

Artificial Intelligence in Universities: Institutional Readiness, Ethical Capacity, and Organizational Implications

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Abstract. *The increasing use of artificial intelligence in higher education has intensified discussions on ethics, responsibility, and institutional preparedness. While existing research has largely focused on normative principles or technological applications, less attention has been paid to how universities develop the organizational and ethical capacities required to manage artificial intelligence in a coherent and sustainable manner. Addressing this gap, the present study adopts a conceptual and methodological research design aimed at developing an analytical framework and a structured measurement instrument for assessing institutional readiness for artificial intelligence in universities.*

Building on insights from the literature on artificial intelligence in education, digital transformation, and institutional governance, the paper conceptualizes institutional readiness as a multidimensional construct shaped by ethical and organizational capacity, AI literacy, and perceived organizational implications. Rather than reporting empirical findings, the study proposes a survey-based research design intended for future empirical application among academic staff, researchers, and university administrators.

The article further outlines an analytical strategy suitable for validating the proposed instrument and examining institutional readiness profiles across higher education institutions. By integrating conceptual clarity with methodological rigor, the study contributes to ongoing debates on responsible artificial intelligence by providing a replicable framework capable of supporting systematic and comparative research in university settings. The proposed approach offers both theoretical and practical relevance, supporting future evidence-based assessments of artificial intelligence preparedness in higher education.

Keywords: Artificial Intelligence; higher education; institutional readiness; ethical capacity; digital transformation.

Introduction

Artificial intelligence has rapidly become an integral component of higher education, influencing teaching methods, assessment practices, research processes, and administrative decision-making. Universities increasingly rely on AI-based tools for learning analytics, automated grading,

plagiarism detection, research evaluation, and strategic planning. While these technologies promise enhanced efficiency and data-driven insights, they also introduce significant ethical and organizational concerns related to academic integrity, fairness, transparency, and accountability (Selwyn, 2019; Zawacki-Richter et al., 2019).

Unlike purely commercial organizations, universities operate within normative frameworks grounded in academic freedom, institutional autonomy, and public trust. The integration of AI into academic environments therefore raises questions that extend beyond technical performance or legal compliance. Scholars have emphasized that the responsible use of AI in higher education requires not only technological capability, but also institutional readiness to address ethical dilemmas, manage risks, and coordinate decision-making across academic and administrative structures (Floridi et al., 2018; UNESCO, 2023).

Recent developments in AI policy and standardization have further intensified these challenges. International organizations and academic networks have issued recommendations on ethical AI, transparency, and human oversight in educational contexts. However, existing studies suggest that universities often adopt AI tools in a fragmented manner, driven by local initiatives rather than institution-wide strategies (Williamson & Eynon, 2020). As a result, ethical considerations are frequently addressed informally, and responsibility for AI-related decisions remains diffused across organizational units.

Against this background, the present study investigates how universities are institutionally prepared to manage the ethical and organizational implications of artificial intelligence. The study focuses on institutional readiness as a multidimensional construct encompassing ethical capacity, organizational coordination, leadership engagement, and AI literacy. By adopting an organizational perspective, the research seeks to move beyond normative discussions and provide an analytical and methodological foundation for examining how universities may operationalize responsible AI practices in everyday academic activities.

Literature review

Artificial Intelligence in Higher Education

The application of artificial intelligence in higher education has expanded significantly over the past decade, driven by advances in data analytics, machine learning, and digital platforms. Research has documented the growing use of AI in adaptive learning systems, automated assessment, student support services, and research management (Zawacki-Richter et al., 2019). Proponents argue that AI can enhance personalization, improve efficiency, and support evidence-based decision-making in academic institutions.

At the same time, critical scholarship highlights the risks associated with the unreflective adoption of AI technologies in educational contexts. Concerns include algorithmic bias, lack of transparency in automated decision-making, and the potential erosion of pedagogical autonomy (Selwyn, 2019). These risks are particularly salient in universities, where AI systems may influence high-stakes outcomes such as grading, admissions, or research evaluation.

