

AI Literacy and Librarians’ Readiness as Determinants of Digital Transformation in University Libraries

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ARTICLE INFO	ABSTRACT
Article history Received: May 12, 2026 Revised: August 2, 2026 Accepted: August 18, 2026 Published: August 20, 2026 Keywords AI Literacy Academic Libraries Digital Transformation Librarians’ Readiness  License by CC-BY-SA Copyright © 2026, The Author(s).	In the context of rapid digital transformation in higher education, artificial intelligence (AI) has emerged as a key driver reshaping the operations of university libraries. This study systematically examines the role of AI literacy and librarians’ readiness in the digital transformation process, drawing on a synthesis of recent scholarly research. The findings indicate that AI is not merely a technical support tool but a transformative force that drives fundamental changes in organizational structures, service models, and professional roles within libraries. The study reveals that AI literacy is a multidimensional construct encompassing digital skills, technological understanding, and ethical awareness, while readiness is influenced by factors such as organizational environment, training, and technological infrastructure. In addition, librarians’ perceptions and attitudes—particularly AI anxiety and technology acceptance—significantly affect the effectiveness of AI implementation. A key finding is that AI does not replace librarians but rather redefines their roles toward becoming “knowledge mediators,” capable of analyzing, evaluating, and connecting information within complex digital environments. However, the study also identifies a gap between technological advancement and human capacity, especially in contexts characterized by uneven resource distribution. Based on these findings, the study emphasizes the need for comprehensive human resource development strategies, including continuous professional training and the integration of AI into library and information science education. Such efforts are essential to ensure that digital transformation in university libraries is both effective and sustainable, enabling libraries to fully leverage the potential of AI in the digital era.
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INTRODUCTION

In the context of profound digital transformation in higher education, artificial intelligence (AI) has emerged as a key driver reshaping the operations of university libraries. Recent studies indicate that AI not only supports the automation of library processes but also enhances service quality, personalizes user experiences, and expands the role of libraries within the digital knowledge ecosystem (Ayinde et al., 2026; Danquah et al., 2024). This shift marks a transition from traditional library models to intelligent libraries, where technology and data play a central role in knowledge provision and management (Sousa, 2025, Vial, 2019).

Alongside the advancement of AI, the role of librarians is undergoing significant transformation. Rather than merely performing technical and operational tasks, librarians are increasingly becoming knowledge professionals who integrate technology and act as intermediaries between users and digital information systems (Cox, 2023; Kavak, 2025). This transformation requires librarians not only to possess traditional professional competencies but also to develop digital skills and AI-related capabilities to adapt to the evolving work environment (Akakpo, 2024).

In this context, the concept of AI literacy has emerged as a core component of library digital transformation. AI literacy encompasses not only the ability to use AI tools but also an understanding of underlying principles, the capacity to evaluate outputs, and the ability to identify associated risks and ethical issues (Hossain, 2025). Previous studies further demonstrate a strong relationship between AI literacy and librarians’ readiness to adopt and implement new technologies (Alao et al., 2024; Jabeen, 2025).

However, despite the growing body of literature addressing individual aspects such as AI literacy, readiness, and AI applications in libraries, there remains a lack of integrative studies that connect these

dimensions within a unified analytical framework. While some recent works have begun to approach this issue from a systemic perspective, significant gaps persist in clarifying the interaction between AI literacy and librarians' readiness, particularly within the specific context of university libraries (Sharma et al., 2026; Shahzad et al., 2024).

Addressing this gap, the present study aims to systematically examine the role of AI literacy and librarians' readiness as key determinants in the digital transformation of university libraries. In doing so, the study contributes not only to the theoretical understanding of these concepts but also provides practical implications for developing library human resources in the age of AI.

METHOD

This study adopts a systematic literature review approach to examine the role of artificial intelligence (AI) literacy and librarians' readiness in the digital transformation of university libraries. This approach enables the structured synthesis of scientific evidence, thereby identifying research trends, influencing factors, and knowledge gaps within the field (Ayinde et al., 2026). In addition, the systematic review method enhances the transparency and replicability of the study through a rigorous process of literature selection and analysis (Danquah et al., 2024).

The research process was conducted in several stages. First, a comprehensive search strategy was developed based on key terms such as "artificial intelligence," "AI literacy," "librarians," "readiness," and "academic libraries," combined with Boolean operators to refine the search scope. Major academic databases, including ScienceDirect, SpringerLink, and leading library and information science journals, were utilized to ensure the reliability and scholarly quality of the data sources (Ayinde et al., 2026).

