REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

KNOWLEDGE MANAGEMENT CHALLENGES IN BRAZILIAN HIGHER EDUCATION INSTITUTIONS AMIDST THE RISE OF ARTIFICIAL INTELLIGENCE

DESAFIOS DA GESTÃO DO CONHECIMENTO EM INSTITUIÇÕES DE ENSINO SUPERIOR BRASILEIRAS DIANTE DA ASCENSÃO DA INTELIGÊNCIA ARTIFICIAL

DESAFÍOS DE LA GESTIÓN DEL CONOCIMIENTO EN INSTITUCIONES DE EDUCACIÓN SUPERIOR BRASILEÑAS ANTE EL AUGE DE LA INTELIGENCIA ARTIFICIAL

Thiago Henrique Almino Francisco
Pós-Doutor, Programa de Pós-Graduação em Desenvolvimento Socioeconômico – Universidade do Extremo Sul Catarinense (UNESC), Brasil
E-mail: tfrancisco@unesc.net

Giancarlo Moser
Doutor, Programa de Pós-Graduação em Administração – Universidade do Sul de Santa Catarina (UNISUL), Brasil
E-mail: mosergiancarlo@gmail.com

Jeanderson Domingos Minotto Bombazar
Mestrando, Programa de Pós-Graduação em Desenvolvimento Socioeconômico – Universidade do Extremo Sul Catarinense (UNESC), Brasil
E-mail: jeanderson.bombazar@gmail.com

Mouhamadou Moustapha Seck
Mestrando, Programa de Pós-Graduação em Desenvolvimento Socioeconômico – Universidade do Extremo Sul Catarinense (UNESC), Brasil
E-mail: moustapha@unesc.net

Abstract: This study examines knowledge management (KM) challenges in higher education institutions (HEIs) in the context of artificial intelligence (AI), focusing on Brazilian universities. Adopting a qualitative multiple-case study approach (Yin, 2018), data were collected through interviews, documents, and observations. The findings identify four interconnected challenges: technological limitations, human and cultural resistance, ethical and governance dilemmas, and academic integrity concerns. Interpreted through neo-institutional theory (DiMaggio & Powell, 1983; Oliver, 1991) and organizational ambidexterity (Tushman & O'Reilly, 1996), the results reveal tensions between innovation and academic values. The study contributes by conceptualizing AI integration as a socio-technical transformation that requires alignment between infrastructure, governance, human capabilities, and pedagogical practices.
Keywords: knowledge management; artificial intelligence; higher education; academic governance; institutional innovation.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Resumo: Este estudo analisa os desafios da gestão do conhecimento (GC) em instituições de ensino superior (IES) no contexto da expansão da inteligência artificial (IA), com foco em universidades brasileiras. Adotou-se uma abordagem qualitativa, por meio de estudo de casos múltiplos (Yin, 2018), com coleta de dados via entrevistas, documentos e observações. Os resultados identificam quatro categorias inter-relacionadas de desafios: limitações tecnológicas e de infraestrutura, resistência humana e cultural, lacunas éticas e de governança, e preocupações com a integridade acadêmica. À luz da teoria neoinstitucional (DiMaggio & Powell, 1983; Oliver, 1991) e da ambidestria organizacional (Tushman & O'Reilly, 1996), os achados evidenciam tensões entre inovação e valores acadêmicos. O estudo contribui ao compreender a adoção da IA como uma transformação sociotécnica, exigindo alinhamento entre infraestrutura, governança, capacidades humanas e práticas pedagógicas para uma GC sustentável e ética nas IES.
Palavras-chave: gestão do conhecimento; inteligência artificial; ensino superior; governança acadêmica; inovação institucional.

Resumen: Este estudio analiza los desafíos de la gestión del conocimiento (GC) en instituciones de educación superior en el contexto del avance de la inteligencia artificial (IA), con foco en universidades brasileñas. Se adoptó un enfoque cualitativo de estudio de casos múltiples (Yin, 2018), con datos obtenidos mediante entrevistas, documentos y observaciones. Los resultados identifican cuatro desafíos interrelacionados: limitaciones tecnológicas, resistencia humana y cultural, dilemas éticos y de gobernanza, y preocupaciones sobre la integridad académica. Interpretados a la luz de la teoría neoinstitucional (DiMaggio & Powell, 1983; Oliver, 1991) y la ambidestreza organizacional (Tushman & O'Reilly, 1996), los hallazgos evidencian tensiones entre innovación y valores académicos. El estudio contribuye al conceptualizar la integración de la IA como una transformación sociotécnica que exige alineación estratégica.
Palabras clave: gestión del conocimiento; inteligencia artificial; educación superior; gobernanza académica; innovación institucional.

1. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) is transforming knowledge processes across sectors, including higher education. Universities are adopting AI in areas such as intelligent tutoring, automated grading, research analytics, and administrative chatbots, enhancing efficiency and enabling personalized learning. AI also holds potential to address educational challenges and support strategic goals like Sustainable Development Goal 4. However, it introduces significant risks, requiring institutions to rethink how knowledge is captured, shared, and utilized when AI both generates insights and disrupts traditional practices.

Knowledge management (KM) is central to higher education institutions (HEIs), as they are inherently knowledge-driven organizations. KM involves creating, storing, sharing, and applying knowledge to achieve organizational objectives. In universities, it supports research, teaching, decision-making, and

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

institutional memory. Despite its importance, KM has long faced challenges such as departmental silos, weak incentives for knowledge sharing, and limited formal systems (Kidwell et al., 2000; Fullwood, Rowley, & Delbridge, 2013). Academic autonomy often reinforces fragmentation, and cultural and resource constraints hinder the adoption of structured KM approaches (Kidwell et al., 2000).

AI intensifies these challenges while offering new opportunities. On one hand, it enhances KM through automated retrieval, personalized delivery, and advanced data analysis. Evidence shows AI-driven KM improving learning personalization and administrative efficiency, particularly during the COVID-19 pandemic. On the other hand, its integration raises technological (data quality, system integration), organizational (resistance, skill gaps), and ethical (bias, privacy, transparency) concerns. In higher education, AI may also disrupt knowledge practices, for example by facilitating plagiarism or reducing critical thinking through over-reliance on machine-generated content.

A critical research gap persists regarding empirical studies on AI's impact on KM in real university contexts, especially in developing countries. Existing research is largely conceptual or technical, with limited focus on organizational and human dimensions. In emerging economies like Brazil, challenges such as resource constraints, digital inequality, and lack of regulatory frameworks may hinder AI adoption. The absence of robust ethical guidelines further complicates institutional responses.

This study addresses the question: What are the main knowledge management challenges for higher education in the face of growing AI interference? Focusing on the Brazilian context, it aims to identify key challenges and contribute to theory and practice. Theoretically, it advances discussions on organizational adaptation and ambidexterity through a neo-institutional lens, examining how universities balance innovation pressures with academic values. Practically, it offers insights for leaders and policymakers to mitigate risks and strategically integrate AI. Understanding these challenges is essential for ensuring that AI strengthens, rather than undermines, knowledge processes in HEIs.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW

2.1 Knowledge Management in Higher Education

Knowledge management (KM) has been broadly defined as the process through which organizations create value from their intellectual and knowledge-based assets (Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998). In the context of higher education, KM encompasses managing academic knowledge (research findings, scholarly expertise), educational knowledge (teaching materials, pedagogical techniques), and organizational knowledge (policies, administrative know-how). Universities, as knowledge-intensive institutions, naturally engage in many KM activities even if not formally labeled as such. Effective KM in universities can lead to improved decision-making, innovation in curriculum and research, and overall institutional performance (Kidwell et al., 2000). For example, capturing and sharing best teaching practices across departments can enhance educational quality, and maintaining comprehensive research repositories can accelerate new discoveries by building on prior knowledge.

However, implementing formal KM initiatives in academia presents unique challenges. Cultural and organizational factors often impede knowledge sharing among academics. Fullwood, Rowley, and Delbridge (2013) found that university faculty might be hesitant to share knowledge due to lack of trust, absence of incentives, or the competitive nature of academic work (e.g., competing for promotions or recognition) Additionally, universities are typically organized into relatively autonomous faculties or departments, which can lead to knowledge silos where valuable insights remain confined within specific units. A study by Ramírez et al. (2022) (as cited in Quarchioni et al., 2022) notes that many HEIs struggle with breaking down these silos and establishing enterprise-wide knowledge systems. Further, while corporations often invest in dedicated KM systems (like knowledge bases, intranets, or AI-driven knowledge portals), universities may lack the resources or strategic mandate to do so (Kidwell et al., 2000). Administrative staff might implement some KM tools (e.g., document management systems for policies

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

or alumni databases), but uptake by academic staff can be limited if the tools are not well aligned with academic workflows.

