



Ethical Readiness of Academic Librarians for AI-supported Decision-Making: Evidence from Hanoi, Vietnam

Kim Dung Nguyen Thi



Nguyen Thi Kim Dung,

University of Social
Sciences and
Humanities,
336 Nguyen Trai Road,
Thanh Xuan, Hanoi,
11400, Vietnam,
Doctor, Vice Dean,
Faculty of Information
Management

ORCID: 0009-0008-6335-9762

e-mail: kimdungnt@ussh.edu.vn

Abstract. The integration of artificial intelligence (AI) into academic libraries raises critical questions regarding professional responsibility and ethical decision-making. This study examines the ethical readiness of academic librarians in Hanoi, Vietnam, by analysing the relationship between awareness of AI ethical principles and ethical judgment capacity (EJC). Data were collected from 68 librarians across six universities using purposive convenience sampling. Correlation analysis shows that awareness of accountability, data privacy, transparency, and fairness is positively associated with EJC at the 0.01 level. Data privacy demonstrates the strongest correlation ($r = .705$), followed by accountability ($r = .691$), transparency ($r = .653$), and fairness ($r = .594$).

Multiple regression analysis indicates that the model is statistically significant ($F(4, 63) = 23.904, p < .001$), explaining 60.3 % of the variance in ethical judgment capacity ($R^2 = .603$). When considered simultaneously, only data privacy ($\beta = .415, p < .001$) and accountability ($\beta = .319, p = .030$) remain significant predictors. The findings suggest that AI ethical principles do not operate uniformly in practice; responsibility-oriented dimensions appear more influential than procedural principles such as transparency or fairness. By providing empirical evidence from a developing-country context, this study contributes to ongoing debates on AI ethics in library and information science and highlights the importance of strengthening data governance and professional accountability in AI-mediated services.

Keywords: Artificial intelligence, AI ethics, academic libraries, data privacy, professional accountability

Citation: Nguyen Thi K. D. Ethical Readiness of Academic Librarians for AI-supported Decision-Making: Evidence from Hanoi, Vietnam. *Bibliosphere*. 2026. № 2. P. 28–38. <https://doi.org/10.20913/1815-3186-2026-2-2>

Этическая готовность академических библиотекарей к принятию решений с использованием искусственного интеллекта: данные из Ханоя, Вьетнам

К. З. Нгуен Тхи

Нгуен Тхи Ким Зунг,
Университет социальных
и гуманитарных наук,
336 Nguyen Trai Road, Thanh Xuan,
Ханой, 11400, Вьетнам,
доктор, заместитель декана,
факультет управления
информацией

ORCID: 0009-0008-6335-9762
e-mail: kimdungnt@ussh.edu.vn

Аннотация. Интеграция искусственного интеллекта (ИИ) в академические и вузовские библиотеки поднимает критические вопросы, касающиеся профессиональной ответственности и этики принятия решений. Была изучена этическая готовность академических библиотекарей в Ханое (Вьетнам) путем анализа взаимосвязи между осведомленностью об этических принципах ИИ и способностью к этическому суждению (СЭС). Данные были собраны у 68 библиотекарей из шести университетов с использованием целенаправленной выборки по принципу удобства. Корреляционный анализ показывает, что осведомленность об ответственности, конфиденциальности данных, прозрачности и справедливости положительно связана с СЭС на уровне значимости 0,01. Конфиденциальность данных демонстрирует самую сильную корреляцию ($r = 0,705$), за ней следуют ответственность ($r = 0,691$), прозрачность ($r = 0,653$) и справедливость ($r = 0,594$). Множественный регрессионный анализ показывает, что модель статистически значима ($F(4, 63) = 23,904$, $p < 0,001$), объясняя 60,3 % дисперсии способности к этическому суждению ($R^2 = 0,603$). При одновременном рассмотрении значимыми предикторами остаются только конфиденциальность данных ($\beta = .415$, $p < .001$) и подотчетность ($\beta = .319$, $p = .030$). Выяснено, что этические принципы ИИ не действуют единообразно; аспекты, ориентированные на ответственность, оказываются более влиятельными, чем процедурные принципы, такие как прозрачность или справедливость. Предоставляя эмпирические данные из контекста развивающейся страны, исследование вносит вклад в продолжающиеся дискуссии об этике ИИ в библиотечном и информационном деле и подчеркивает важность укрепления управления данными и профессиональной подотчетности в услугах, предоставляемых с помощью ИИ.

