International Journal of Information Science and Management
Vol. 24, No. 1, 2026, 81- 96
DOI: https://doi.org/10.22034/ijism.2026.2025995.1446 / DOR: https://dor.isc.ac/dor/20.1001.1.20088302.2026.24.1.4.5

Original Research

Information Culture in the Artificial Intelligence Age: Perspectives of Information Science Faculty Members

Hasan Mahmoudi Topkanlo
Assistant Prof., Knowledge and Information Science Department, Faculty of Psychology and Education, Semnan University, Semnan, Iran.
hmahmoudi@semnan.ac.ir
ORCID iD: https://orcid.org/0000-0002-0611-221X

Received: 05 April 2024
Reviewed: 25 May 2024
Accepted: 19 August 2025

Abstract

Information culture reflects the core values, beliefs, and organizational attitudes toward the creation, use, and management of information. This study aims to identify the main components of information culture within university settings in the age of artificial intelligence, based on the views of information science experts. This is an applied study conducted using the reflexive thematic analysis method. The population consisted of faculty members from knowledge and information science departments at Iranian universities, selected through purposive sampling. Semi-structured interviews were conducted to gather data, and the process continued until theoretical saturation was reached after interviewing 17 participants. Participant feedback was used to assess the validity of the research. Qualitative data analysis yielded 142 initial codes, grouped by semantic and conceptual similarities, resulting in 32 subthemes. These subthemes were then organized into four base themes that form the primary structure of the information culture framework proposed in this study. The four base themes of information culture are information management, information technology management, information values and norms, and communication and interaction practices. The findings provide an empirical benchmark for improving and expanding current models, and give scholars and university leaders a practical tool to evaluate and enhance information culture in the era of artificial intelligence within academic environments.

Keywords: Information Culture, Information values, Information Management, Information Technology, Artificial Intelligence.

Introduction

Information culture is a culture that recognizes the value and utility of information in achieving operational and strategic success. It is where information serves as the basis for organizational decision-making, and information technology is readily used as an enabler of effective information systems (Curry & Moore, 2003). As Choo et al. (2006) state, information culture reflects an organization's values, norms, and practices for managing and using information. These norms influence how information is created, shared, and used within the organization (Choo et al., 2006). It is defined as a conceptual framework for people's interaction

with the growing flows of data and knowledge (Mamasoliyevich, 2023). This culture includes values, skills, and attitudes that facilitate the utilization of information at both the individual and organizational levels (Anvarovna, 2023). Information culture plays a central role in developing the information society (Alide, 2025). In the information age, organizations need a strong information culture to stay competitive and respond quickly to environmental changes. Such a culture provides a foundation for evidence-based decision-making by promoting shared values and norms in collecting, analyzing, and exchanging information.

Additionally, a cohesive information culture enhances collaboration across units, prevents duplication of effort, improves process efficiency, and supports continuous innovation. Ultimately, organizations that view information as a strategic asset can respond more rapidly to emerging opportunities and succeed amid market complexities (Sofilkanych, 2022). The spread of globalization and digital communication has expanded the role of information culture beyond technical concerns, emphasizing its social and ethical aspects. Therefore, educating about information ethics and fostering information citizenship in the 21st century relates to issues like access justice and media literacy (Abdurakhmonova et al., 2021). From this perspective, the philosophical dimensions of information culture have also been explored through a socio-philosophical lens (Sofilkanych, 2022). In universities, where the core activity involves producing, disseminating, and expanding information and knowledge, attention to information culture is a necessity (Mahmoudi, 2021; Anvarovna, 2023). Establishing clear values and norms for gathering, analyzing, and sharing information helps faculty members, researchers, and students strengthen their scientific, educational, and research skills—and enables the university to make more accurate and effective strategic decisions. Focusing on information not only enhances research quality, teaching, and management but also strengthens the university's standing in national and international rankings by enhancing data analysis skills and fostering continuous innovation, thereby leading to sustainable development (Mahmoudi, 2021; Sayfullayeva, 2025). Efforts in some universities have aimed to reinforce components of the information culture. Researchers have developed effective teaching methods and applications to foster an information culture, providing systematic educational models and guides to improve students' information skills, which is a recent priority (Anvarovna, 2023).

Additionally, a review of doctoral programs indicates that digital infrastructure and library policies play significant roles in shaping the information culture of emerging researchers (Deja, Wojcik & Świerczyńska-Głownia, 2024). Fields such as theological research and the development of social literacy among adolescents also offer new avenues for studying how information culture evolves and is transmitted. For example, the evolution of research methods at the University of Helsinki's Faculty of Theology shows that the study of religious literature is influenced by changes in information culture (Myllykoski, 2025). Examining the role of social literacy in developing information citizenship among adolescent students highlights the importance of communication skills within an information culture (Sayfullayeva, 2025).