Despite these hurdles, the importance of KM in higher education is well recognized. Knowledge is the core product and currency of academia – managing it effectively is linked to a university's ability to innovate and remain competitive. Institutional theory offers one lens to understand how universities adopt management practices like KM. According to DiMaggio and Powell's (1983) concept of isomorphism, organizations (including universities) often conform to practices deemed legitimate in their institutional environment. In the 2000s, as KM became popular in the corporate world, universities faced some normative pressures (e.g., via professional management communities and accreditation bodies) to modernize and adopt similar practices. However, many universities engaged in what Meyer and Rowan (1977) would term "decoupling" – ceremonially adopting KM rhetoric or superficial systems to appear modern and gain legitimacy, without deeply integrating these practices into daily academic life. This highlights a classic tension: universities must balance the technical demands for efficiency (managing knowledge for performance) with institutional demands for legitimacy in the eyes of stakeholders (Suchman, 1995).

2.2 Artificial Intelligence in Higher Education

AI's role in higher education has expanded significantly in recent years, driven by advances in machine learning and big data. In academia, its applications span multiple domains. In teaching and learning, AI-powered technologies—such as adaptive learning platforms, intelligent tutoring systems, and automated grading—enable personalized instruction and immediate feedback. These systems analyze student performance and tailor activities to individual needs, with evidence suggesting improvements in engagement and learning outcomes (Zawacki-Richter et al., 2019). More recently, generative AI tools (e.g., ChatGPT) have been adopted for content creation, translation, and academic support, creating both pedagogical opportunities and concerns regarding misuse.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

In research and knowledge creation, AI is increasingly used for data analysis, pattern recognition, literature synthesis, and even hypothesis generation. According to Duan et al. (2019), AI augments human capabilities by processing complex data and uncovering insights that may not be easily identifiable by researchers. Across fields such as engineering and medicine, machine learning models function as partners in knowledge discovery. However, this reliance introduces challenges related to interpretability and the potential reproduction of biases embedded in datasets.

AI is also transforming administrative and support services in universities. Applications include chatbots for student services, automated scheduling, and predictive analytics to identify at-risk students. A prominent example is Georgia State University's "Pounce" chatbot, which reduced summer melt by assisting students through enrollment processes. These systems act as knowledge management tools by efficiently retrieving and disseminating institutional knowledge, enhancing responsiveness and operational efficiency.

At the institutional level, AI supports decision-making through advanced analytics, enabling universities to integrate data across departments and generate strategic insights. This includes identifying curriculum overlaps, optimizing course offerings, and detecting emerging research areas, thereby strengthening knowledge-driven governance.

In the Brazilian higher education context, interest in AI has grown, supported by initiatives such as the Brazilian Artificial Intelligence Strategy (EBIA). Universities are experimenting with AI in both teaching and administration, although adoption varies due to resource disparities. While there are innovative cases—such as personalized learning platforms in mathematics—many institutions remain in early stages. A case study at UFRJ highlights this duality: faculty recognize AI's potential for improving course design and reducing administrative workload, but also express concerns regarding plagiarism risks and infrastructural limitations.

2.3 AI "Interference" in Knowledge Management: Potential and Challenges

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

AI can be conceptualized as a double-edged sword for knowledge management (KM) in higher education. On the one hand, it enhances knowledge discovery, personalization, and efficiency by enabling rapid retrieval of information from large knowledge bases and supporting tailored learning and research recommendations. It also automates routine KM tasks, such as document classification and query handling, improving administrative efficiency and allowing human actors to focus on higher-value activities. Furthermore, AI supports evidence-based decision-making by identifying patterns in institutional data, transforming knowledge into a strategic asset for governance and performance improvement.

On the other hand, AI introduces complex challenges across technological, organizational, ethical, and epistemic dimensions. Technologically, its implementation requires robust infrastructure, high-quality data, and interoperability, which many institutions—particularly in developing contexts—lack. Data fragmentation and biases in training datasets further compromise reliability (Fosso Wamba et al., 2022), reinforcing inequalities such as the digital divide observed in countries like Brazil.

From an organizational perspective, AI disrupts established roles and routines, often generating resistance due to fears of job displacement and insufficient AI literacy. Effective KM in this context demands new competencies and governance structures (Borges et al., 2021), while academic cultures characterized by autonomy and decentralization may conflict with the integrative nature of AI systems.

Ethical and legal concerns are equally critical. Issues related to privacy, bias, transparency, and trust directly affect AI adoption in KM processes (Siau & Wang, 2020). Regulatory frameworks remain underdeveloped, and although legislation such as Brazil's LGPD imposes data protection requirements, many universities lack operational compliance. The absence of clear institutional policies has led to inconsistent and sometimes problematic uses of AI, particularly in the context of generative tools.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

A central challenge lies in maintaining academic integrity and knowledge quality. Generative AI enables the production of sophisticated content, raising concerns about plagiarism, misinformation, and over-reliance on automated outputs. This may erode critical thinking and compromise the validation processes traditionally embedded in academic knowledge production. As a result, universities must develop new literacies that enable the critical and responsible use of AI, ensuring that it complements rather than replaces human judgment.