Ключевые слова: искусственный интеллект, этика ИИ, вузовские библиотеки, конфиденциальность личных данных, профессиональная ответственность

Для цитирования: Нгуен Тхи К. З. Этическая готовность академических библиотекарей к принятию решений с использованием искусственного интеллекта: данные из Ханоя, Вьетнам // Библиосфера. 2026. № 2. С. 28–38. <https://doi.org/10.20913/1815-3186-2026-2-2>

Статья поступила в редакцию
03.04.2026

Получена после доработки 05.05.2026

Принята для публикации 02.06.2026

Introduction

In recent years, artificial intelligence (AI) has evolved from a technological trend into a structural force reconfiguring institutional practices across multiple sectors, including information and library services. Within academic libraries, AI is increasingly embedded in management systems, information retrieval processes, data classification, and user services not merely as an efficiency-enhancing tool but as an infrastructural layer that mediates how information is organized, accessed, and ascribed value. While these developments offer substantial operational benefits, they also introduce risks such as algorithmic bias in information retrieval, opacity in automated decision-making, privacy breaches in user data processing, and the potential erosion of professional accountability.

This integration represents more than technological enhancement; it signals a transformation in the epistemic foundations of library work. By automating routine operations while enabling predictive analytics, resource recommendation, behavioral analysis, and personalized information environments, AI systems actively shape patterns of knowledge access and user engagement. In doing so, AI contributes to redefining professional practice, decisionmaking structures, and the distribution of informational authority within the academic ecosystem [Cox, 2023; Cox et al., 2019]. Importantly, these transformations extend beyond managerial roles, affecting frontline librarians who routinely engage in decisions such as validating AI-generated search results, moderating automated recommendations, or handling user data within AI supported services.

As algorithmic systems increasingly participate in the selection, classification, and recommendation of information, decision-making processes within libraries can no longer be regarded as purely technical operations. Rather, they must be situated within frameworks of professional governance and institutional responsibility, as articulated by IFLA¹. In this context, AI functions not only as a support mechanism but as a mediating infrastructure that reorganizes epistemic authority within the information environment.

At the normative level, global AI ethics frameworks emphasize that technological deployment must remain anchored in human-centered values, accountability, and social responsibility² [Floridi et al., 2018]. In library contexts, these principles translate into concrete decision-making situations: ensuring data privacy when handling user borrowing histories or search logs; maintaining transparency when AI systems recommend or rank information resources; upholding fairness by preventing biased classification or exclusion of minority perspectives; and enforcing accountability when librarians validate, override, or take responsibility for AI supported decisions. Without robust oversight mechanisms, failures in these areas may lead to compromised user trust, inequitable access to information, and unintended harm to vulnerable user groups.

Against this backdrop, the international library community increasingly underscores the centrality of human agency in AI assisted decision-making. Librarians are not merely operators of technological systems but remain the ultimate ethical agents responsible for decisions supported by AI particularly when such decisions affect users' rights, experiences, and trust³. In practice, this responsibility extends across both strategic and operational levels, encompassing not only policy oriented decisions but also everyday professional judgments made by non-managerial staff in their interactions with AI systems.

Although AI ethics has become a prominent research domain across disciplines, much of the scholarship focuses on normative principles and governance models rather than on the situated ethical capacities of practitioners. The limited empirical evidence available especially from diverse

socio-cultural and institutional contexts raises concerns about the generalizability of existing conclusions and highlights the need for context-sensitive inquiry [Floridi et al., 2018; Jobin et al., 2019]. At the same time, the traditionally strong ethical foundations of the library profession including commitments to intellectual freedom, user privacy, and equitable access suggest that existing professional value systems may play a critical role in shaping how librarians engage with emerging AI technologies.

In Vietnam, artificial intelligence has been identified as a strategic pillar of national science and digital transformation agendas, with recent policy orientations incorporating ethical principles centered on human values, social responsibility, and sustainable development^{4, 5}. Within the library sector, AI adoption has begun in areas such as automated classification, search assistance, and data-driven service optimization [Pham Thi Yen, 2024]. However, systematic empirical investigation into ethical decision-making capacities among librarians in AI supported environments remains limited. Existing Vietnamese studies have primarily examined digital transformation, information literacy, and AI implementation in academic libraries rather than librarians' ethical awareness and ethical decision-making competencies in AI contexts [Diep, Nahl, 2011; Nguyen, 2026]. Recent research on Vietnamese academic libraries has emphasized technological readiness, digital services, and AI literacy, yet has paid insufficient attention to how librarians interpret ethical principles such as transparency, accountability, fairness, and privacy when making professional decisions involving AI systems [Bui, Nguyen, 2025; Nguyen, 2026].