Institutional Readiness and Organizational Capacity

Institutional readiness refers to the extent to which organizations possess the structures, resources, and capabilities required to adopt and manage new technologies effectively. In the context of digital transformation, readiness has been linked to leadership commitment, organizational learning, and cross-functional coordination (Westerman et al., 2014; Keding, 2021). Studies in higher education

suggest that technological innovation often outpaces organizational adaptation, leading to fragmented implementation and inconsistent practices (Williamson & Eynon, 2020).

Universities face specific challenges related to institutional readiness, including decentralized governance structures, disciplinary diversity, and competing academic norms. Research indicates that without coordinated strategies and clear responsibility structures, AI initiatives risk remaining isolated experiments rather than becoming integrated institutional practices (Zawacki-Richter & Latchem, 2018). Consequently, assessing institutional readiness requires attention not only to technical infrastructure, but also to organizational culture and decision-making processes.

Ethical Capacity and Academic Responsibility

Ethical capacity represents a critical component of institutional readiness for AI. It encompasses the ability of organizations to identify ethical risks, integrate ethical considerations into decision-making, and respond to emerging challenges in a systematic manner. In higher education, ethical capacity is closely linked to principles of academic integrity, fairness, and respect for individual rights (Floridi et al., 2018).

Studies focusing on digital platforms and innovation ecosystems in higher education suggest that institutional responsibility increasingly extends beyond teaching and research to include social impact, transparency, and ethical engagement with stakeholders (Semenescu et al., 2023). These perspectives reinforce the relevance of ethical capacity as a core component of institutional readiness for artificial intelligence.

Empirical studies suggest that while universities frequently endorse ethical principles at a declarative level, the translation of these principles into operational practices remains limited (UNESCO, 2023). Mechanisms such as ethical impact assessments, transparency requirements, and participatory oversight are unevenly implemented across institutions. As a result, ethical responsibility often depends on individual awareness rather than institutionalized processes, increasing the risk of inconsistency and accountability gaps.

Organizational Implications of AI Adoption

Beyond ethical considerations, the adoption of AI has broader organizational implications for universities. These include changes in academic roles, shifts in decision-making authority, and new demands for skills and competencies. Research indicates that AI can alter power relations within institutions by privileging data-driven expertise and centralizing control over information flows (Williamson & Eynon, 2020).

Recent studies also highlight the potential for responsible AI practices to enhance institutional legitimacy and stakeholder trust (Davenport & Mittal, 2022). Universities that proactively address ethical and organizational challenges may be better positioned to leverage AI as a strategic resource rather than a source of controversy. However, empirical evidence on the relationship between institutional readiness and perceived organizational benefits remains scarce, underscoring the need for systematic investigation.

Conceptual Framework and Research Propositions

The increasing integration of artificial intelligence into academic activities requires universities to develop institutional capacities that extend beyond technological adoption. Building on the literature reviewed in the previous section, this study conceptualizes institutional readiness for AI

as a multidimensional construct reflecting the ability of universities to manage ethical challenges, coordinate organizational responses, and support responsible AI use through leadership and institutional practices.

Conceptual Framework

The proposed conceptual framework positions institutional AI readiness as the central outcome variable, shaped by three key antecedents: ethical capacity, organizational capacity, and AI literacy, with leadership support acting as an enabling condition. In addition, the framework assumes that higher levels of institutional readiness are associated with more positive organizational implications of AI, particularly in terms of perceived academic quality, trust, and sustainability.

First, ethical capacity refers to the extent to which universities possess formal and informal mechanisms for identifying, deliberating, and addressing ethical issues arising from AI use. Prior research emphasizes that ethical principles alone are insufficient unless they are embedded in institutional routines and decision-making processes (Floridi et al., 2018; UNESCO, 2023). In academic contexts, ethical capacity is closely linked to academic integrity, fairness in assessment, and transparency in automated decision-making.

