

Aidemics and the Future of Academic Work: Ethical Human–AI Collaboration in Higher Education

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ABSTRACT -This study adopts a quantitative research methodology to examine the integration of artificial intelligence (AI) in higher education and its influence on academic practices, professional identity, and human–AI collaboration among academics. A descriptive and analytical research design was employed to obtain measurable and generalizable insights into the emerging phenomenon of Aidemics within academic institutions. The study collected primary data through a structured questionnaire administered to academics from diverse disciplines and institution types. A total of 350 valid responses were obtained using purposive and convenience sampling techniques. The respondents included faculty members who actively utilize AI tools in teaching, research, curriculum development, academic writing, data analysis, administrative functions, and other professional activities.

The questionnaire was designed using established constructs from prior literature and measured variables related to AI integration, AI competency, ethical AI usage, perceived usefulness of AI, academic identity transformation, human–AI collaboration, and concerns regarding AI colonialism and loss of human agency. Responses were measured using a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree.” The quantitative approach enables statistical examination of relationships among variables and provides broader insights into how academics perceive and adapt to AI-enabled work environments. The study focuses on academics representing multiple disciplinary backgrounds and varying levels of AI usage intensity. This diversity strengthens the generalizability of the findings and allows for a comprehensive understanding of the Aidemics phenomenon across different higher-education contexts.

Keywords: Artificial intelligence, Aidemics, Higher education, AI Competency, Human–AI Collaboration.

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies is transforming the landscape of higher education across the globe. Universities and academic institutions are increasingly integrating AI-powered tools into teaching, research, curriculum development, assessment, administration, and knowledge dissemination. These developments have significantly altered the nature of academic work by improving efficiency, automating repetitive tasks, and enabling data-driven decision-making. However, the integration of AI into academia is not merely a technological shift; it also represents a profound transformation in how academics perceive their professional roles, intellectual autonomy, and ethical responsibilities. As AI becomes embedded in academic environments, there is a growing need to understand how academics adapt to this evolving human–machine relationship and how institutions can foster responsible and ethical AI usage.

In this emerging context, the concept of “Aidemics” has gained relevance in understanding academics who effectively and ethically collaborate with AI technologies to enhance their professional practices. Aidemics are characterized by their ability to balance technological efficiency with human judgment, creativity, ethical reasoning, and critical thinking. Rather than completely depending on AI systems, these academics engage in a human-in-the-loop approach where AI functions as a supportive partner rather than a replacement for human intelligence. While AI tools provide substantial benefits in academic productivity and performance enhancement, concerns regarding overdependence on technology, loss of human agency, algorithmic bias, hallucinations, and ethical misuse continue to challenge higher-education institutions. Consequently, understanding the determinants of responsible AI adoption among academics has become an important area of academic inquiry.

Despite the growing adoption of AI in educational settings, existing literature has largely focused on the technical capabilities of AI tools, student perspectives, or institutional implementation strategies, while limited attention has been

given to the experiences and behavioral transformation of academics themselves. Furthermore, issues such as academic identity transformation, ethical AI awareness, institutional support, and AI colonialism remain underexplored in the context of higher education. AI colonialism refers to the unequal concentration of technological power, data ownership, and algorithmic influence among dominant global actors, which may reinforce epistemic inequalities and marginalize local knowledge systems. These concerns highlight the necessity for a comprehensive framework that examines both the opportunities and risks associated with AI integration in academic work.

Against this background, the present study aims to examine the influence of AI integration, AI competency, perceived usefulness of AI, ethical AI awareness, and institutional AI support on human–AI collaboration and responsible AI adoption among academics in higher education institutions. The study further investigates the impact of human–AI collaboration on academic identity transformation and academic performance enhancement while considering the moderating role of AI colonialism concerns. Adopting a quantitative research approach, the study collected data from 350 academics representing diverse disciplines and institution types. By exploring the emerging phenomenon of Aidemics, the study contributes to the growing discourse on ethical human–AI collaboration and provides valuable insights for policymakers, educational institutions, and researchers seeking to promote responsible, explainable, and sustainable AI integration in higher education.