Despite advances in both theory and practice, there is still a need for an integrated, locally developed framework in academic environments. Although many studies have examined information culture in organizations such as universities, attention to artificial intelligence and its recent developments has been overlooked. Evidence shows that the rise and expansion of artificial intelligence have significantly influenced information-related processes. Therefore, it is essential to reassess the components of information culture. Based on this, the current study aims to create a multidimensional model of information culture in universities by exploring the

perspectives of information science experts, with a specific focus on artificial intelligence. This research intends to fill existing gaps and foster progress and innovation in the field.

Literature Review

Since this study aims to identify the components of information culture in university settings, this section reviews research on information culture, focusing on the elements they include.

One of the earliest studies on information culture was Curry & Moore's (2003) research examining the status of information culture in health organizations. The results showed that the importance of information within the organization was well understood. However, employees were not very satisfied with the organization's environment; they believed it could not foster an information culture. As in this previous study, Choo et al. (2006) examined the impact of information culture and information management on information use behavior in Canada. The findings indicated that information sharing and the proactive use of information within the dimensions of information culture were most closely related to their information use behavior. Two years later, in another investigation, Choo et al. (2008) studied the impact of information culture on information use outcomes across three separate organizations. The results showed that organizational information culture significantly influenced information use behavior. They also revealed that each of the three organizations had different information cultures, with notable differences in the intensity of information culture dimensions. Oliver (2008) examined information culture and the factors influencing it in organizations from Germany, Australia, and Hong Kong. The findings indicated that recognition and acceptance of social and organizational requirements, attitudes toward information sharing, technology utilization, trust in written documents, and communication priorities were practical factors shaping an organization’s information culture. Legal requirements for information management also played a key role in shaping this culture. Building on previous studies, Tien and Chao (2012) explored the impact of information culture and employee satisfaction on organizational innovation. The results showed that both factors influenced innovation. Furthermore, the impact of each dimension of information culture on organizational innovation revealed that, aside from the two dimensions of inter-organizational communication and participation, the others had a positive effect on both technical and managerial innovations. In another study, Choo (2013) identified four types of organizational information culture patterns: consequential culture, rule-based culture, relationship-based culture, and risk culture. Each type was characterized by a set of attributes, including primary goals of information management, values, information norms, and behaviors. Using a different approach, Svärd (2014) studied various information cultures and their impact on the processes of creating, collecting, organizing, and managing public records within a Belgian organization. The results showed that the organization's existing systems were not suitable for sharing information among employees, who tended not to share beyond organizational tasks. Overall, the findings demonstrated that the influence of information culture affected public records management, and the dominant type of information culture significantly impacted how the organization managed its resources and information systems. Lauri, Heidmets, and Virkus (2016) examined the status of information culture and its relationship with information management, job satisfaction, leadership style, and individual performance among faculty members of higher education institutions in Estonia. The findings showed that information integrity, the proactive use of information, and informal information

were among the distinctive features of the information culture dominating Estonian higher education institutions. Mahmoudi et al. (2017) studied the information culture of faculty members at Ferdowsi University of Mashhad using a six-dimensional model that included information accuracy, formality, control, transparency, sharing, and active use of information. The results showed that, from the faculty members' point of view, the state of the information culture and its dimensions are well below ideal levels. They found that the dominant information culture at Ferdowsi University is relationship-oriented, which emphasizes interpersonal relationships and knowledge sharing. Widén and Karim (2018) explored the role of information culture in developing information literacy in work settings. Their results showed that information culture was effective in at least five areas: organizational information management, overall effectiveness, workplace information literacy and use, and the alignment between ICT and IT processes and their infrastructure. Nordsteien and Byström (2018) examined how newly arrived health professionals interact with the hospital's information culture. Their findings revealed that newcomers are very cautious and methodical in their use of information, and they believe that sharing information and reporting errors are key aspects of hospital information culture. Over time, the newcomers adapt to the organization's information culture. Boamah (2018) studied the information culture of Ghanaian immigrants living in New Zealand. The findings indicated that these immigrants sought more information on education, health, the environment, politics, and sports, while paying less attention to entertainment, agriculture, and religion. Their preferred sources of information included websites, followed by libraries and academic databases.