Second, organizational capacity captures structural and procedural elements that support coordinated action, including clear role allocation, cross-departmental collaboration, and institutional guidelines for AI use. Studies on digital transformation highlight that organizational capacity is a critical determinant of successful technology adoption, particularly in complex and decentralized institutions such as universities (Westerman et al., 2014; Keding, 2021). Without adequate organizational capacity, AI initiatives tend to remain fragmented and dependent on individual actors rather than institutional strategies.

Third, AI literacy reflects the knowledge and understanding of AI-related risks, limitations, and implications among academic staff and administrators. Research suggests that AI literacy is essential for informed decision-making and for mitigating risks associated with overreliance on automated systems (Zawacki-Richter et al., 2019). In universities, uneven levels of AI literacy can exacerbate governance gaps, especially when responsibility for AI use is diffused across teaching, research, and administrative domains.

Finally, leadership support is conceptualized as a contextual factor that shapes how ethical and organizational capacities are mobilized. Leadership commitment has been consistently identified as a key enabler of institutional change, influencing resource allocation, priority setting, and cultural norms (Stilgoe et al., 2013; Williamson & Eynon, 2020). In the context of AI, leadership support signals institutional responsibility and facilitates the integration of ethical considerations into strategic decisions.

The framework further assumes that institutional readiness is not an end in itself, but a condition that shapes the broader organizational implications of AI adoption. Universities with higher readiness levels are expected to perceive AI as a resource that enhances academic quality and institutional resilience, rather than as a source of risk or controversy (Davenport & Mittal, 2022).

Research Propositions

Given the conceptual and methodological orientation of this study, the relationships outlined in the proposed framework are articulated as research propositions rather than empirically testable hypotheses. These propositions are derived from the synthesis of existing literature and serve to guide future empirical investigations by clarifying the expected relationships between ethical and

organizational capacity, AI literacy, institutional readiness, and perceived organizational implications in university settings.

Proposition 1: Ethical and organizational capacity is a core determinant of institutional readiness for AI in universities.

Proposition 2: AI literacy enables responsible AI use by supporting informed institutional decision-making.

Proposition 3: Higher institutional readiness is associated with more positive organizational implications of AI adoption.

Research Methodology

Research Design and Purpose

This study adopts a conceptual and methodological research design aimed at developing a structured framework and measurement instrument for assessing institutional readiness for artificial intelligence in universities. Rather than reporting empirical findings, the paper focuses on instrument development and analytical design, providing a foundation for future quantitative investigations in higher education contexts.

This approach is particularly suitable for emerging research areas where conceptual clarity and methodological consistency remain limited. By articulating a coherent framework and a validated survey structure, the study seeks to support subsequent empirical research on responsible AI adoption in academic institutions.

Accordingly, the study should be understood as a conceptual and methodological contribution, aimed at supporting future empirical investigations rather than reporting empirical findings.

Conceptualization of Constructs

The proposed research design operationalizes institutional readiness for artificial intelligence as a multidimensional construct encompassing ethical integration, organizational capacity, AI literacy, and perceived organizational implications. These dimensions are derived from a synthesis of literature on AI in higher education, digital transformation, and institutional ethics.

- Ethical and organizational capacity reflects the extent to which ethical considerations related to AI are embedded in institutional structures, decision-making processes, and coordination mechanisms.
- AI literacy captures the level of awareness and understanding of AI-related implications among academic and administrative staff, with emphasis on ethical, pedagogical, and organizational dimensions rather than technical proficiency.
- Institutional readiness represents the central outcome construct, indicating the ability of universities to manage AI use in a responsible, coordinated, and sustainable manner.
- Perceived organizational implications of AI capture how institutional actors evaluate the broader effects of AI adoption on academic quality, trust, and long-term institutional sustainability.

Instrument Development

The measurement instrument was designed specifically for this study, informed by existing research on artificial intelligence in higher education, institutional readiness, and ethical capacity,

while deliberately avoiding direct replication of previously validated scales. This strategy was adopted to reduce conceptual overlap and to ensure the originality and contextual relevance of the instrument.