THEORETICAL BACKGROUND

The theoretical foundation of this study is primarily anchored in the Technology Acceptance Model (TAM) and Human–AI Collaboration theory. The Technology Acceptance Model proposed by Davis explains that individuals' acceptance and usage of technological systems are significantly influenced by perceived usefulness and perceived ease of use. In the context of higher education, academics are increasingly adopting AI tools because of their ability to enhance productivity, simplify complex tasks, improve research efficiency, and support teaching and administrative activities. Recent studies indicate that AI integration in higher education has accelerated rapidly due to the emergence of generative AI technologies such as ChatGPT, which have transformed academic writing, curriculum design, and knowledge management processes. (Bond et al., 2024b) At the same time, scholars argue that effective AI adoption in academia requires not only technical competency but also ethical awareness, institutional support, and responsible usage practices. The concept of Aidemics emerges within this framework to describe academics who critically and ethically collaborate with AI while maintaining human judgment and intellectual autonomy. The growing emphasis on explainable and trustworthy AI further supports the relevance of examining human-centered AI integration in educational environments (Atchley et al., 2024).

The study is further supported by Human–AI Collaboration theory, which emphasizes a symbiotic relationship between human intelligence and artificial intelligence rather than the replacement of human roles by automated systems. Human–AI collaboration highlights the importance of maintaining human agency, creativity, ethical reasoning, and critical thinking while leveraging AI capabilities for efficiency and innovation. Recent literature suggests that collaborative human–AI systems can significantly improve academic productivity and performance when humans actively supervise, evaluate, and refine AI-generated outputs. (Nguyen et al., 2024) However, researchers have also identified several concerns associated with AI adoption in higher education, including hallucinations, algorithmic bias, overdependence on AI, erosion of critical thinking, and unequal access to technological resources. These concerns align with the emerging discourse on AI colonialism, which argues that the dominance of technologically advanced nations and corporations may reinforce epistemic inequalities and marginalize local knowledge systems within global academia. Consequently, the present study adopts a human-centered and ethical perspective to examine how AI integration, AI competency, ethical AI awareness, and institutional support influence responsible AI adoption and academic identity transformation among academics in higher education institutions (Atchley et al., 2024b).

PURPOSE OF STUDY

The rapid integration of artificial intelligence (AI) into higher education has fundamentally transformed academic work, creating new opportunities for innovation, efficiency, and knowledge creation. Academics are increasingly utilizing AI tools for teaching, research, curriculum development, academic writing, assessment, and administrative responsibilities. While AI technologies enhance productivity and decision-making capabilities, they also raise important concerns regarding ethical usage, academic integrity, professional identity, and human agency. In this evolving academic landscape, the emergence of “Aidemics” reflects a new category of academics who effectively and ethically collaborate with AI systems while maintaining critical thinking, creativity, and professional judgment. Despite the growing

relevance of AI-enabled academic environments, there remains limited empirical understanding of the factors that influence responsible AI adoption and human–AI collaboration among academics. Furthermore, issues such as AI colonialism, ethical awareness, and institutional support remain insufficiently explored within higher-education research.

Against this background, the present study aims to examine the influence of AI integration, AI competency, perceived usefulness of AI, ethical AI awareness, and institutional AI support on human–AI collaboration and responsible AI adoption among academics in higher education institutions. The study also seeks to investigate how human–AI collaboration contributes to academic identity transformation and academic performance enhancement while assessing the moderating influence of AI colonialism concerns. By adopting a quantitative approach involving 350 academic respondents from diverse disciplines and institution types, the study intends to provide empirical insights into the emerging phenomenon of Aidemics and contribute to the growing discourse on ethical and sustainable AI integration in higher education. The study is guided by the following research questions:

RQ1: How does AI integration in academic work influence human–AI collaboration among academics in higher education?

RQ2: How does AI competency influence responsible AI adoption (Aidemics behaviour) among academics?