Next, clear inclusion and exclusion criteria were established. The study focuses on publications from recent years (primarily 2020–2026) to capture the latest developments in AI applications in libraries. Selected studies were required to meet at least one of the following criteria: (i) research on librarians' AI literacy, (ii) studies on readiness for AI adoption, or (iii) analyses of AI applications in academic libraries. Studies not directly related to library contexts or lacking a focus on AI were excluded. This approach is consistent with prior systematic reviews in the library and information science domain (Danquah et al., 2024).

The screening process was carried out at multiple levels, including title, abstract, and full-text review, to ensure the relevance and quality of each selected study. Following the screening stage, the included studies were coded and categorized into key thematic areas: (i) concepts and structure of AI literacy, (ii) librarians' readiness, (iii) perceptions and attitudes toward AI, and (iv) the role of AI in library transformation. This thematic classification facilitated the development of a structured analytical framework and supported the synthesis of findings (Fu et al., 2025; Fedorov & Karpov, 2025).

The primary analytical method employed was qualitative content analysis, combined with comparative synthesis. By comparing findings across different contexts and regions, the study identifies common patterns as well as variations in AI literacy and readiness among librarians. Previous studies have highlighted that readiness for AI implementation is influenced by multiple factors, including organizational environment, technological infrastructure, and individual competencies, thereby necessitating a multidimensional analytical approach (Fu et al., 2025; Fedorov & Karpov, 2025).

Furthermore, the study emphasizes the evaluation of literature quality to ensure the robustness of the synthesized findings. Assessment criteria included relevance to the research topic, methodological rigor, and the academic contribution of each study. Priority was given to research with clear methodologies, reliable data, and publication in reputable journals, thereby strengthening the validity and credibility of the conclusions.

Overall, the research methodology is designed to be systematic, transparent, and generalizable, aligning with the objective of analyzing the role of AI literacy and librarians' readiness in the digital transformation of university libraries.

RESULTS AND DISCUSSION

Concept and Structure of AI Literacy

As artificial intelligence (AI) becomes increasingly integrated into library operations, the concept of AI literacy has emerged as a critical foundation for understanding and evaluating librarians' adaptive capacity. AI literacy extends beyond the mere use of tools; it encompasses the ability to understand, analyze, and critically evaluate AI systems within professional contexts. From an interdisciplinary perspective, AI literacy is defined as a set of knowledge, skills, and attitudes that enable individuals to interact effectively with AI systems while recognizing their broader social and ethical implications (Long & Magerko, 2020; Davy et al., 2021). Within the library and information science domain, this concept has been further refined to reflect the specific role of librarians as knowledge intermediaries in digital environments (Deshen & Aharony, 2026).

One of the core components of AI literacy is digital skills. These skills form the foundation that enables librarians to access and operate technological systems, including the use of software, data management, and interaction with digital platforms. Studies indicate that digital skills are not only a prerequisite but also a basis for developing more advanced AI-related competencies (Alao et al., 2024; Kavak & Gültekin, 2026; Polat, 2024). In the context of university libraries, digital skills also involve the ability to navigate academic databases, utilize analytical tools, and support users in digital information environments. A lack of such skills can become a significant barrier to AI implementation, particularly in developing countries (Begum & Elahi, 2025).

The second component is AI understanding, which includes knowledge of underlying principles, algorithms, and the capabilities of AI systems. Unlike digital skills, which are largely operational, AI understanding requires deeper cognitive engagement with how AI processes data, makes decisions, and generates outputs. Research suggests that librarians must be able to evaluate the reliability of AI systems, understand their limitations, and identify potential biases (Deshen & Aharony, 2024; Hossain, 2025). This is particularly crucial in academic library contexts, where AI is increasingly used to support information retrieval and scholarly research, and where accuracy and transparency are essential.

The third component of AI literacy is ethical awareness and risk understanding. AI is not merely a technical tool; it raises critical issues related to privacy, algorithmic bias, and accountability. Recent studies emphasize that librarians must be capable of identifying and addressing ethical concerns arising from AI use while ensuring fairness and transparency in information services (Elsayed & Abusharhah, 2025; Michalak & Ellixson, 2026). Moreover, awareness of risks enables librarians to make informed decisions regarding the selection and implementation of AI technologies within library systems.