All constructs are operationalized using five-point Likert-type items ranging from 1 (strongly disagree) to 5 (strongly agree). The items are formulated to capture organizational practices and institutional conditions rather than individual attitudes toward specific AI tools.

The instrument is structured into four sections corresponding to the main constructs of the conceptual framework:

1. Ethical and organizational capacity
2. AI literacy
3. Institutional readiness for AI
4. Perceived organizational implications of AI adoption

Sample items are included in the Appendix to facilitate replication and adaptation in future studies.

Proposed Data Collection Strategy

For future empirical applications, the instrument is intended to be administered to academic staff, researchers, and university administrators involved in teaching, research management, digitalization initiatives, or institutional governance. Data collection may be conducted through online surveys distributed via institutional channels or academic networks.

The proposed design supports cross-sectional studies at the institutional or national level, as well as comparative research across different higher education systems. While the instrument is primarily developed for universities, it may also be adapted to other knowledge-based organizations with minimal modification.

Analytical Strategy for Future Studies

The methodological framework outlines a multi-step analytical strategy suitable for validating the instrument and testing the proposed conceptual relationships in future research.

First, descriptive analysis may be used to examine response patterns and institutional profiles. Second, reliability analysis (e.g., Cronbach's alpha) and exploratory factor analysis (EFA) are recommended to assess internal consistency and dimensional structure. Third, confirmatory factor analysis (CFA) or partial least squares structural equation modeling (PLS-SEM) may be employed to validate the measurement model and to examine relationships between constructs.

In addition, cluster analysis may be used to identify typologies of institutional readiness, enabling the classification of universities into distinct profiles based on ethical capacity, organizational coordination, and AI literacy. This analytical approach supports both theory development and practical benchmarking.

Methodological Contribution and Limitations

By focusing on instrument development and analytical design, this study makes a methodological contribution to the literature on artificial intelligence in higher education. The proposed framework and measurement instrument offer a systematic approach for capturing institutional readiness and ethical capacity, addressing a gap between normative discussions and empirical research.

At the same time, the study acknowledges its conceptual nature. The absence of empirical validation in the present paper limits the ability to draw conclusions about specific institutional

contexts. However, this limitation is intentional and reflects the study’s aim to provide a robust methodological foundation for future empirical investigations.

Research Results

Overview of the Analytical Framework

Although the present study does not report empirical findings, the results section consolidates the conceptual and methodological outcomes derived from the development of the analytical framework and measurement instrument. These results consist of a structured operationalization of key constructs and a structured representation of their expected relationships, providing a clear foundation for future empirical testing.

To enhance analytical clarity, Table 1 summarizes the main constructs included in the framework and their expected analytical roles, while Table 2 presents the conceptual relationships between ethical and organizational capacity, AI literacy, institutional readiness, and perceived organizational implications in university settings.

Key Constructs and Expected Analytical Roles

To operationalize the conceptual framework proposed in this study, the results section begins by identifying the key analytical constructs that define institutional readiness for artificial intelligence in universities. These constructs were derived through a systematic synthesis of the literature on artificial intelligence in higher education, digital transformation, and institutional governance, and were selected for their relevance in capturing both organizational capacities and perceived outcomes.

Clarifying the analytical role of each construct is essential for ensuring conceptual consistency and for supporting future empirical applications of the framework. By explicitly distinguishing between antecedent conditions, the central readiness construct, and outcome-oriented dimensions, the framework provides a structured basis for subsequent measurement, comparison, and validation efforts.

Table 1 presents the four core constructs underpinning the proposed framework, together with their conceptual definitions and anticipated roles in future empirical analyses. The table clarifies how each construct contributes to the assessment of institutional readiness for artificial intelligence in universities.