Furthermore, although a recent exploratory study on academic librarians in Hanoi reported relatively high awareness of AI ethics principles, the study remained limited in scope and focused mainly on general ethical awareness rather than the practical ethical decision-making processes of librarians in AI-assisted services [Nguyen, 2026]. Consequently, there is still a significant research gap concerning how Vietnamese university librarians perceive, evaluate, and apply AI ethics principles when making professional decisions in emerging AI-supported library environments.

Addressing this gap, the present study examines the ethical readiness of academic librarians for AI-assisted decision making through empirical evidence collected in Hanoi, Vietnam. Specifically, it analyzes the relationship between awareness

¹ IFLA statement on libraries and artificial intelligence / IFLA FAIFE (Committee on Freedom of Access to Information and Freedom of Expression) // International Federation of Library Associations and Institutions : repository. 2020. URL: <https://repository.ifla.org/handle/20.500.14598/1646> (accessed 20.03.2026).

² Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library : website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&query-Id=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

³ IFLA statement on libraries and artificial intelligence / IFLA FAIFE (Committee on Freedom of Access to Information and Freedom of Expression) // International Federation of Library Associations and Institutions : repository. 2020. URL: <https://repository.ifla.org/handle/20.500.14598/1646> (accessed 20.03.2026).

⁴ Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library : website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&query-Id=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

⁵ Quyết định số 127/QĐ-TTg của Thủ tướng Chính phủ: Ban hành Chiến lược quốc gia về nghiên cứu, phát triển và ứng dụng Trí tuệ nhân tạo đến năm 2030 // Cổng Thông tin điện tử Chính phủ. 2021. URL: <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=202565> (accessed 20.03.2026).

of AI ethical principles and librarians' capacities for ethical evaluation and decision-making, contributing contextually grounded insights to ongoing scholarly debates on AI ethics in library and information science.

Research objectives

This study aims to assess the ethical readiness of academic librarians for AI-assisted decision-making by examining the relationship between their awareness of AI ethical principles and their capacity for ethical evaluation and decision-making.

Empirical data were collected from librarians working at six higher education institutions in Hanoi, Vietnam. Through this analysis, the study seeks to provide contextually grounded evidence on how ethical awareness translates into practical decision-making competence in AI-supported library environments.

By focusing on the professional community directly engaged in AI-related practices, the research contributes empirical insights from a developing country context to the broader discourse on AI ethics in library and information science.

Research questions

Research question 1: What is the level of awareness among academic librarians in Hanoi regarding ethical principles relevant to the use of artificial intelligence in decision-making?

Research question 2: What is the relationship between awareness of AI ethical principles and librarians' ethical decision-making competence?

Methodology

Research Design

This study adopts a quantitative research design with a descriptive and analytical orientation, employing a structured questionnaire survey to examine the ethical readiness of academic librarians in the context of AI-assisted decision making. This design is appropriate for assessing individuals' ethical awareness and competencies, as well as for analyzing relationships among research variables within a specific practical setting [Creswell J. W., Creswell J. D., 2018].

The study follows a cross sectional approach, capturing respondents' perceptions and competencies at a single point in time.

Sample and data collection

Data were collected from 68 librarians working at six universities in Hanoi, Vietnam: Hanoi Law University (n = 14), National Economics University (n = 11), Banking Academy of Vietnam (n = 11), Thuongmai University (n = 18), National University

of Civil Engineering (n = 12), and Vietnam Women's Academy (n = 2).

Participants were selected using purposive convenience sampling. Individuals were recruited based on professional experience and their potential involvement in, or exposure to, library activities related to the application or consideration of AI tools. This sampling strategy ensured that respondents possessed relevant professional insight into AI-supported decisionmaking within academic library contexts.

The questionnaire was distributed in person to librarians between 22 January and 26 January 2025. Participation was voluntary, and measures were taken to ensure anonymity and confidentiality of respondents' personal information. Prior to official administration, the questionnaire was reviewed and refined to enhance clarity of statements and to ensure contextual relevance to academic library professionals.

Measurement and variables

This study focuses on two core variables: (1) awareness of artificial intelligence (AI) ethical principles, and (2) ethical judgment and decision-making capacity in AI supported contexts.

The variable AI ethical principles awareness (AEP) captures librarians' level of awareness regarding four core AI ethics principles: transparency, fairness, accountability, and data privacy. Measurement items for this construct were developed based on widely recognized AI ethics frameworks in the academic literature and international policy recommendations⁶ [Floridi et al., 2018; Jobin et al., 2019].