Abdurakhmonova, Uglimirzayev, Karimov and Karimova (2021) examine how globalization transforms information culture and increases the need for ethical education. They explain key terms such as globalization, information culture, information sphere, information society, moral education, and ideological immunity, and describe the modern information space as including research institutions, media outlets, educational platforms, and electoral technologies. Arguing that swift economic and technological integration creates new demands on individuals' moral and spiritual abilities, they highlight Uzbekistan's curriculum reforms that combine ICT training with ethics education. The authors conclude by proposing concrete strategies for integrating ethics modules into information-communication programs, strengthening ideological resilience, fostering critical thinking, and collaborating with policymakers to modernize the national education system standards. Mahmoudi (2021) argues that in knowledge-intensive environments like public universities, a strong information culture supports effective research collaboration, informed decision-making, and strategic institutional growth. Noting the absence of a validated framework for assessing information culture in Iranian government universities, he develops and empirically tests a comprehensive four-dimensional model information values and norms, effective use of information and communication technology (ICT), information and communication management processes, and patterns of information interaction contending that this multifaceted framework provides a solid foundation for systematically evaluating and improving information culture across Iran's higher education institutions. Sofilkanych (2022) examines the socio-philosophical foundations and future trajectories of information culture by systematizing its content from an ontological standpoint. Employing a dialectical methodology, she investigates the convergence of culture and information as dual categories, delineating information culture as both a contextual reality and an instrumental construct. The study operationalizes core processes, recursive interplay

with epistemological frameworks, value manipulation, normative selectivity, and collective norm formation, and presents dyadic definitions that clarify how ethical and epistemic dimensions evolve. Finally, it proposes a conceptual framework for guiding interventions in public information standards, educational innovation, and managerial practices to shape a forward-looking information culture. Anvarovna (2023) proposes and empirically tests a structured methodology for integrating information culture education into higher education curricula. Drawing on an extensive literature review and expert consultations, He defines information culture across four dimensions—ethical use of information, information management, technology integration, and collaborative information practices—and then develops a five-stage instructional model consisting of Needs Assessment, Curriculum Design, Interactive Instruction, Formative Assessment, and Program Evaluation. Mamasoliyevich (2023) conducts a socio-philosophical analysis of how young people develop an information culture in today's globalized, media-saturated world. He describes the current "information crisis" as both a spiritual and a socio-political challenge, in which the flood of competing narratives gives rise to phenomena such as information warfare and ideological manipulation. Arguing that a strong information culture is essential for protecting national values and individual resilience, he reviews philosophical and pedagogical approaches to media literacy, outlines legal and psychological safeguards, and provides recommendations for policymakers to enhance information security and promote ethical engagement among youth. Deja, Wojcik, and Świerczyńska-Głownia (2024) conducted a scoping review to define digital information culture within doctoral schools. Using the CIMO search framework and thematic analysis, they identified three key areas—information access, research support, and the community of inquiry—and proposed an initial model for evaluating and developing DIC. They conclude that strengthening the digital information culture is vital for doctoral candidates' integration into academic life and for improving their scholarly outcomes. Myllykoski (2025) examines how digitalization has transformed the information culture of theological research at the University of Helsinki's Faculty of Theology. Through institutional document analysis, a faculty survey, and in-depth interviews, he documents a transition from print-focused scholarship to a digitally mediated environment characterized by open-access repositories, collaborative online platforms, and the adoption of digital humanities tools (e.g., text mining, GIS). Based on these findings, he develops a four-part model encompassing digital literacy, epistemic values, technological infrastructure, and community engagement, which reflect changing skills, norms, resources, and practices. Myllykoski concludes by recommending targeted digital skills training, stronger partnerships with library researchers, and continued investment in open-access and digital humanities services to foster a resilient, transparent, and collaborative information culture in theological scholarship.

The literature review shows that information culture is a complex, dynamic, multifaceted, and evolving concept that varies across different contexts such as healthcare organizations, higher education institutions, immigrant communities, and doctoral schools. Early research focused on practical aspects such as information sharing, proactive use, and technology engagement, while more recent investigations have explored its philosophical, ethical, pedagogical, and digital dimensions. Globalization and digitalization have further changed its meaning by emphasizing roles in promoting critical thinking, protecting information security, and supporting social participation. Despite this wide range of research, the impact of artificial intelligence on information culture remains limited; this study aims to fill that gap by examining

information culture in university settings during the AI era.

Materials and Methods

The present study is applied research. This study used reflexive thematic analysis, as developed by Braun and Clarke (2006; 2019), to examine the semantic patterns in qualitative data. This method provides a flexible yet theoretically grounded framework for identifying, analyzing, and interpreting meaning across datasets. Instead of adhering to strict methodological rules, reflexive thematic analysis acknowledges the researcher's active and interpretive role in developing themes and insights. The analytical process was carried out in six recursive stages:

1) Data Familiarization: Repeated reading of interview transcripts and note-taking to gain a comprehensive understanding.

2) Initial Coding: Systematic identification of meaningful segments and the development of preliminary codes.

3) Theme Development: Grouping codes into candidate themes that reflect broader patterns of meaning.

4) Theme Review: Assessing the internal consistency and coherence of themes concerning coded data and the entire dataset.

5) Theme Definition and Naming: Clarifying the focus and applying clear, descriptive labels to each theme.

6) Final Reporting: Combining thematic narratives with illustrative excerpts to present the research findings.