Taken together, these components demonstrate that AI literacy is a multidimensional construct encompassing technical, cognitive, and ethical dimensions. Several studies have proposed AI literacy models to systematize these components. For example, Long and Magerko (2020) highlight the integration of knowledge, skills, and attitudes, whereas Ng et al. (2021) propose a framework consisting of awareness, application, and evaluation of AI. In the library context, recent studies have adapted these models to align with professional practices, emphasizing the role of librarians in facilitating users' understanding and effective use of AI (Deshen & Aharony, 2026; Rezaei Sharifabadi et al., 2025).

Furthermore, research indicates that AI literacy is closely associated with factors such as technological experience, work environment, and access to training opportunities. Librarians who have access to AI-related training programs tend to exhibit higher levels of competence and greater readiness to adopt new technologies (Alao et al., 2024; Shahzad et al., 2024; Hossain et al., 2025). This suggests that the development of AI literacy is not solely an individual responsibility but is also shaped by organizational strategies for human resource development.

Overall, the concept and structure of AI literacy reflect a shift from traditional information literacy toward more advanced digital competencies in the AI era. Understanding the components of AI literacy not only facilitates the assessment of librarians' readiness but also provides a foundation for designing training programs and strategic initiatives. In the context of digital transformation in university libraries, AI literacy serves as a critical enabler for librarians to assume their evolving role as "intelligent knowledge mediators," thereby fostering innovation and sustainable development within library systems.

Librarians' Readiness

Librarians' readiness to adopt and implement AI is widely regarded as a prerequisite for successful digital transformation in university libraries. This concept generally refers to the extent to which individuals and organizations possess the necessary capabilities, resources, and attitudes to effectively apply new technologies in practice (Shahzad et al., 2024). In the library context, readiness not only reflects the capacity to adopt technology but also encompasses the ability to adapt to changes in professional roles, workflows, and service models (Begum & Elahi, 2025).

One of the key determinants of readiness is organizational factors. Research indicates that the organizational environment plays a crucial role in shaping librarians' perceptions and behaviors toward AI adoption. Libraries with clear digital transformation strategies, strong leadership support, and a culture of innovation tend to exhibit higher levels of readiness (Fu et al., 2025; Fedorov & Karpov, 2025). Conversely, a lack of strategic direction or limited resources may hinder AI implementation, even when librarians possess adequate individual competencies. Additional factors such as organizational structure, internal policies, and levels of technological investment also significantly influence readiness (Rodin, 2025; Emmatrice & Ekoko, 2025). These findings suggest that AI transformation is not solely an individual issue but must be understood within a broader organizational context (Francisco, 2025).

In addition to organizational factors, training and professional development constitute another critical determinant of readiness. Numerous studies highlight that the absence of specialized AI training programs represents a major barrier to librarians' readiness (Chatikobo & Pasipamire, 2024; Begum & Elahi, 2025). Training initiatives not only enhance technical skills but also reshape perceptions and attitudes toward emerging technologies. Effective training programs typically integrate theoretical knowledge with practical application, enabling librarians to understand how AI systems function and how they can be applied in specific professional contexts. Moreover, opportunities for continuous learning and access to training resources have been shown to positively influence readiness levels (Shahzad et al., 2024; Alao et al., 2024). This underscores the importance of viewing training not merely as a short-term intervention but as a long-term strategic investment in library human resource development.

A third major factor influencing readiness is the technological environment. The implementation of AI requires an appropriate technological infrastructure, including data systems, software, and supporting tools. Studies indicate that libraries with advanced technological infrastructures, system integration capabilities, and access to modern AI tools tend to demonstrate higher readiness (Fedorov & Karpov, 2025; Fu et al., 2025). In contrast, inadequate infrastructure—particularly in developing countries—can pose significant barriers to AI adoption (Begum & Elahi, 2025; Togia et al., 2026). Furthermore, access to high-quality data and open technological platforms plays an essential role in enhancing librarians' readiness to engage with AI systems.

Beyond these primary factors, several studies emphasize the importance of individual-level characteristics, such as technological experience, learning motivation, and attitudes toward AI. For instance, librarians with prior experience in digital technologies or involvement in AI-related projects tend to exhibit higher levels of readiness (Shahzad et al., 2024). Additionally, positive perceptions of AI's benefits can facilitate greater acceptance and willingness to adopt the technology (Chen et al., 2026; Peekhaus, 2026).