Although the principle of non-maleficence is commonly identified as a foundational component of AI ethics, it was not operationalized as a standalone dimension in this study. Instead, considerations related to potential harm, risk, and adverse consequences of AI-supported decisions were conceptually embedded within the dimensions of accountability, fairness, and data privacy. This approach is consistent with applied AI ethics research, which acknowledges the conceptual overlap and contextual interdependence of ethical principles in professional practice [Floridi et al., 2018; Jobin et al., 2019].

The variable Ethical judgment capacity (EJC) reflects librarians' ability to identify ethical issues arising from the use of AI, to assess the potential impacts of AI-supported decisions on users' rights and interests, and to make appropriate professional judgments when algorithmic outputs conflict with established professional values and norms. Measurement items for EJC were informed by prior research

⁶ Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library: website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&queryId=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

on ethical decision-making in professional contexts and technology-mediated practices, as well as by normative guidance on human responsibility in AI governance^{7,8} [Floridi et al., 2018].

All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Composite scores for each variable were calculated as the mean of their respective items and were used in subsequent statistical analyses.

Data analysis

Data were processed and analyzed using SPSS statistical software. Descriptive statistics were first employed to summarize the characteristics of the research sample and the distribution of the main variables.

Internal consistency reliability of the measurement scales was assessed using Cronbach's alpha coefficients to ensure the coherence of the items within each construct.

To examine the relationship between awareness of AI ethical principles and ethical decision-making capacity, Pearson's correlation analysis and simple

linear regression were conducted. Given the sample size ($n = 68$) and the inclusion of a single independent variable, this analytical approach is appropriate for exploring associative relationships without inferring causality beyond the collected data [Field, 2018].

Prior to regression analysis, key statistical assumptions including linearity and normality were examined to ensure the validity of the model. Statistical significance was determined at the level of $p < .05$.

Results

Respondent characteristics

Table 1 presents the demographic characteristics of the 68 academic librarians who participated in the survey. The sample is predominantly female (82.4 %), reflecting the gender distribution commonly observed in the library and information field in Vietnam.

Most respondents belong to middle-aged groups and have substantial professional experience, with 50.0 % aged between 40 and 49 and 22.1 %

Table 1. Respondent characteristics

Таблица 1. Характеристика респондентов

Demographic information	Category	Number of participants	Percentage (%)
Gender	Male	12	17.6
	Female	56	82.4
Age	Under 30 years	3	4.4
	30–39 years	16	23.5
	40–49 years	34	50.0
	Over 50 years	15	22.1
Educational qualification	College diploma	0	0
	Bachelor's degree	37	54.4
	Master's degree	31	45.6
	Doctoral degree	0	0
Years of professional experience	Less than 5 years	4	5.9
	5–10 years	12	17.6
	11–20 years	37	54.4
	More than 20 years	15	22.1
Position	Professional staff	61	89.7
	Managerial staff	7	10.3
Level of exposure to AI tools at work	Occasional	46	67.6
	Frequent	22	32.4

⁷ IFLA statement on libraries and artificial intelligence / IFLA FAIFE (Committee on Freedom of Access to Information and Freedom of Expression) // International Federation of Library Associations and Institutions : repository. 2020. URL: <https://repository.ifla.org/handle/20.500.14598/1646> (accessed 20.03.2026).

⁸ Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library : website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&query-Id=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

aged over 50. Consistent with this age structure, the majority of participants report long professional tenure, with 54.4 % having 11–20 years of experience and 22.1 % having more than 20 years.

In terms of educational background, all respondents hold at least a bachelor's degree, including 54.4 % with a bachelor's degree and 45.6 % with a master's degree. Regarding job positions, 89.7 % of respondents are professional librarians, while 10.3 % occupy managerial roles.

With respect to exposure to AI tools in professional practice, approximately two-thirds of respondents report using AI occasionally (67.6 %), whereas the remaining 32.4 % indicate frequent use. This finding suggests that the adoption of AI in academic libraries is still at an early and formative stage.

Reliability analysis

Table 2 presents the reliability analysis results. The analysis indicates that all measurement scales demonstrate strong internal consistency and satisfactory construct validity. Both the AI ethical principles awareness (AEP) and ethical judgment capacity (EJC) scales exhibit high reliability, supporting the coherence of the constructs and the appropriateness of the instrument for examining ethical readiness in AI-supported decision-making contexts.

Cronbach's Alpha coefficients range from 0.865 to 0.929, well above the recommended threshold of 0.70, indicating a high degree of internal consistency across all constructs. The Ethical Judgment and Decision-Making Capacity scale exhibits the highest reliability ($\alpha = 0.929$), while the minimum corrected item–total correlations exceed 0.68, suggesting that all observed items contribute meaningfully to their respective constructs.