Overall, the literature converges on four core categories of challenges: technological, organizational, ethical, and quality-related. While AI offers transformative potential for KM, it also requires a strategic and contextualized approach. Universities must balance innovation pressures with the preservation of academic values, reflecting a need for organizational ambidexterity (Tushman & O'Reilly, 1996; Raisch & Birkinshaw, 2008). As highlighted by Greenwood and Hinings (1996), such transformations involve inherent tensions between new practices and institutional traditions. This study advances the discussion by empirically examining how these tensions materialize as KM challenges in the AI era, with a focus on Brazilian higher education institutions.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Table 1. Key AI-Related Knowledge Management Challenges Identified in Literature

Challenge Category	Description	Illustrative Sources
Technological Infrastructure & Data	AI integration is limited by inadequate IT infrastructure, data silos, poor data quality, and integration complexity. Developing countries face a digital divide in access to AI tools. Algorithmic biases can arise from unrepresentative data.	Fosso Wamba et al. (2022) – data silos & integration issues; Hagos *et al.* (2025) – tech barriers & digital divide; Rezaei (2025) – integration complexity & bias concerns.
Human Skills & Organizational Culture	Lack of AI literacy and technical skills among staff and students hinders effective use of AI tools. Resistance to change due to fear of job displacement or distrust in technology. Need for training and a culture that supports knowledge sharing and innovation.	Borges *et al.* (2021) – skill gaps & change resistance; Siau & Wang (2020) – importance of trust in AI; Fullwood *et al.* (2013) – pre-existing knowledge sharing barriers.
Ethical & Governance Issues	Concerns about data privacy, security, and compliance with laws (e.g., LGPD). Potential biases and lack of transparency in AI decisions. Absence of clear institutional policies or ethical frameworks for AI use leads to uncertainty and misuse. Need for governance frameworks to ensure responsible AI deployment.	Hagos *et al.* (2025) – need for ethical AI frameworks; Rezaei (2025) – calls for robust governance structures; UNESCO (2023) – policy/regulatory lag behind AI advances
Academic Integrity & Knowledge Quality	AI-generated content usage raises plagiarism and academic dishonesty issues. Over-reliance on AI can diminish critical thinking and deep learning. Ensuring accuracy of knowledge (AI can "hallucinate" incorrect info) and maintaining rigorous validation (peer review, critical reflection) becomes challenging.	Costa *et al.* (2025) – plagiarism risk & dependence on AI tools; Suchman (1995) – need for legitimacy (implies upholding academic standards); Dwivedi *et al.* (2021) – multidisciplinary perspective on AI challenges in trust and accuracy.

Sources in table: Selected examples from literature; many challenges span multiple domains and are widely reported.

3. METHODOLOGY

To address the research question, we adopted a qualitative design grounded in an interpretive paradigm, suitable for exploring emerging challenges where theory is still evolving. A multiple-case study strategy (Yin, 2018) was employed, involving three Brazilian higher education institutions that had begun integrating AI into areas such as teaching, library services, or administration. The institutions—one public,

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

one private, and one community-based—were selected through purposeful sampling (Patton, 2015) to represent mid-sized universities (5,000–15,000 students), enabling cross-case comparison while reflecting typical resource constraints and institutional pressures in the Brazilian context.

The study is primarily exploratory and descriptive, with an explanatory dimension aimed at understanding how challenges manifest in practice. Although no single theoretical framework guided the design, concepts from institutional theory and knowledge management informed the analysis, enabling theoretical triangulation and multi-perspective interpretation of findings.

Data collection combined semi-structured interviews, document analysis, and limited observation to ensure depth and triangulation. A total of 18 interviews (5–7 per institution) were conducted between March and June 2025, involving administrators, faculty, and technical staff engaged in AI and knowledge management initiatives. Interviews lasted 45–90 minutes, were conducted both online and in person, recorded with consent, transcribed in Portuguese, and translated into English when necessary. An interview guide ensured consistency while allowing flexibility for participants to elaborate on their experiences with AI, perceived changes in knowledge processes, and encountered challenges.

Document analysis included institutional reports, strategic plans, policy documents related to AI, and national guidelines such as the Brazilian AI Strategy (EBIA, 2021), enabling validation and contextualization of interview data. Limited observations during site visits—such as IT support operations and faculty workshops on AI tools—provided additional contextual insights aligned with reported experiences.