In this interpretive framework, the researcher is viewed not just as an analyst but as a creator of meaning. Therefore, reflexivity and analytical transparency are core principles throughout the process.

The statistical population of this study included faculty members from the knowledge and information science departments of Iranian universities. Participants were selected through purposive sampling. Selection criteria included having at least five years of teaching experience, familiarity with the field of information culture, and publications on related topics such as information and knowledge management, information behavior, and information systems. Data were collected through semi-structured interviews, which continued until theoretical saturation was reached after interviewing 17 faculty members. In terms of academic rank, 5 participants were professors, 7 were associate professors, and 5 were assistant professors.

To ensure analytical validity, this study employed the participant feedback method, as outlined by Johnson and Christensen (2024). In this approach, the initial codes and thematic categories were shared with five interviewees, who were invited to review and confirm the accuracy and relevance of the interpretations.

Results

Through interview implementation and thematic analysis, 183 initial codes related to information culture were identified. After carefully reviewing to remove duplicates and overlapping concepts, the list was narrowed down to 142 unique codes. These codes were then grouped based on semantic and conceptual similarities, yielding 32 sub-themes. These sub-themes were subsequently organized into four main overarching themes, which form the core

structure of the information culture framework proposed in this study. Tables 1 to 4 illustrate the main themes, their corresponding sub-themes, and definitions. To maintain clarity and conciseness, the initial codes have been omitted; instead, the table presents theoretical and practical descriptions of the sub-themes as interpreted and articulated by faculty members of information science.

Table 1
Subthemes of Information Management

Base Theme	Sub Themes	Scientific And Practical Explanation
Information Management	Information collection	The process of gathering and collecting primary data from internal or external sources.
	Information organization	Structuring, classifying, and organizing data for efficient and logical retrieval.
	Information Quality	The extent to which information is accurate, precise, complete, and current for effective use.
	Information processing	Analyzing, transforming, and preparing data to extract insights or generate useful results.
	Information Integration	Integrating and harmonizing data from various sources into a coherent and usable system.
	Information Accessibility	Permissions and roles determine ease, speed, and user access levels to data.
	Information exploitation	Using information for decision-making, innovation, learning, or performance enhancement.
	Information preservation	Long-term, reliable, and durable storage of information to prevent deletion or corruption.

The first fundamental theme derived from information culture is information management. Information management refers to the set of activities involved in collecting, organizing, storing, processing, and effectively using information within organizational settings. This dimension addresses the infrastructure, policies, and processes that enable the optimal use of information and foster data-driven decision-making. As shown in Table 1, information management consists of 8 sub-themes. Each of these themes represents a key information management process that organizations should focus on.

The second key theme of the information culture is IT management. Information technology management involves planning, implementing, and monitoring an organization's technological resources, including hardware, software, networks, and information systems. This section focuses on aligning technology with the organization's strategic goals, ensuring information security, and improving the efficiency of using technologies to support information processes. As shown in Table 2, IT management includes 10 sub-themes. Each highlights actions organizations should take to achieve the most effective use of IT.

Table 2
Subthemes of Information Technology Management

Base Theme	Sub Themes	Scientific And Practical Explanation
Information Technology Management	Information Technology Infrastructure	Technical resources required to implement and support technology in the organization include servers, networks, and software.

	Information and Data Security	Technical and managerial measures designed to safeguard data confidentiality, integrity, and availability against both internal and external threats. Including encryption, access governance, backup and recovery mechanisms, and continuous monitoring on information systems.
	IT-Business Strategic Alignment	Aligning information technology with the organization's mission, values, and overall strategies.
	Adoption of Emerging Technologies	Absorbing and applying emerging technologies such as blockchain, the Internet of Things, and augmented reality.
	Managing and utilizing artificial intelligence	Integrating AI into educational, research, and management processes, including chatbots, data analytics, machine learning, and AI ethics.
	Digital Tools Management and Evaluation	Conducts need assessment, monitors, and measures the effectiveness of organizational software programs such as LMS, CRM, and other educational, research, administrative software, and communication platforms.
	Monitoring Technology-Related Behaviors	Regulate, assess, and direct how users engage with new technologies in the organization.
	Utilization of Social Media Platforms	Analyze and facilitate organizational use of social media for education, promotion, interactions, and digital identity.
	Digital Security Culture	Institutionalizing safety-oriented attitudes, values, and habits in the use of information technology to prevent and mitigate threats. Including employee compliance with security policies, individual responsibility, collective awareness, and the integration of secure practices into everyday routines.
	IT Training and Capacity Building for Staff	Educational programs to enhance digital literacy, master new tools, and adapt to current technologies.

The third core theme of information culture is information values and norms. These include a set of beliefs, ethical principles, and behavioral rules that direct how information is created, used, and shared within organizations and society. This aspect reflects current views on information, professional ethics, and behavioral patterns related to information interactions. As shown in Table 3, information values and norms comprise 8 sub-themes. These themes represent the values, principles, and rules organizations must follow to handle information and information technologies properly.