Overall, librarians' readiness is the result of complex interactions among multiple factors, with organizational context, training, and technological environment playing central roles. Enhancing readiness cannot be achieved through isolated measures but requires a comprehensive approach that integrates individual capacity building with the development of supportive organizational conditions. This is particularly critical in the context of AI-driven digital transformation in university libraries, where success depends not only on technological advancement but also on human capabilities and organizational effectiveness.

Perceptions and Attitudes toward AI

In addition to competencies and readiness, librarians' perceptions and attitudes toward AI represent a critical factor directly influencing the implementation of technology in university libraries. Research indicates that the acceptance or rejection of AI is not solely determined by technical capability but is also strongly shaped by psychological factors, including levels of trust, anxiety, and perceived benefits of the

technology (Elsayed & Abusharhah, 2025; Edam-Agbor et al., 2025). Therefore, examining librarians' attitudes is essential for understanding both the drivers and barriers of digital transformation.

One prominent concept in recent studies is "AI anxiety." This refers to a psychological state characterized by concern, apprehension, or even fear when interacting with AI systems. Gültekin and Kavak (2025) found that many librarians worry that AI may partially or fully replace their roles, leading to professional insecurity. Similarly, other studies have shown that a lack of understanding of how AI functions can intensify such concerns, particularly in environments experiencing rapid technological change (Chen et al., 2026; Peekhaus, 2026). These findings suggest that AI anxiety is not merely an individual issue but is also influenced by how organizations communicate and provide training related to emerging technologies.

AI anxiety can negatively affect technology acceptance. When librarians feel uncertain or lack confidence in using AI systems, they are more likely to avoid or limit their use in professional practice. Empirical studies demonstrate that higher levels of anxiety are often associated with lower levels of acceptance, thereby reducing the effectiveness of AI implementation in libraries (Gültekin & Kavak, 2025; Elsayed & Abusharhah, 2025). Conversely, when librarians possess a clear understanding of AI's benefits and functionalities, they tend to adopt and utilize the technology more proactively.

Beyond anxiety, technology acceptance is also influenced by perceptions of value and usefulness. Studies indicate that librarians are more inclined to embrace AI when they perceive that it enhances work efficiency, reduces repetitive tasks, and improves service quality (Edam-Agbor et al., 2025; Shahzad et al., 2024). For example, the use of chatbots or recommendation systems can save time and enhance user experience, thereby fostering positive perceptions of AI. Additionally, factors such as ease of use and the ability to integrate AI into existing workflows play an important role in shaping acceptance attitudes.

Another important dimension is the role of organizational context and workplace environment in shaping attitudes toward AI. Research shows that in organizations characterized by a culture of innovation and support for technological experimentation, librarians tend to exhibit more positive attitudes toward AI (Edam-Agbor et al., 2025; Shahzad et al., 2024). In contrast, in environments lacking support or characterized by higher perceived risks, librarians are more cautious and less willing to adopt new technologies. This highlights that attitudes toward AI are not solely individual but are also shaped by broader organizational contexts.

Furthermore, experience and exposure to technology significantly influence librarians' perceptions and attitudes. Individuals with prior experience using AI tools or participating in training programs tend to demonstrate higher confidence and lower levels of anxiety when engaging with technology (Chen et al., 2026; Peekhaus, 2026). This reinforces the argument that enhancing AI literacy can help mitigate AI anxiety and promote greater acceptance of technological innovation.

Overall, perceptions and attitudes toward AI constitute a key component of digital transformation in university libraries. AI anxiety and technology acceptance are closely interrelated and influenced by both individual and organizational factors. Reducing anxiety and fostering positive perceptions of AI require a combination of training, effective communication, and supportive work environments. These efforts not only facilitate successful AI implementation but also contribute to redefining the evolving role of librarians in the digital age.

The Role of AI Literacy in the Digital Transformation of University Libraries

In the context of increasingly pervasive digital transformation, AI literacy is recognized as a central factor determining the effective implementation and utilization of technology in university libraries. Beyond its technical dimension, AI literacy functions as a catalyst for organizational innovation, service reconfiguration, and enhanced operational performance. Recent studies demonstrate a strong correlation between librarians' AI literacy and the success of digital transformation initiatives in libraries (Kavak & Gültekin, 2026; Shahzad et al., 2024).