All data were managed using NVivo 14, with systematic coding and traceability procedures. Translation accuracy was verified by a bilingual assistant to preserve the integrity of nuanced responses.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Table 2. Data Sources and Participants

Institution (Case)	Type	Participants Interviewed	Documents Analyzed	Contextual Notes
Alpha University (Public, State-funded)	~12,000 students; diverse programs	7 interviews: Vice-Rector (Academic Affairs), Library KM Manager, IT Director, 2 Professors (Engineering, Education), 1 Researcher (AI lab), 1 IT staff.	Strategic Plan 2021–2025; ICT Master Plan; Draft policy on "Use of AI in Teaching" (internal memo).	Has initiated an AI tutor pilot in large freshman courses; moderate funding for IT.
Beta University (Private, non-profit)	~8,000 students; emphasis on business and tech programs	5 interviews: Dean of Innovation, 1 Professor (Computer Science), 1 Professor (Business/admin), Head of e-Learning unit, LMS Administrator.	University Innovation Strategy document; Code of conduct (no mention of AI yet); Minutes of Teaching and Learning Committee meetings (2024) discussing AI.	Strong tech orientation, early adopter of AI chatbot for student services; relies on tuition, budget constraints noted.
Gamma College (Community-focused private college)	~5,500 students; mainly undergraduate	6 interviews: Academic Coordinator, 2 Lecturers (one Sciences, one Humanities), IT support lead, Librarian, Student affairs officer.	Student handbook (2025) with new "AI usage" section; Institutional self-study report for accreditation (2023).	Limited IT infrastructure; just started exploring AI, e.g., considering plagiarism detection software.

(Participant roles and documents have been anonymized for confidentiality.)

We employed thematic analysis (Braun & Clarke, 2006), combining inductive and deductive approaches informed by the literature and research question. Initially, the research team familiarized itself with all transcripts and documents, producing analytical memos, with coding conducted in Portuguese to preserve meaning.

A coding scheme was developed based on both prior theory (e.g., technological, organizational, and ethical issues) and emergent data. Two researchers independently coded initial transcripts using NVivo, aligning definitions before proceeding. One researcher then coded the full dataset, while a second reviewed a subset (30%) to ensure consistency, achieving over 85% agreement.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Codes were grouped into themes through iterative refinement, ensuring internal coherence and distinction. While some themes aligned with prior frameworks, others—such as academic integrity and critical thinking—emerged directly from the data and were treated as distinct due to their prominence.

Triangulation across interviews, documents, and observations strengthened validity. Member checking was conducted with selected participants, confirming the findings with minor refinements. Additionally, relationships between themes were explored, identifying interdependencies (e.g., skill gaps contributing to ethical risks).

Throughout the process, a clear chain of evidence was maintained (Yin, 2018), with findings supported by multiple data sources and illustrated through representative quotes, ensuring transparency and analytical robustness.

4. RESULTS

Through qualitative analysis, four interrelated categories of knowledge management (KM) challenges emerged across the three case institutions: technological, human, ethical, and epistemic (academic integrity and knowledge quality). These categories reveal how AI simultaneously exposes structural weaknesses and introduces new tensions within higher education.

Technological and infrastructure barriers were foundational constraints. Institutions reported insufficient computational capacity, unstable connectivity, and limited interoperability between systems, which hindered the effective deployment of AI-driven KM tools. Instances of system overload and failed integrations illustrated the mismatch between legacy infrastructures and AI requirements. Data fragmentation further limited AI effectiveness, as institutional knowledge remained siloed across departments, requiring extensive cleaning and integration efforts. These findings align with prior research on data silos and integration complexity (Fosso Wamba et al., 2022), while also highlighting a pronounced digital divide in resource-constrained contexts such as Brazil. Additionally, issues of localization and algorithmic bias emerged, as AI systems trained primarily in English struggled to interpret Portuguese academic contexts, raising concerns about fairness and reliability.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Human and cultural resistance constituted a second critical dimension. Faculty and staff frequently expressed skepticism toward AI, perceiving it as a threat to academic autonomy and professional identity. This resistance reflects deeper tensions between traditional academic values and technological innovation. At the same time, limited AI literacy hindered effective use, often resulting in misinterpretation of outputs and abandonment of tools. The absence of structured training and incentives further reduced engagement, while workload pressures discouraged adoption. Generational differences were observed, with younger academics more receptive to AI. These dynamics are consistent with broader challenges in digital transformation and underscore the importance of capacity building, change management, and incentive alignment (Dwivedi et al., 2021).