Table 3

Subthemes of information values and norms

Base Theme	Sub Themes	Scientific And Practical Explanation
information values and	Public Access to Information	Universal right to access information without discrimination.

norms	Openness of Information Space	Enabling free exchange and interaction of information in scientific, media, or public environments.
	Free Flow of Information	Removing censorship barriers, unnecessary restrictions, and promoting data flow at societal and institutional levels.
	Information Reliability	Ensuring credibility, accuracy, and precision of information; minimizing the spread of misleading or incorrect data.
	Information Ethics	Adhering to ethical principles like privacy, intellectual property, and honesty in producing and republishing information.
	Information and Knowledge Sharing	Transfer of data, information, knowledge, experiences, analyses, and insights to foster scientific learning and collaboration.
	Information Transparency	Clarity of sources, origin of information, purposes of publication, and how data and information are used.
	Information Accountability	Accountability of information producers, publishers, or aggregators for content and its impact.

The fourth key theme of information culture is communication and interaction practices. These practices refer to the processes by which individuals and groups exchange, interpret, and understand information. This dimension includes communication channels, interaction styles, levels of information participation, and the quality of interactions among information stakeholders within an organization. As shown in Table 4, communication and interaction practices consist of 6 sub-themes. These sub-themes represent the principles, criteria, and processes that enhance and facilitate information-based interactions and communication within the organization.

Table 4

Subthemes of Communication and Interaction Practices

Base Theme	Sub Themes	Scientific And Practical Explanation
Communication and Interaction Practices	Culture of Dialogue and Critical Exchange	Fostering a multi-voiced environment for exchanging ideas, rethinking, and developing collective insight in a setting where analyzing and understanding information is essential.
	Constructive Organizational Interaction	Effective collaboration, active listening, conflict resolution, and synergy across units, disciplines, and organizational roles.
	Merit-Based Communication Practices	Building professional relationships grounded in expertise and credible information, focusing on informational fairness and recognizing genuine knowledge.
	National and International Scholarly Networking	Expanding scientific and intellectual collaborations nationally and globally to foster intercultural exchange, establish standard

Base Theme	Sub Themes	Scientific And Practical Explanation
		knowledge bases, and integrate experiences.
	Utilization of Modern Communication Technologies	Purposeful use of communication platforms such as scientific social networks, online conferences, and AI-based tools.
	Communicative Transparency and Accountability	Clarifying roles, taking responsibility for messaging and accountability, and building trust within the organization's communication environment.

Discussion

Information culture not only influences core informational variables such as information management, document management, information use, and information literacy but also affects key organizational variables, including knowledge sharing, creativity and innovation, organizational effectiveness, e-commerce adoption, job satisfaction, and individual performance (Tien & Chao, 2012; Choo, 2013; Vick Nagano & Popadiuk, 2015; Heidmets & Virkus, 2016; Widén & Karim, 2018; Ziemba, 2019). Accurately identifying, assessing, and monitoring an organization’s information culture enables managers to implement strategic plans and data-driven activities more precisely and effectively (Sofilkanych, 2022; Anvarovna, 2023). Focusing on information culture is especially crucial for universities, whose core functions fundamentally rely on information and knowledge (Mahmoudi, 2021; Anvarovna, 2023).

Building on this, the current study explored various aspects of information culture within the university setting by analyzing the perspectives of faculty members in Information Science. Four main dimensions emerged from the qualitative data: (1) Information Management, (2) Information Technology Management, (3) Information Values and Norms, and (4) Communication and Interaction Practices, which together form the core of the information culture framework. (Figure 1).