First, AI literacy has a direct impact on technology implementation. The adoption of AI in libraries requires not only technological infrastructure but also the capacity of staff to understand, operate, and adapt these systems. Research indicates that librarians with higher levels of AI literacy are better positioned to engage with emerging technologies, as well as to participate in the design, customization, and evaluation of AI applications in library contexts (Kavak & Gültekin, 2026; Fu et al., 2025). Conversely, insufficient competencies may result in superficial or ineffective implementation, or in the deployment of

technologies that do not align with practical needs (Begum & Elahi, 2025). This suggests that AI literacy is not merely a supporting factor but a prerequisite for meaningful digital transformation.

Second, AI literacy plays a crucial role in service innovation. AI enables libraries to develop intelligent services such as recommendation systems, user-support chatbots, and analytics-driven user behavior insights. However, the successful design and operation of these services depend heavily on librarians' ability to understand and leverage AI technologies. Atikuzzaman (2025) highlights that AI can enhance service quality through personalization and automation, yet the effectiveness of such applications is contingent upon staff readiness and competence. Similarly, other studies emphasize that librarians with strong AI literacy are more likely to innovate services, experiment with new models, and respond effectively to evolving user needs (Kavak, 2025; Sousa, 2025). This transformation supports the shift of libraries from traditional information providers to intelligent knowledge hubs.

Third, AI literacy significantly influences operational efficiency. The application of AI in automating processes such as classification, metadata management, and large-scale data processing reduces manual workload and increases productivity. However, the effectiveness of these systems depends on librarians' ability to monitor, adjust, and optimize AI operations. Studies suggest that when librarians possess adequate AI literacy, they can leverage technology to improve workflows, minimize errors, and enhance service quality (Michalak & Ellixson, 2026; Edam-Agbor et al., 2025). In contrast, a lack of competency may result in AI systems becoming complex and difficult to manage, potentially introducing operational and data-related risks.

Beyond these dimensions, AI literacy also contributes to the redefinition of librarians' professional roles in digital environments. Rather than performing repetitive tasks, librarians are increasingly positioned as information analysts, academic advisors, and data-driven knowledge managers. Research highlights that AI literacy enables librarians to transition from "system operators" to "co-creators of knowledge" within the academic ecosystem (Sousa, 2025; Michalak & Ellixson, 2026). This shift not only enhances professional value but also strengthens the strategic role of libraries within higher education institutions.

However, it is important to note that the impact of AI literacy is not automatic but depends on its interaction with other factors such as organizational context, policy frameworks, and technological infrastructure. Studies indicate that even when librarians possess high levels of competency, insufficient organizational support or limited resources can undermine the effectiveness of digital transformation efforts (Fu et al., 2025; Fedorov & Karpov, 2025). Therefore, the development of AI literacy must be embedded within a comprehensive strategy that integrates human resource development with the creation of supportive organizational environments. Organizational support—through policies, leadership, and resource allocation—has been shown to positively influence readiness and technology acceptance (Fu et al., 2025; Edam-Agbor et al., 2025; Umegbolu & Ejeabukwa, 2025).

Overall, AI literacy plays a central role in the digital transformation of university libraries, influencing technology implementation, service innovation, and operational efficiency. Investment in developing this competency not only enables libraries to adapt to technological change but also provides a foundation for sustainable development in the digital era.

DISCUSSION

The findings indicate that although AI is increasingly embedded in all aspects of library operations, the human factor—particularly librarians—remains central to the digital transformation process. AI does not replace humans; rather, it redefines professional roles toward the integration of technology and knowledge. Librarians are no longer merely system operators but are evolving into intermediaries who connect users with AI systems and digital knowledge resources (Sousa, 2025; Michalak & Ellixson, 2026). This transformation reflects a broader trend in education and information sectors, where human capabilities and technological systems complement rather than compete with each other.

Moreover, the effective utilization of AI depends heavily on librarians' ability to understand and manage these technologies. Studies on AI literacy suggest that insufficient understanding of AI can reduce the effectiveness of its application and even lead to flawed decision-making in information services (Kavak & Gültekin, 2026; Deshen & Aharony, 2026). Therefore, librarians are not only users of AI but also key agents shaping its implementation and impact within library environments.

Another significant finding is the existence of a digital divide between technological advancement and human capability, even within individual libraries. While many institutions have invested in technological infrastructure and AI systems, the competencies of their staff are often uneven, resulting in suboptimal utilization of these technologies. Studies across different national contexts reveal that this gap is particularly pronounced in developing countries, where training resources and technological infrastructure remain limited (Begum & Elahi, 2025; Shahzad et al., 2024).