Ethical, legal, and governance dilemmas further complicated AI integration. All institutions exhibited fragmented or absent governance frameworks, with only partial or informal guidelines regarding AI use. Key concerns included data privacy, regulatory compliance (e.g., LGPD), algorithmic bias, and accountability for AI-generated outputs. Participants reported uncertainty about data ownership and institutional responsibility in cases of misinformation. This governance gap reflects a broader lag between technological advancement and regulatory adaptation. From an institutional perspective, these deficiencies pose risks to organizational legitimacy (Suchman, 1995), as failures in ethical oversight may erode stakeholder trust. The establishment of formal governance mechanisms—such as AI ethics committees and clear institutional policies—emerged as a critical priority.

Finally, academic integrity and knowledge quality concerns represented the most critical epistemic challenge. Generative AI has disrupted traditional mechanisms of knowledge validation by enabling the production of original yet non-authentic academic work. Faculty reported increasing difficulty in detecting AI-assisted plagiarism, alongside concerns about student over-reliance on AI, potentially undermining learning outcomes and critical thinking. This is consistent with findings by Costa et al. (2025), which identify dependency and integrity risks as central issues. Beyond misconduct, participants highlighted the unreliability of AI-generated content, including inaccuracies and hallucinations. The absence of clear

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

norms regarding acceptable AI use further exacerbates inconsistency across courses and institutions. Nonetheless, some adaptive practices emerged, such as incorporating AI into pedagogical activities that foster critical evaluation. This reflects the need for organizational ambidexterity (Tushman & O'Reilly, 1996), balancing the preservation of academic rigor with the exploration of AI-enabled innovation.

Table 3: Synthesis Table – Knowledge Management Challenges in the AI Era

Dimension	Key Challenges	Empirical Evidence / Implications
Technological	Limited infrastructure, data fragmentation, integration complexity, algorithmic bias	System overload, data silos, localization issues
Human and Cultural	Resistance to change, low AI literacy, lack of incentives, workload pressure	Tool abandonment, distrust, uneven adoption
Ethical and Governance	Policy gaps, privacy concerns, lack of accountability, regulatory uncertainty	Risks to institutional legitimacy (Suchman, 1995)
Integrity and Quality	Plagiarism, AI dependency, erosion of critical thinking, unreliable outputs	Assessment challenges, need for pedagogical redesign

Sources in table: Authors (2026)

The findings demonstrate that AI integration into knowledge management in higher education is not merely a technological shift but a deeply socio-technical and institutional transformation. The four dimensions identified operate as an interconnected system of tensions, requiring coordinated strategic responses. Misalignment between infrastructure, human capabilities, governance mechanisms, and pedagogical practices constrains the transformative potential of AI. Therefore, the central challenge lies not in adopting AI per se, but in developing organizational ambidexterity—balancing innovation with the preservation of academic values. This equilibrium will determine whether AI functions as an enabler of knowledge processes or a source of epistemic disruption in higher education.

5. **DISCUSSION**

Our findings highlight the multifaceted challenges that higher education institutions face in managing knowledge amid the expansion of AI technologies. Interpreted through theoretical lenses, these challenges both corroborate existing literature and provide new empirical insights.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

From a neo-institutional perspective, AI adoption represents a complex set of institutional pressures—coercive, normative, and mimetic (DiMaggio & Powell, 1983). Universities experience pressure to innovate, remain competitive, and align with global technological trends. However, as Oliver (1991) suggests, organizational responses are not purely compliant; instead, they are mediated by internal constraints. Our findings show that technological, human, ethical, and integrity-related challenges act as moderating factors, creating misalignments between institutional expectations and operational capacity. In some cases, institutions symbolically adopt AI without full implementation, reflecting decoupling dynamics (Meyer & Rowan, 1977).

Organizational ambidexterity (Tushman & O'Reilly, 1996) also provides a valuable interpretive lens. Universities must simultaneously exploit established knowledge practices and explore AI-driven innovations. Our results indicate that achieving this balance is particularly challenging. Overemphasis on traditional practices risks stagnation, while premature adoption of AI without adequate preparation may compromise knowledge quality and institutional performance. Adaptive responses—such as combining AI tools with human oversight—illustrate emerging attempts to reconcile these tensions. Structural adaptations, including new governance roles and hybrid organizational arrangements, reflect broader transformation processes (Greenwood & Hinings, 1996; Raisch & Birkinshaw, 2008).