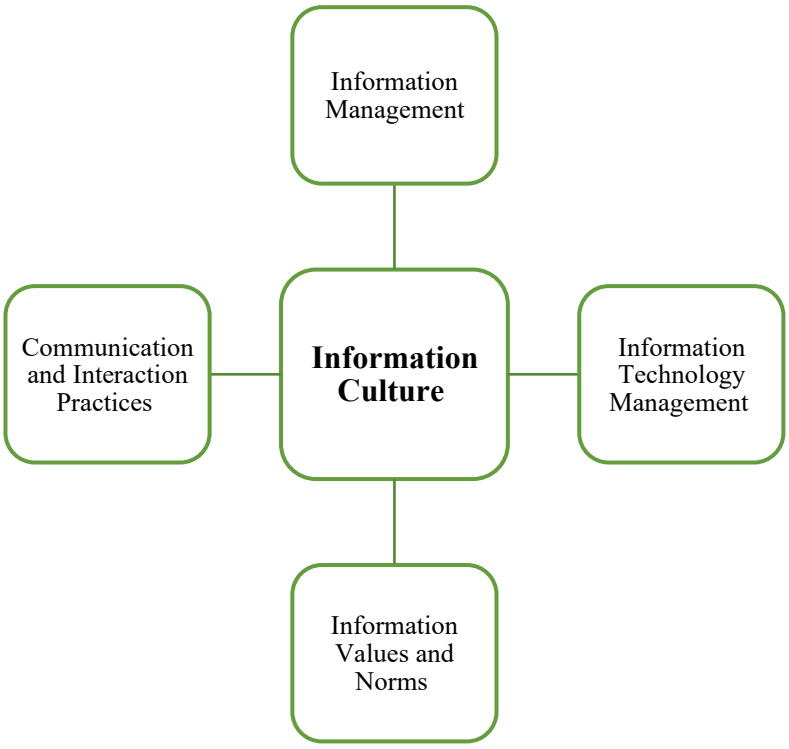

Figure 1: The thematic network of information culture

The first dimension of information culture is Information Management, which comprises eight key subcomponents: collection, organization, quality, processing, integration, access, exploitation, and preservation. Accurate data collection from internal and external sources is the starting point of the information flow, while logical organization enables quick and efficient retrieval. In this context, Mahmoudi (2021) also identifies organization, exploitation, and preservation as the three core processes of this dimension. Ensuring information quality in terms of accuracy, completeness, and timeliness increases confidence in analytical results, and processing transforms and analyzes data to gain strategic insights. Integration of information within organizational systems ensures data coordination and consistency, while defining access levels and roles facilitates or restricts access. Aligning with Ziemba's (2019) emphasis on precisely setting access levels and exploiting information outputs supports innovative decision-making and improves individual and group performance. Finally, secure preservation of this intangible asset, document storage and accessibility, which Suard (2014) regards as fundamental,l ensures that the organization can safeguard its knowledge and experience over the long term and utilize it in the future.

The second dimension of information culture focuses on Information Technology Management. It includes ten key subcomponents: IT infrastructure, information and data security, strategic alignment of technology with business goals, adoption of emerging technologies, use of artificial intelligence, management and evaluation of digital tools, monitoring user behavior during technology interactions, use of social platforms, institutionalization of a digital security culture, and staff training and empowerment. Findings support earlier research: Mahmoudi (2021) stresses the optimal use of IT tools, including social networks, while Carey and Moore (2003) and Oliver (2008) emphasize the importance of strong infrastructure and data security in maintaining information systems. A notable aspect of this study is its specific focus on emerging technologies, especially artificial intelligence, which

traditional information culture models have largely overlooked. AI capabilities such as machine learning, predictive analytics, workflow automation, and intelligent chatbots not only speed up data analysis and improve decision accuracy but also foster a dynamic environment for continuous organizational innovation. Therefore, simply developing infrastructure and implementing digital security measures without leveraging these intelligent technologies and strategically aligning them with organizational goals cannot unlock the full potential of digital transformation.

The third dimension of information culture centers on information values and norms. It includes eight key subcomponents: public access to information, opening of the information space, free flow of information, content reliability, information ethics, knowledge sharing, information transparency, and the accountability of data and information producers. This dimension offers a comprehensive framework for embedding informational norms within organizations and ensures that every informational action occurs at the highest level of both freedom and responsibility. Findings align with Mahmoudi's (2021) model, which positions information values and norms as the foundation for effective research collaboration, informed decision-making, and strategic growth in public universities, proposing a four-dimensional framework that incorporates these elements. Conversely, Abdurakhmonova et al. (2021), with their focus on globalization, emphasize the need for ethical education and developing ideological resilience; by integrating information ethics into the current model, we directly address this requirement. Sofilkanich (2022) argues, from an ontological point of view, that the dialectical relationship between values and norms underpins the development of information culture, an insight our study reinforces by emphasizing transparency and accountability. Similarly, Anvarovna (2023) introduces interactive information-culture training into curricula to showcase the importance of knowledge sharing and ethics in learning; our model institutionalizes these two elements alongside open access. Moreover, Mamasoliwich's (2023) research on the information crisis and Milikowski's (2025) work on the digital transformation of theological studies highlight the crucial importance of transparency, content reliability, and the defense of intellectual sovereignty, which we include under the headings of information transparency and content accuracy. Finally, Seyfalayva (2025) emphasizes the importance of social literacy and critical evaluation of information in fostering a strong information culture among adolescents—a dimension our framework extends to the university level through its focus on accountability and information ethics. Overall, this dimension of our model demonstrates greater breadth and depth than previous frameworks, covering a wide range of values and norms essential to building a robust information culture.