The adequacy of the data for factor analysis is supported by Kaiser-Meyer-Olkin (KMO) values ranging from 0.713 to 0.840, with all tests reaching statistical significance ($p < 0.001$). Moreover, the minimum factor loadings remain consistently high

(0.810–0.909), providing strong evidence of convergent validity. The extracted factors account for 77.042% to 86.206% of the total variance, substantially surpassing the commonly accepted benchmark of 50% and indicating considerable explanatory power of the measurement model.

At the dimensional level, the four ethical principles—transparency, fairness, accountability, and data privacy are empirically well-defined and conceptually distinct. The results of factor analysis further confirm the adequacy of the measurement model, with extracted factors explaining a substantial proportion of variance. Taken together, these findings provide a robust methodological foundation for the subsequent correlational and regression analyses.

AI ethical principles awareness (AEP)

Building on the validated measurement scales, the findings presented in Table 3 reveal a high level of awareness of AI ethical principles among academic librarians. The overall mean score of 4.24 (Median = 4.25, SD = 0.645) suggests that respondents possess a strong awareness of the ethical implications arising from the use of AI in academic library settings.

Among the four dimensions, accountability receives the highest rating ($M = 4.37$), highlighting librarians' strong belief in the importance of human oversight and responsibility for AI-assisted decisions. Data privacy ($M = 4.22$) and transparency ($M = 4.21$) also achieve high scores, reflecting concerns regarding the protection of user information and the explainability of AI systems – both of which are closely aligned with established professional values in librarianship. Although fairness remains positively evaluated ($M = 4.16$), it records the lowest mean score among the ethical dimensions, suggesting that issues related to algorithmic bias and equitable outcomes may be comparatively less salient or more difficult to operationalize in practice.

Table 2. Reliability analysis results

Таблица 2. Результаты анализа надежности

Scale	Cronbach's Alpha	Minimum corrected item–Total correlation	KMO	p-value	Smallest Factor loading	Loadings Cumulative (%)
AI Ethics (overall)	.899	.784	.840	< 0.001	.810	77.042
Transparency	.867	.716	.713	< 0.001	.873	79.413
Fairness	.919	.801	.751	< 0.001	.909	86.206
Accountability	.910	.783	.734	< 0.001	.900	84.822
Data privacy	.865	.687	.721	< 0.001	.853	79.117
Ethical judgment and decision making capacity	.929	.746	.808	< 0.001	.831	78.317

Table 3. AI Ethics awareness among academic librarians

Таблица 3. Осведомленность академических библиотекарей об этике использования ИИ

Factors	Mean	Median	Standard Deviation (SD)
Transparency	4.21	4.33	0.791
Fairness	4.16	4.00	0.699
Accountability	4.37	4.33	0.699
Data privacy	4.22	4.33	0.754
Total	4.24	4.25	0.645

Taken together, these findings suggest that ethical awareness of AI among academic librarians is relatively well developed, while also pointing to potential gaps between general ethical recognition and its consistent operationalization across ethical dimensions.

Ethical judgment capacity (EJC)

The findings indicate that academic librarians demonstrate a relatively strong capacity for ethical judgment and decision-making in AI-supported professional contexts. The overall mean score of 4.24 (Median = 4.25, SD = 0.645) suggests a high level of confidence in identifying ethical concerns, balancing user interests, and aligning decisions with professional values when engaging with AI-generated outcomes. Details of these findings are presented in Table 4.

Notably, the strongest agreement is observed for the willingness to refuse the use of AI when ethical risks outweigh potential benefits ($M = 4.29$), followed closely by the willingness to consult colleagues or supervisors when encountering AI-related ethical issues ($M = 4.25$). These findings reflect a cautious and professionally responsible approach to AI adoption, emphasizing both ethical accountability and collective deliberation in decision-making processes. The relatively high score for making decisions when AI-generated outcomes conflict with professional values ($M = 4.16$) further indicates

librarians' readiness to prioritize professional ethics over technological convenience.

In contrast, the ability to identify ethical issues arising from AI use receives the lowest rating ($M = 3.94$), despite remaining above the scale midpoint. This pattern suggests that while librarians appear prepared to respond appropriately once ethical concerns become apparent, the early recognition of ethical risks may be less consistently developed. Similarly, consideration of users' rights prior to AI implementation ($M = 4.06$) indicates room for strengthening proactive ethical assessment practices.

Taken together, these results suggest that ethical judgment capacity among academic librarians is well established at the level of action and professional responsibility. However, the comparatively lower scores related to ethical issue recognition highlight the need for targeted training and institutional support to enhance anticipatory ethical awareness in AI-enabled library environments.