This divide exists not only across countries but also within organizations, among librarians with varying levels of expertise and experience. Research shows that individuals with stronger technological backgrounds or formal training adapt more quickly to AI, whereas those with limited experience tend to exhibit hesitation and reduced engagement with new technologies (Fedorov & Karpov, 2025; Togia et al., 2026). These findings underscore that digital transformation cannot rely solely on technological investment but must be accompanied by comprehensive capacity-building efforts across the entire workforce.

The findings yield several important theoretical implications. First, AI literacy should be conceptualized as a new core competency in the field of library and information science. While information literacy has traditionally been considered foundational, the AI era requires an expanded framework that includes the ability to understand, interact with, and critically evaluate intelligent systems (Long & Magerko, 2020; Ng et al., 2021). This shift calls for a reconfiguration of existing competency frameworks for librarians.

Second, the role of librarians is evolving from that of “information providers” to “knowledge mediators.” In digital environments where AI can autonomously process and deliver information, the value of librarians lies in their ability to evaluate, interpret, and contextualize knowledge according to users’ specific needs. Recent studies highlight this role as essential for maintaining the reliability and quality of information systems (Sousa, 2025; Michalak & Ellixson, 2026). This transformation contributes to redefining the strategic position of libraries within the academic ecosystem.

From a practical perspective, the findings highlight the need for targeted strategies to enhance AI literacy and readiness among librarians. First, continuous professional development is essential. Training programs should integrate theoretical knowledge with practical application, enabling librarians not only to understand AI but also to apply it effectively in their professional contexts (Chatikobo & Pasipamire, 2024; Alao et al., 2024). Additionally, fostering communities of practice and knowledge-sharing initiatives can further strengthen collective competencies.

Second, institutions must develop appropriate human resource strategies aligned with digital transformation goals. This includes recruiting personnel with technological expertise while simultaneously upskilling existing staff through structured training and support mechanisms. Organizational support—through policies, leadership, and resource allocation—has been shown to positively influence readiness and technology acceptance (Fu et al., 2025; Edam-Agbor et al., 2025).

Finally, integrating AI into library and information science education is a critical step. Academic programs should incorporate AI literacy, data analytics, and technology ethics to prepare future librarians for digital work environments (Hossain, 2025; Deshen & Aharony, 2026). This approach not only enhances workforce quality but also contributes to sustainable digital transformation in the long term.

Overall, the discussion confirms that the digital transformation of university libraries is not merely a technological issue but a comprehensive restructuring process in which human factors play a central role. The integration of competency development, strategic planning, and educational innovation is essential for effectively leveraging the potential of AI in library contexts.

CONCLUSION

This study has systematically examined the role of AI literacy and librarians’ readiness in the digital transformation of university libraries. The findings indicate that AI is not merely a technological tool but is increasingly becoming a transformative force that reshapes organizational structures, service models, and professional roles within libraries. In this context, AI literacy emerges as a core determinant of librarians’ capacity to adapt to and effectively leverage technological innovations.

The analysis demonstrates that AI literacy is a multidimensional construct encompassing digital skills, technological understanding, and ethical awareness, while readiness is influenced by a range of factors,

including organizational environment, training, and technological infrastructure. The interaction between these two dimensions forms the foundation for effective and sustainable AI implementation in libraries. In addition, librarians' perceptions and attitudes—particularly AI anxiety and technology acceptance—play a crucial role in shaping the trajectory of digital transformation.

A key finding of this study is that AI does not replace librarians but rather redefines their roles toward the integration of technology and knowledge. Librarians are increasingly positioned as knowledge mediators, capable of evaluating, interpreting, and connecting information within complex digital environments. This highlights that library digital transformation is not solely a technological issue but a comprehensive restructuring process in which human factors remain central.

However, the study also reveals the existence of a gap between technological advancement and human capacity, particularly in contexts where library development is uneven. This underscores the urgent need for strategic human resource development, including continuous training, awareness enhancement, and the integration of AI into library and information science education.

Overall, it can be concluded that AI literacy and librarians' readiness are decisive factors in the digital transformation of university libraries. Investing in human capacity development, alongside the establishment of supportive organizational environments, will be essential for effectively harnessing the potential of AI and strengthening the role of libraries in the digital era.

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