The fourth dimension of information culture, Communication and Interaction Practices, comprises six key subcomponents: a culture of dialogue and critical exchange; constructive organizational interaction; competency-based communication practices; national and international scholarly networking; the use of modern communication technologies; and communicative transparency and accountability. According to this dimension, universities aiming to strengthen their information flows must create multi-voiced environments for collective reflection and effective cross-unit, interdisciplinary engagement, while also maintaining responsibility in messaging and innovative use of emerging tools. Our findings align with those of Mahmoudi (2021), who considers information management and communication processes fundamental to constructive organizational interaction. In contrast, Abdellarmanova et al. (2021) highlight the need for ethical education and ideological resilience

in informational exchanges; by incorporating communicative transparency and accountability, our model directly addresses this requirement. Sofilkanych (2022), from a dialectical perspective, stresses the importance of dialogue and collective rethinking, reflected in our culture of dialogue and critical exchange subcomponent. Similarly, Anvarovna (2023) presents a five-stage curricular model showing how participatory interaction and advanced technologies promote information culture; our constructive organizational interaction and use of modern communication technologies subcomponents formalize this approach. Deja, Wojcik, and Swierczynska-Glownia (2024) emphasize the importance of expanding scholarly networking both nationally and internationally, which is reinforced by our national and international scholarly networking subcomponent. Lastly, Sayfullayeva (2025) demonstrates that social literacy and competency-based communication behaviors support active civic participation—an insight that our focus on competency-based communication practices, communicative transparency, and accountability extends into the university setting.

Overall, although previous studies have each focused on specific aspects of information culture, such as information management or technological infrastructure, this research's model offers much greater comprehensiveness. The comprehensive framework includes key processes like information management, IT governance, and the adoption of emerging technologies such as artificial intelligence; ethical values and norms like open access, transparency, accountability, and knowledge sharing; and communication and human interaction practices, including dialogue and critical exchange, constructive organizational engagement, and national and international scholarly networking. As a result, this model provides a more effective tool for accurately assessing, continuously monitoring, and enhancing information culture within universities.

Conclusion

Information culture is a complex and evolving phenomenon influenced by environmental changes, technological progress, and human interactions. In this study, we present a comprehensive model for evaluating information culture in universities by identifying emerging components and less-studied aspects. A distinguishing feature of our framework is the integration of advanced technologies, particularly artificial intelligence,e which prior models have largely neglected. By embedding AI adoption as a core organizational component, the model underscores its transformative potential for knowledge creation, dissemination, and decision-making. Furthermore, our framework elevates cultural and human factors such as collaborative discourse, ethical awareness, critical reflection, and stakeholder engagement alongside technical and informational dimensions. This integrative approach yields a robust, multidimensional instrument for diagnosing and monitoring the information culture of higher education institutions. In practice, university leaders and policymakers can leverage this model to assess and monitor the information culture in universities, pinpoint gaps, design targeted interventions, and benchmark progress over time. The current study broadens the theoretical understanding of information culture and provides a foundation for future research. Upcoming studies can focus on refining and validating the model and exploring how information culture relates to other organizational variables.

Acknowledgement

I sincerely thank the esteemed faculty members who participated in the research interviews, as well as the editorial board and the respected reviewers of the journal for their valuable insights and constructive feedback.

References

Abdurakhmonova, M. M., Uglimirzayev, M. A., Karimov, U. U., & Karimova, G. Y. (2021). Information culture and ethical education in the globalization century. *The American Journal of Social Science and Education Innovations*, 3(03), 384-388. https://doi.org/10.37547/tajssei/Volume03Issue03-58

Alide, Z. (2025). Information culture is one of the main factors in the development of the information society. *Universum: Social Sciences,* 2(5), 25–28. https://doi.org/10.32743/UniSoc.2025.120.5.20192

Anvarovna, x. Z. (2023). Methodology for the effective use and teaching of information culture to students in the higher education system. *International journal of social science & interdisciplinary research*, 12(09), 92-97. Retrieved from https://gejournal.net/index.php/IJSSIR/article/view/2226/2139

Boamah, E. (2018). Information culture of Ghanaian immigrants living in New Zealand. *Global Knowledge, Memory, and Communication*, 67(8/9), 585-606. https://doi.org/10.1108/GKMC-07-2018-0065

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Chang, C. L. h., & Chen, J. Q. (2017). The information ethics perception gaps between Chinese and American students: A Chinese guanxi perspective. *Information Technology & People*. 30(2), 473-502. https://doi.org/10.1108/ITP-08-2014-0181

Choo, C. W. (1998). *The knowing organization: How organizations use information to construct meaning, create knowledge, and make decisions*. New York: Oxford University Press.