Correlation between AI ethical principles awareness and ethical judgment capacity

The correlation analysis indicates that all dimensions of AI ethical principles awareness are positively associated with ethical evaluation and decision-making capacity. Most relationships are significant at the 0.01 level, while the association with transparency is significant at the 0.05 level. These findings provide evidence consistent with the assumption

Table 4. Ethical evaluation and decision making capacity of academic librarians

Таблица 4. Этическая оценка и способность академических библиотекарей принимать решения

Factors	Mean	Median	SD
I am able to identify ethical issues that arise when using AI in the library	3.94	4.00	0.844
I consider the impact of AI on users' rights before applying it	4.06	4.00	0.896
I am able to make decisions when AI-generated outcomes conflict with professional values	4.16	4.00	0.803
I am willing to refuse the use of AI if ethical risks outweigh its benefits	4.29	4.00	0.774
I am willing to consult colleagues or supervisors when encountering AI-related ethical issues	4.25	4.00	0.799
Total	4.24	4.25	0.645

that ethical awareness functions as a foundational cognitive antecedent of professional judgment in AI-supported environments. The relationships among the study variables are reported in Table 5.

Notably, data privacy exhibits the strongest correlation with EJC ($r = .705$), followed by accountability ($r = .691$) and transparency ($r = .653$), while fairness shows the weakest, though still substantial, association ($r = .594$). The prominence of data privacy and accountability may reflect a context-specific emphasis on user protection, risk mitigation, and professional responsibility in AI-mediated library practices.

These findings are theoretically significant for at least two reasons. First, they extend prior AI ethics research, which has largely been grounded in normative frameworks⁹ [Floridi et al., 2018; Jobin et al., 2019], by suggesting that ethical awareness is empirically associated with professional judgment capacity in AI-mediated contexts [Cox, 2023], particularly within underexamined developing country contexts. Second, the relatively strong and consistent correlations across all dimensions suggest that

AI ethical principles may operate as an integrated normative framework rather than isolated values.

Taken together, the results contribute context-sensitive evidence to the growing body of literature on AI ethics in library and information science, highlighting that ethical preparedness in emerging digital environments is shaped not only by technological exposure but also by professional value systems embedded within local institutional and cultural conditions. These findings provide an empirical foundation for subsequent regression analyses examining the predictive relationship between ethical awareness and ethical judgment capacity.

Regression analysis

The regression model was statistically significant, $F(4, 63) = 23.904$, $p < .001$, explaining 60.3 % of the variance in ethical evaluation and decision-making capacity ($R^2 = .603$). This indicates a substantial level of explanatory power for an exploratory cross-sectional study. The regression coefficients and diagnostic statistics are reported in Table 6.

Table 5. Correlation between AI ethics awareness and ethical evaluation and decision making capacity

Таблица 5. Корреляция между осведомленностью об этике ИИ и способностью к этической оценке и принятию решений

Variables	1	2	3	4	5
1. Transparency	1				
2. Fairness	.740**	1			
3. Accountability	.791**	.746**	1		
4. Data privacy	.636**	.606**	.634**	1	
5. Ethical evaluation and decision making capacity	.653*	.594**	.691**	.705**	1

* $p < .05$; ** $p < .01$.

Table 6. Multiple linear regression analysis predicting ethical evaluation and decision making capacity

Таблица 6. Множественный линейный регрессионный анализ для прогнозирования этической оценки и способности принимать решения

Independent variable	Unstandardized coefficient (B)		Standardized coefficient (β)	t	p	Tolerance	Multicollinearity statistics
	B	SE	β				Variance inflation factor (VIF)
Constant	.461	.395		1.165	.248		
Transparency	.121	.131	.131	.919	.361	.310	3.231
Fairness	.008	.135	.008	.061	.951	.372	2.691
Accountability	.331	.149	.319	2.217	.030	.305	3.274
Data Privacy	.400	.105	.415	3.815	<.001	.534	1.874

Note. Dependent variable: Ethical evaluation and decision-making capacity. $R^2 = .603$, $F = 23.904$, $p < .001$.

⁹ Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library: website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&queryId=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

When all dimensions were entered simultaneously into the model, accountability ($\beta = .319$, $p = .030$) and data privacy ($\beta = .415$, $p < .001$) were statistically significant predictors. In contrast, transparency and fairness did not demonstrate independent effects in the multivariate model, despite showing significant bivariate correlations. Among the predictors, data privacy exhibited the strongest standardized effect, followed by accountability.