Ethical and legitimacy concerns further reinforce this complexity. The integration of AI challenges core academic norms, requiring institutions to engage in both maintenance and creation of institutional practices (Suchman, 1995; Lawrence & Suddaby, 2006). Efforts to develop AI policies or adapt academic integrity frameworks represent attempts to preserve legitimacy while accommodating innovation. At the same time, institutional entrepreneurs (Battilana, 2006) play a critical role in advancing AI initiatives and shaping new norms within universities.

When compared to prior studies, our findings show strong convergence. Technological challenges such as data fragmentation and infrastructure limitations align with Rezaei (2025) and Hagos et al. (2025), while also highlighting the

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

importance of contextual adaptation, particularly language and cultural specificity. Human and organizational barriers, including trust deficits and skill gaps, reinforce insights from Siau & Wang (2020) and Dwivedi et al. (2021), with our study adding empirical depth by illustrating how these issues affect knowledge management practices directly.

Ethical and governance concerns similarly reflect global discussions, such as UNESCO (2021), particularly regarding equity, privacy, and bias. Our contribution lies in exposing the internal processes of policy formation and institutional uncertainty, often absent in broader studies. Finally, issues of academic integrity and knowledge quality align with emerging research (e.g., Cotton et al., 2023), but our study advances the discussion by framing these concerns as core knowledge management challenges rather than solely pedagogical issues. Importantly, we demonstrate the interdependence of these dimensions: technological limitations exacerbate human resistance, while governance gaps intensify risks to knowledge quality and integrity, present in table

Table 4: Synthesis Table – Interpretation of Findings and Theoretical Alignment

Dimension	Key Findings	Theoretical Lens	Implications for KM
Technological	Infrastructure gaps, data fragmentation, localization issues	Institutional constraints (Oliver, 1991)	Limits AI scalability and integration
Human and Organizational	Resistance, lack of skills, trust deficit	Change management; trust in AI (Siau & Wang, 2020; Dwivedi et al., 2021)	Reduces adoption and knowledge sharing
Ethical and Governance	Policy gaps, privacy concerns, legitimacy risks	Legitimacy theory (Suchman, 1995); Institutional work (Lawrence & Suddaby, 2006)	Undermines trust and governance of knowledge
Integrity and Quality	Plagiarism, AI dependency, erosion of critical thinking	Ambidexterity (Tushman & O'Reilly, 1996)	Challenges validation and reliability of knowledge

Sources in table: Authors (2026)

Overall, the findings demonstrate that AI adoption in higher education is shaped by a dynamic interplay between institutional pressures and internal capabilities. Rather than a linear process of technological integration, AI-driven knowledge management emerges as a contested and negotiated transformation. The four dimensions identified operate as an interconnected system, where failures

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

or gaps in one area amplify challenges in others. This reinforces the need for a systemic and context-sensitive approach, in which universities develop organizational ambidexterity, align governance structures, and invest in human capabilities. Ultimately, the effectiveness of AI in knowledge management will depend less on the technology itself and more on the institution's ability to integrate it ethically, strategically, and coherently within its academic mission.

6.CONCLUSION

Artificial Intelligence is increasingly embedded in universities' knowledge functions, offering transformative potential while introducing complex challenges. This study examined how AI affects knowledge management (KM) in medium-sized Brazilian universities, revealing that its integration is not merely technological but deeply organizational, encompassing technical, human, ethical, and pedagogical dimensions. Four interrelated categories of challenges were identified: technological infrastructure limitations, human and cultural resistance, ethical and governance gaps, and concerns regarding academic integrity and knowledge quality.

These findings indicate that effective AI-enabled KM requires a holistic and systemic approach. Technologically, institutions must strengthen infrastructure and develop integrated data ecosystems to support AI applications. Equally important is investing in human capital through AI literacy and change management, addressing resistance and enabling informed use. Cultural alignment emerges as a critical factor, requiring leadership to actively engage stakeholders and position AI as a complement to, rather than a replacement for, human expertise. Furthermore, robust governance frameworks are essential, including policies on data privacy, transparency, and accountability, ensuring ethical and trustworthy AI use. Pedagogically, universities must adapt teaching and assessment practices to maintain critical thinking and learning integrity in an AI-rich environment.

The implications are both practical and strategic. Practically, the findings provide a roadmap for institutional action, including investments in infrastructure, training, governance, and pedagogical innovation. Strategically, they underscore that AI adoption must align with institutional missions and values, reinforcing global

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

calls for human-centered and inclusive AI in education. This study contributes theoretically by integrating knowledge management, institutional theory, and educational technology, demonstrating that AI challenges are interdependent and require coordinated responses across organizational dimensions.