Table 1. Conceptual Constructs and Expected Analytical Outcomes

Construct	Definition	Expected Analytical Role in Future Studies
Ethical and Organizational Capacity	The extent to which ethical considerations related to AI are embedded in institutional structures, decision-making processes, and coordination mechanisms.	Primary determinant of institutional readiness; expected to show strong positive association with readiness levels.
AI Literacy	The level of awareness and understanding of AI-related implications among academic and administrative staff, including ethical and organizational aspects.	Enabling factor supporting informed decision-making and responsible AI use across academic activities.

Construct	Definition	Expected Analytical Role in Future Studies
Institutional Readiness for AI	The ability of universities to manage AI adoption in a coordinated, ethical, and sustainable manner.	Central outcome variable capturing institutional preparedness for AI integration.
Perceived Organizational Implications of AI	Institutional actors' perceptions of how AI adoption affects academic quality, trust, and sustainability.	Outcome construct reflecting the perceived value and legitimacy of AI use in higher education.

Source: Authors' conceptualization.

The table highlights institutional readiness for AI as the central outcome variable, shaped by ethical and organizational capacity and AI literacy, and linked to broader organizational implications. By explicitly defining these constructs, the framework addresses a recurrent limitation in the literature on AI in higher education, namely the lack of consistent operational definitions for organizational and ethical dimensions.

Conceptual Relationships Between Constructs

The conceptual relationships proposed in this study are illustrated in Table 2, which depicts institutional readiness for AI as a mediating construct between organizational capacities and perceived organizational implications. Ethical and organizational capacity, together with AI literacy, are positioned as antecedents that enable universities to respond to ethical, pedagogical, and managerial challenges associated with AI use.

Table 2. Conceptual framework illustrating the relationships between ethical and organizational capacity, AI literacy, institutional readiness for artificial intelligence, and perceived organizational implications in universities

Analytical Dimension	Core Focus	Key Components
Ethical and Organizational Capacity	Institutional ability to integrate ethical considerations into AI-related decision-making and governance structures	Ethical deliberation mechanisms; institutional coordination; clear allocation of responsibilities
AI Literacy	Organizational awareness and understanding of AI-related implications among academic and administrative staff	Awareness of ethical and organizational implications; understanding of AI limitations; institutional guidance and training
Institutional Readiness for AI	Overall institutional preparedness to manage AI adoption in a coherent, responsible, and sustainable manner	Coherent internal guidelines; integrated oversight practices; organizational alignment
Perceived Organizational Implications	Perceived effects of AI adoption on institutional functioning and sustainability	Academic quality and integrity; institutional trust; long-term sustainability

Source: Authors' elaboration.

The table emphasizes that institutional readiness is not a purely technical condition, but rather the outcome of coordinated ethical deliberation, organizational alignment, and staff

awareness. This visualization supports the analytical logic of the framework and facilitates its application in future quantitative studies using structural modeling techniques.

Anticipated Institutional Readiness Profiles

Based on the proposed framework, future empirical applications are expected to reveal distinct institutional readiness profiles among universities, reflecting different stages of organizational and ethical maturity in relation to artificial intelligence. These profiles are not assumed to follow a linear progression, but rather to capture diverse configurations shaped by institutional history, governance structures, and strategic priorities.

At one end of the spectrum, universities with high institutional readiness are expected to exhibit integrated ethical practices, clear allocation of responsibilities, and coordinated organizational responses to AI adoption. In such institutions, AI literacy is likely to be supported through formal guidance and training, while oversight mechanisms are embedded in existing governance structures. These characteristics suggest a proactive and anticipatory approach to AI, where ethical reflection and organizational coordination evolve alongside technological deployment.

In contrast, institutions with moderate readiness may demonstrate widespread use of AI tools at the level of individual units or projects, but lack institution-wide frameworks for coordination and ethical oversight. In these cases, responsibility for AI-related decisions tends to be fragmented, and ethical considerations are addressed inconsistently, often in response to emerging concerns rather than through structured processes.

Finally, universities with low institutional readiness are expected to be characterized by ad hoc or informal AI use, limited AI literacy beyond technical specialists, and minimal integration of ethical considerations into organizational routines. In such contexts, AI adoption is driven primarily by individual initiative, with little institutional support or strategic alignment.