These findings suggest that, within the surveyed Vietnamese university libraries, ethical decision-making in AI-supported contexts appears to be more strongly associated with concerns related to responsibility and user data protection than with procedural principles alone. Multicollinearity diagnostics (VIF values below 5) indicate that the estimates are stable and not adversely affected by collinearity.

Overall, the results provide preliminary empirical evidence from a developing-country context that different AI ethical principles may exert unequal influence on professional ethical judgment in practice.

This pattern may reflect the situated professional priorities of librarians operating within resource-constrained institutional environments, where accountability and data protection are perceived as more immediate ethical risks than abstract principles such as transparency or fairness.

Discussion

This study examined the ethical readiness of academic librarians in Hanoi by analysing the relationship between awareness of AI ethical principles and ethical judgment capacity. The findings offer three key theoretical contributions.

First, librarians demonstrate consistently high awareness of core AI ethical principles, reflecting the diffusion of global AI governance discourses into professional practice¹⁰ [Floridi et al., 2018; Jobin et al., 2019]. This suggests that AI ethics frameworks are not confined to policy or technical communities but have permeated frontline information professions.

However, awareness does not translate uniformly into decision-making capacity. While all principles correlate with EJC, regression analysis reveals that only accountability and data privacy independently predict ethical judgment capacity. This asymmetry is theoretically significant. It indicates that ethical principles operate hierarchically in practice rather than equally.

Accountability and data privacy appear to function as “actionable ethics” dimensions. Unlike transparency and fairness, which often require systemic or algorithmic intervention accountability and privacy can often be enacted directly by librarians within their professional discretion. This finding aligns with IFLA’s¹¹ emphasis on maintaining human responsibility in AI supported services and supports Johnson and Verdicchio’s [2023] argument that ethical agency depends on practitioners’ ability to critically evaluate technological outputs.

Second, the relatively high level of ethical judgment capacity particularly the willingness to reject AI under ethical risk challenges narratives of technological determinism. Rather than passively adopting AI for efficiency gains, librarians demonstrate normative reflexivity. Ethical readiness, therefore, is not merely cognitive awareness but involves professional autonomy and moral responsibility.

Third, this study contributes empirical evidence from a developing country context. As Jobin et al. [2019] note, global AI ethics principles display convergence across regions, yet empirical studies remain concentrated in developed countries. The present findings suggest that while principle awareness converges globally, the practical salience of specific dimensions may vary according to professional culture and institutional conditions. In the Vietnamese context, responsibility and user data protection emerge as central anchors of ethical readiness.

Despite its contributions, this study has several methodological limitations that should be acknowledged. First, the relatively small sample size ($n = 68$) may limit statistical power and constrain the ability to conduct more complex multivariate modelling, while also increasing sensitivity to potential outliers. Second, the use of purposive convenience sampling implies a non-random selection of respondents, which may introduce selection bias and limit the representativeness of the findings for the broader population of academic librarians in Vietnam. Third, the study is geographically confined to six universities in Hanoi, which restricts the generalisability of the results to other regions of Vietnam or to different socio-cultural and institutional contexts.

These limitations are typical of exploratory empirical studies in emerging research areas such as AI ethics in libraries. Future research should address these constraints by employing larger and more representative samples, adopting stratified random sampling techniques, and extending the study across multiple regions and longitudinal designs to capture changes in ethical readiness over time.

¹⁰ Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library: website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&query-Id=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

¹¹ IFLA statement on libraries and artificial intelligence / IFLA FAIFE (Committee on Freedom of Access to Information and Freedom of Expression) // International Federation of Library Associations and Institutions: repository. 2020. URL: <https://repository.ifla.org/handle/20.500.14598/1646> (accessed 20.03.2026).

Conclusion

This study offers initial empirical evidence on the ethical readiness of academic librarians in Hanoi for AI supported decision-making. The findings demonstrate high awareness of core AI ethical principles and a relatively strong capacity for ethical evaluation. Crucially, accountability and data privacy emerge as the most influential predictors of ethical judgment capacity.

These results extend AI ethics scholarship beyond policy-level discourse¹² [Floridi et al., 2018; Jobin et al., 2019] by situating ethical principles within frontline professional practice. The study shows that ethical principles do not operate uniformly: responsibility oriented dimensions, particularly accountability and user data protection, play a decisive role in shaping ethical decision-making. This reinforces the human in the loop perspective emphasized by IFLA¹³ and underscores the centrality of professional accountability in AI mediated environments [Johnson, Verdicchio, 2023].

Importantly, the relatively high levels of ethical awareness and judgment observed in this study can be plausibly explained by the longstanding professional value systems embedded in librarianship. Core principles such as user privacy, intellectual freedom, and equitable access have historically shaped professional norms and practices, and appear

to remain influential as librarians engage with emerging AI technologies. This suggests that ethical readiness in AI mediated environments is not developed in isolation but is grounded in pre-existing professional ethics that continue to inform decision-making even in the absence of formal AI specific training.