Despite its contributions, the study is context-bound and based on qualitative data, capturing perceptions at a specific moment in a rapidly evolving technological landscape. Future research should expand through longitudinal and comparative designs, as well as quantitative approaches, to assess how institutions adapt over time and which strategies effectively mitigate risks. There is also a need to further explore student perspectives and to develop updated theoretical frameworks that incorporate AI into knowledge management models.

In conclusion, the integration of AI into knowledge management represents a critical frontier for higher education. Its success depends not only on technological adoption but on the institution's capacity to align systems, people, governance, and pedagogy. Universities that proactively address these dimensions will be better positioned to leverage AI as a strategic asset, ensuring that it enhances—rather than undermines—the creation, sharing, and validation of knowledge**.**

References

Battilana, J. (2006). Agency and institutions: The enabling role of individuals' social position. *Organization*, 13(5), 653–676. DOI: 10.1177/1350508406067008.

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

Costa, M. F. B., Tinoco, G. O., Corrêa, N. S. F., Botelho, P. C., & Fontainha, T. C. (2025). Challenges and opportunities of artificial intelligence in higher education: Perceptions of faculty in the university environment. *Avaliação (Campinas)*, 30(1), e025003. DOI: 10.1590/1982-57652025v30id2864353

Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How organizations manage what they know*. Harvard Business School Press.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63–71.

Dwivedi, Y. K., et al. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994.

Fosso Wamba, S., et al. (2022). *Title unknown (referenced in Rezaei, 2025)* – indicating multifaceted challenges (technological, organizational, etc.) in AI systems.

Fullwood, R., Rowley, J., & Delbridge, R. (2013). Knowledge sharing amongst academics in UK universities. *Journal of Knowledge Management*, 17(1), 123–136

Greenwood, R., & Hinings, C. R. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21(4), 1022–1054.

Hagos, H. G., Lesjak, D., Flogi, A., & Babu, R. (2025). Artificial Intelligence in Knowledge Management for Higher Education: Transformative impact, challenges, and future directions post-COVID-19. *Journal of Information Systems Engineering and Management*, 10(3s), Article 414.

Jarrahi, M. H., et al. (2023). *Title unknown (referenced in Rezaei, 2025)* – likely discussing AI reshaping KM paradigms.

Kidwell, J. J., Vander Linde, K. M., & Johnson, S. L. (2000). Applying corporate knowledge management practices in higher education. *EDUCAUSE Quarterly*, 23(4), 28–33

Lawrence, T. B., & Suddaby, R. (2006). Institutions and institutional work. In S. Clegg, C. Hardy, T. Lawrence, & W. Nord (Eds.), *The SAGE Handbook of Organization Studies* (2nd ed., pp. 215–254). Sage.
Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–37.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese companies create the dynamics of innovation*. Oxford University Press.
Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1), 145–179.

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods* (4th ed.). Sage.

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

Quarchioni, S., Paternostro, S., & Trovarelli, F. (2022). Knowledge management in higher education: A literature review and further research avenues. *Knowledge Management Research & Practice*, 20(2), 304–319.

Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, 34(3), 375–409.

Rezaei, M. (2025). Artificial intelligence in knowledge management: Identifying and addressing the key implementation challenges. *Technological Forecasting and Social Change*, 217, 124183.

Sanzogni, L., et al. (2017). *Title unknown (referenced in Rezaei, 2025)* – likely on tacit-explicit knowledge dichotomy in context of AI.

Seidl, D., & Hinings, C. R. (2017). *Title unknown (possibly about dynamic institutions or organizational change)*.

Siau, K., & Wang, W. (2020). Building trust in artificial intelligence, machine learning, and robotics. *CUTTER Business Technology Journal*, 33(2), 47–53.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610.

Tushman, M. L., & O'Reilly, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8–30.

UNESCO. (2023). *Artificial intelligence in education: Guidance for policy-makers*. United Nations Educational, Scientific and Cultural Organization. Available at UNESCO Digital Library.

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). Sage.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? *International Journal of Educational Technology in Higher Education*, 16(39), 1–27.

Acknowledgments:The authors would like to thank the Fundação de Amparo à Pesquisa e Inovação do Estado de Santa Catarina (FAPESC) for the financial support provided through Public Call FAPESC No. 51/2024 – ACAFE/FAPESC (Grant Agreement No. 2024TR001909). This support was essential for the development of this research and contributed to advancing knowledge in the field

REMUNOM
ISSN 2178-6925

Received: 13/01/2026 - **Accepted:** 27/03/2026
Vol: 13.04
DOI: 10.66104/ppt7ep52
Pages: 1-20

of knowledge management and artificial intelligence in higher education.