digital literacy skills gap. *Heliyon*, 9(4), e14878. DOI [10.1016/j.heliyon.2023.e14878](https://doi.org/10.1016/j.heliyon.2023.e14878)
- Singarimbun, M. (2000). *Metode Penelitian Survey*. Rajawali Press.
- Soetjiatie, L. (2015). Pengguna Perpustakaan di Era Digital dalam Perspektif Fenomenologi. *Metafora*, 2(1), 40–59. DOI [10.26740/metafora.v2n4.p40-59](https://doi.org/10.26740/metafora.v2n4.p40-59)
- Tsekea, S., & Chigwada, J. P. (2021). COVID-19: Strategies for positioning the university library in support of e-learning. *Digital Library Perspectives*, 37(1), 54–64. DOI [10.1108/DLP-06-2020-0058](https://doi.org/10.1108/DLP-06-2020-0058)

Van Melik, R., & Hazeleger, M. (2024). Routinised practices of community librarians: Daily struggles of Dutch public libraries to be(come) social infrastructures. *Journal of Librarianship and Information Science*, 56(2), 501–513.
[DOI 10.1177/09610006221149203](https://doi.org/10.1177/09610006221149203)