For practice, the findings suggest that strengthening ethical readiness requires moving beyond general awareness toward structured capacity building in accountability mechanisms and data governance. As AI adoption accelerates within national digital transformation agendas, ethical competence among information professionals becomes critical to sustaining user trust and institutional legitimacy.

While limited by its cross sectional design and localized sample, this study contributes empirical insight from a developing country context, addressing the geographical imbalance in current AI ethics research. Future studies should adopt comparative and longitudinal designs to further examine how ethical readiness evolves across institutional and cultural settings.

The author has read and approved the final manuscript.

Conflict of interest. *The author declares no conflict of interest related to this article.*

¹² Recommendation on the ethics of artificial intelligence / UNESCO // UNESCO Digital Library: website. 2023. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000386510?posInSet=8&queryId=85e5467e-a234-4521-b152-90b88d098fff> (accessed 20.03.2026).

¹³ IFLA statement on libraries and artificial intelligence / IFLA FAIFE (Committee on Freedom of Access to Information and Freedom of Expression) // International Federation of Library Associations and Institutions: repository. 2020. URL: <https://repository.ifla.org/handle/20.500.14598/1646> (accessed 20.03.2026).

References

- Bui TT and Nguyen LT (2025) Fostering scientific integrity in Vietnam: the contribution of library and information services. *IFLA Journal* 51 (1): 32–45. DOI: <https://doi.org/10.1177/03400352241310536>
- 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: <https://doi.org/10.1002/asi.24635>
- Cox AM, Pinfield S and Rutter S (2019) The intelligent library: thought leaders' views on the likely impact of artificial intelligence on academic libraries. *Library Hi Tech* 37 (3): 418–435. DOI: <https://doi.org/10.1108/LHT-08-2018-0105>
- Creswell JW and Creswell JD (2018) Research design: qualitative, quantitative, and mixed methods approaches. 5th ed. Los Angeles: Sage Publ.
- Diep KC and Nahl D (2011) Information literacy instruction in four Vietnamese university libraries. *The International Information & Library Review* 43 (4): 198–206. DOI: <https://doi.org/10.1016/j.iilr.2011.10.002>
- Field A (2018) Discovering statistics using IBM SPSS statistics. 5th ed. Sage Publ.
- Floridi L, Cowls J, Beltrametti M, Chatila R, Chazerand P, Dignum V, Luetge C, Madelin R, Pagallo U, Rossi F, Schafer B, Valcke P and Vayena E (2018) AI4People – An ethical framework for a good AI society: opportunities, risks, principles, and recommendations. *Minds and Machines* 28 (4): 689–707. DOI: <https://doi.org/10.1007/s11023-018-9482-5>
- Jobin A, Ienca M and Vayena E (2019) The global landscape of AI ethics guidelines. *Nature Machine Intelligence* 1 (9): 389–399. DOI: <https://doi.org/10.1038/s42256-019-0088-2>
- Johnson DG and Verdicchio M (2023) Ethical AI is not about AI. *Communications of the ACM* 66 (2): 32–34. DOI: <https://doi.org/10.1145/3576932>
- Nguyen LT (2026) Influential factors in digital transformation of Vietnamese academic library services. *IFLA Journal*. OnlineFirst. DOI: <https://doi.org/10.1177/03400352261436359>
- Nguyen Thi KD (2026) Nhận thức về đạo đức trí tuệ nhân tạo của cán bộ thư viện tại một số thư viện trường đại học trên địa bàn Hà Nội [Awareness of the artificial intelligence ethics among librarians at several university libraries in Hanoi]. *Tạp chí Văn hóa Nghệ thuật* 633. (In Vietn.). URL: <https://vanhoanghethuat.vn/nhan-thuc-ve-dao-duc-tri-tue-nhan-taocua-can-bo-thu-vien-tai-mot-so-thu-vien-truong-dai-hoc-tren-dia-ban-ha-noi-77761526.html> (accessed 20.03.2026).
- Pham Thi Yen (2024) Ứng dụng AI trong hoạt động phân loại tài liệu của thư viện [Application of AI in the library's document classification activities]. *Thư Viện Quốc Gia Việt Nam*. (In Vietn.). URL: <https://nlv.gov.vn/nguyen-cuu-trao-doi/ung-dung-a-i-trong-hoat-dong-phan-loai-tai-lieu-cua-thu-vien.html> (accessed 20.03.2026).