Choo, C. W. (2013). Information culture and organizational effectiveness. *International Journal of Information Management*, 33(5), 775-779. https://doi.org/10.1016/j.ijinfomgt.2013.05.009

Choo, C. W., Bergeron, P., Detlor, B. D., & Heaton, L. (2008). Information culture and information use: An exploratory study of three organizations. *Journal of the American Society for Information Science and Technology*, 59(5), 792–804. https://doi.org/10.1002/asi.20797

Choo, C. W., Furness, C., Paquette, S., Van Den Berg, H., Detlor, B., Bergeron, P., & Heaton, L. (2006). Working with information: information management and culture in a professional services organization. *Journal of Information Science*, 32(6), 491-510. https://doi.org/ 10.1177/0165551506068159

Curry, A., & Moore, C. (2003). Assessing information culture: An exploratory model. *International Journal of Information Management*, 23(2), 91–110. https://doi.org/10.1016/S0268-4012(02)00102-0

Deja, M., Wojcik, M., & Świerczyńska-Głownia, W. (2024). Digital information culture in doctoral schools: A scoping review. *Journal of Librarianship and Information Science*, 57(3), 642-660. https://doi.org/10.1177/09610006241239084

Hamiti, M., Reka, B., & Baloghová, A. (2014). Ethical use of information technology in high education. *Procedia-Social and Behavioral Sciences,* 116, 4411-4415. https://doi.org/10.1016/j.sbspro.2014.01.957

Johnson, R. B., & Christensen, L. B. (2024). *Educational research: Quantitative, qualitative, and mixed approaches*. Sage Publications.

Lauri, L., Heidmets, M., & Virkus, S. (2016). The information culture of higher education institutions: The Estonian case. *Information Research: An International Electronic Journal*, 21(3), n3. Retrieved from https://files.eric.ed.gov/fulltext/EJ1114153.pdf

Mahmoudi, H. (2021). Presentation and evaluation of information culture model in governmental Iranian universities. *Sciences and Techniques of Information Management*, 7(4), 195-220. https://doi.org/10.22091/stim.2021.7291.1635 [in Persian]

Mahmoudi H, Fattahi R, Nowkarizi M, Dayani M H. (2017). Analysis of the concept of information culture and a survey of its status among faculty members of Ferdowsi University of Mashhad. *Human Information Interaction*; 3(4), 37-55. 20.1001.1.24237418.1395.3.4.4.4 [in Persian]

Mamasoliyevich, N. K. (2023). Information culture: A new approach. *World Bulletin of Social Sciences*, 19, 129-134. Retrieved from https://scholarexpress.net/index.php/wbss/article/view/2228/1920

Myllykoski, M. (2025). The changes in the information culture of theological research: The Faculty of Theology in the University of Helsinki as an example. *BETH Bulletin: European Theological Librarianship*, 3(1), 45-65. Retrieved from https://bethbulletin.eu/ojs/index.php/bethyb/article/view/3935/3891

Nordsteien, A., & Byström, K. (2018). Transitions in workplace information practices and culture: The influence of newcomers on information used in healthcare. *Journal of Documentation*, 74(4), 827-843. https://doi.org/10.1108/JD-07-2017-0116

Oliver, G. (2008). Information culture: an exploration of differing values and attitudes to information in organizations. *Journal of Documentation*, 64(3), 363-385. https://doi.org/10.1108/00220410810867588

Sayfullayeva, F. (2025). The role of social literacy in developing civic and information culture among adolescent students. *International Journal of Artificial Intelligence,* 1(5), 867–868. Retrieved from https://inlibrary.uz/index.php/ijai/article/view/115537

Sofilkanych, M. (2022). The formation of a new information culture of the future: The socio-philosophical content. *Futurity Philosophy*, 1(1), 56-67. https://doi.org/10.57125/FP.2022.03.30.05

Svärd, P. (2014). The impact of information culture on information/records management: A case study of a municipality in Belgium. *Records Management*, 24(1), 5-21. https://doi.org/10.1108/RMJ-04-2013-0007.

Tien, L. C., & Chao, H. S. (2012). Effects of information culture and job satisfaction on organizational innovation: A study of different leadership styles as a moderator. *Advances in Management and Applied Economics*, 2(3), 83-110. Retrieved from https://www.scienpress.com/journal_focus.asp?main_id=55&Sub_id=IV&Issue=312

Vick, T. E., Nagano, M. S., & Popadiuk, S. (2015). Information culture and its influences in knowledge creation: Evidence from university teams engaged in collaborative innovation projects. *International Journal of Information Management*, 35(3), 292-298. https://doi.org/10.1016/j.ijinfomgt.2015.01.010.

Widén G., & Karim M. (2018). Role of information culture in workplace information literacy: A literature review. In: Kurbanoğlu S., Boustany J., Špiranec S., Grassian E., Mizrachi D., & Roy L. (eds) *Information Literacy in the Workplace*. ECIL 2017. Communications in Computer and Information Science, 810. Springer, Cham. https://doi.org/10.1007/978-3-319-74334-9_3

Ziemba, E. (2019). The contribution of ICT adoption to a sustainable information society. *Journal of Computer Information Systems*, 59(2), 116-126. https://doi.org/10.1080/08874417.2017.1312635.