The identification of these profiles through cluster-based analytical techniques would enable systematic comparison and benchmarking across institutions and higher education systems. Beyond classification, such profiles can support diagnostic assessments, helping universities identify specific gaps and prioritize organizational interventions aimed at strengthening institutional readiness for artificial intelligence.

Methodological Value of the Results

Beyond substantive insights, the results of this study demonstrate a clear methodological contribution to research on artificial intelligence in higher education. By combining clearly defined constructs with a coherent conceptual model, the study offers a replicable approach for examining institutional readiness and ethical capacity, addressing a recurring limitation in the existing literature—namely, the lack of operational tools capable of translating normative concepts into empirically observable dimensions.

The integration of Table 1 and Table 2 illustrates how conceptual reasoning can be systematically transformed into an empirical research design. Table 1 clarifies the analytical roles of the core constructs, while Table 2 synthesizes these elements into a structured framework that delineates the dimensions of institutional readiness and their key components. Together, these tables demonstrate how abstract notions such as ethical capacity or AI literacy can be operationalized in a way that supports quantitative analysis.

From a methodological perspective, the framework is designed to be flexible and adaptable. It can be applied in cross-sectional studies, comparative research across higher education systems, or longitudinal designs examining institutional change over time. Moreover, the measurement instrument derived from the framework can be combined with different analytical techniques, including factor analysis, structural equation modeling, or cluster analysis, depending on the research objectives.

In this sense, the methodological value of the results lies not only in the specific framework proposed, but also in the research logic it exemplifies—one that bridges normative discussions of responsible AI with evidence-based institutional analysis.

Summary of Results

In summary, the results of this study consist of a structured conceptual framework and an operational measurement model that together clarify how ethical and organizational factors shape institutional readiness for artificial intelligence in universities. Rather than presenting empirical findings, the study articulates expected analytical outcomes and plausible institutional profiles, offering a coherent basis for future empirical investigation.

By explicating the relationships between ethical and organizational capacity, AI literacy, institutional readiness, and perceived organizational implications, the framework contributes to the consolidation of research on responsible artificial intelligence in higher education. The results thus serve a dual function: they advance conceptual clarity in an emerging field and provide practical methodological tools capable of supporting systematic, comparative, and longitudinal research on AI preparedness in university contexts.

Discussion and Implications

The purpose of this study was to advance the understanding of how universities can be analytically assessed in relation to their preparedness for artificial intelligence, with particular attention to ethical capacity and organizational conditions. By developing a conceptual framework and a structured measurement instrument, the study responds to a recurring limitation in the literature on AI in higher education: the predominance of normative discussions in the absence of coherent analytical tools. From this perspective, institutional readiness for AI may shape how universities organize responsibilities, allocate decision-making authority, and integrate ethical considerations into everyday academic and administrative practices.

The framework proposed in this paper highlights institutional readiness as a critical intermediary between AI adoption and its broader organizational implications. Rather than viewing AI challenges in universities as isolated ethical or technological issues, the model emphasizes the interaction between ethical integration, organizational coordination, and AI literacy. This perspective aligns with recent scholarship suggesting that responsible AI use depends less on individual awareness and more on institutionalized practices and decision-making structures.

From a theoretical standpoint, the study contributes to the literature on responsible innovation and digital transformation in higher education by shifting the analytical focus from technology-centric approaches to institutional capacity. Ethical capacity is conceptualized not as a set of abstract principles, but as an operational dimension embedded in routines, coordination mechanisms, and leadership practices. This framing enables a more nuanced understanding of why universities with similar technological resources may differ substantially in their ability to manage AI responsibly.

The proposed framework also has important managerial and organizational implications. For university leaders and administrators, the model underscores the need to move beyond fragmented or informal approaches to AI use. Ethical guidelines and training initiatives, while necessary, are unlikely to be effective in isolation unless supported by clear institutional responsibilities and cross-functional collaboration. By explicitly linking readiness to perceived organizational implications, the framework suggests that investments in ethical and organizational capacity may contribute not only to risk mitigation but also to institutional legitimacy and long-term sustainability.

In addition, the measurement instrument developed in this study offers a practical tool for institutional self-assessment and benchmarking. Universities may use the proposed constructs to identify gaps between AI adoption and organizational preparedness, facilitating more targeted interventions. At the policy level, the framework may also inform comparative studies across higher education systems, supporting evidence-based discussions on institutional responsibility in the context of accelerated digitalization.

Conclusions

The increasing integration of artificial intelligence into higher education has drawn renewed attention to the capacity of universities to manage technological change in a responsible and institutionally coherent manner. While much of the existing literature emphasizes ethical principles or policy recommendations, fewer studies provide analytical tools capable of capturing how responsibility, coordination, and oversight are operationalized in everyday academic practice. This study addresses that gap by proposing a conceptual framework and a structured measurement instrument for assessing institutional readiness for artificial intelligence in universities.

By conceptualizing institutional readiness as an integrative construct, the paper highlights the interplay between ethical and organizational capacity, AI literacy, and perceived organizational implications. In line with prior research on artificial intelligence in education and digital transformation, the framework underscores that responsible AI use in universities depends less on individual awareness or isolated initiatives and more on institutionalized practices, cross-functional coordination, and leadership-supported decision-making (Selwyn, 2019; Williamson & Eynon, 2020; UNESCO, 2023). From this perspective, ethical capacity is understood not as a declarative commitment, but as an operational dimension embedded in organizational routines and governance structures.

The primary contribution of this study is methodological. Rather than advancing empirical claims, the paper develops an original survey instrument and an associated analytical strategy designed to support future quantitative and comparative research. This contribution is particularly relevant in a research landscape where conceptual discussions of responsible artificial intelligence often outpace the availability of empirical evidence and validated measurement tools. By offering a replicable framework, the study enables future investigations to move beyond descriptive accounts toward systematic assessments of institutional preparedness.

The proposed framework also carries important organizational and managerial implications for higher education institutions. Universities seeking to integrate artificial intelligence into teaching, research, and administrative processes may benefit from using the instrument as a diagnostic and benchmarking tool. Identifying gaps between technological adoption and institutional readiness can inform targeted interventions, such as the development of internal guidelines, training initiatives, or coordination mechanisms that support responsible AI use. In this

sense, institutional readiness emerges not only as a condition for risk mitigation, but also as a factor shaping trust, legitimacy, and long-term institutional sustainability.

Several limitations should be acknowledged. The conceptual nature of the study implies that the proposed relationships remain to be empirically tested, and institutional contexts may require adaptation of the instrument to reflect national or organizational specificities. These limitations, however, reflect deliberate design choices aligned with the study's exploratory and theory-building objectives.

Building on these considerations, future research is encouraged to pursue several directions. First, empirical validation of the proposed instrument through quantitative studies in university settings would allow for testing the relationships between ethical and organizational capacity, AI literacy, and institutional readiness. Second, comparative analyses across institutions or higher education systems could reveal contextual differences in AI preparedness and governance approaches. Third, longitudinal studies could examine how institutional readiness evolves over time as universities develop strategies, policies, and structures dedicated to artificial intelligence. Finally, the framework may be extended by incorporating additional dimensions, such as data governance, stakeholder engagement, or the impact of artificial intelligence on organizational culture.

In conclusion, this study argues that the responsible integration of artificial intelligence in universities cannot be reduced to technological capability or ethical declarations alone. Instead, it requires the development of institutional capacities that embed ethical reflection, organizational coordination, and informed decision-making into the core structures of academic life. By providing a conceptual and methodological foundation for assessing institutional readiness, the paper contributes to a more evidence-oriented and institutionally grounded understanding of artificial intelligence in higher education and outlines a clear agenda for future research.

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