RQ3: How does human–AI collaboration influence academic performance enhancement among academics?

RQ4: How does ethical AI awareness influence responsible AI adoption among academics? RQ5: Does AI colonialism concern moderate the relationship between human–AI collaboration and academic identity transformation?

RESEARCH METHODOLOGY

This study adopts a quantitative research methodology using a descriptive and analytical research design to examine the influence of artificial intelligence (AI) integration on academic work and human–AI collaboration in higher education institutions. Primary data were collected through a structured questionnaire administered to academicians from higher education institutions across Kerala representing diverse disciplines and institution types who actively utilize AI tools in teaching, research, curriculum development, academic writing, data analysis, and administrative activities. A total of 350 valid responses were obtained using purposive and convenience sampling techniques. The questionnaire measured constructs such as AI integration in academic work, AI competency, perceived usefulness of AI, ethical AI awareness, institutional AI support, human–AI collaboration, academic identity transformation, academic performance enhancement, responsible AI adoption, and AI colonialism concerns. Responses were recorded using a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree.” The collected data were analyzed using statistical techniques including descriptive statistics, correlation analysis, regression analysis, and Structural Equation Modeling (SEM) to examine the relationships among the study variables and test the proposed hypotheses.

H1: AI Integration positively influences Human–AI Collaboration.

The increasing integration of artificial intelligence into higher education has transformed the manner in which academics engage in teaching, research, curriculum development, assessment, and administrative activities. AI-powered technologies such as generative AI systems, intelligent tutoring systems, predictive analytics, and automated content-generation tools enable academics to interact collaboratively with technological systems to improve efficiency and productivity (Belda-Medina & Kokošková, 2023). According to Human–AI Collaboration theory, AI technologies enhance human performance when they are integrated as supportive systems rather than autonomous replacements (Wilke et al., 2024). Recent studies suggest that AI integration improves collaborative interaction, adaptive learning processes, and decision-making effectiveness within educational environments. Research further indicates that AI-supported systems encourage greater human engagement, facilitate task-sharing between humans and machines, and strengthen collaborative academic workflows. Moreover, AI-enabled academic systems enhance communication, information processing, and research productivity among educators. These findings collectively support the argument that increased AI integration positively contributes to human–AI collaboration in higher education institutions.

H2: AI Competency positively influences Responsible AI Adoption (Aidemics Behaviour).

AI competency refers to the knowledge, skills, critical understanding, and ethical capability required to effectively utilize AI technologies within professional and academic contexts (Rahiem, 2026). Academics possessing higher AI

competency are more capable of evaluating AI outputs, identifying biases and hallucinations, and integrating AI responsibly into teaching and research practices. Existing literature highlights that AI literacy and digital competency significantly influence trust, confidence, and responsible AI usage behaviour among users. Recent studies have demonstrated that individuals with stronger AI competencies are more likely to apply AI systems ethically and critically while maintaining human oversight in AI-assisted tasks (Salisu et al., 2026). Research also emphasizes that AI competency contributes to responsible decision-making, sustainable technology adoption, and ethical awareness in higher education settings. Furthermore, competency-based AI training has been recognized as an essential factor for developing responsible AI users capable of balancing technological efficiency with ethical accountability (Pangestu et al., 2026). Therefore, AI competency significantly influences responsible AI adoption and supports the emergence of Aidemics behaviour among academics.

H3: Human–AI Collaboration positively influences Academic Performance Enhancement. Human–AI collaboration theory argues that collaborative interaction between humans and AI systems can significantly enhance performance outcomes by combining computational efficiency with human creativity, judgment, and contextual understanding (Zheng et al., 2023). In academic environments, AI-assisted collaboration supports research productivity, teaching effectiveness, curriculum innovation, content generation, and decision-making efficiency. Recent studies indicate that human–AI collaborative systems improve educational outcomes, academic productivity, and task performance when humans actively supervise and refine AI-generated outputs. Research also demonstrates that AI-supported collaboration reduces workload burden and allows academics to allocate more time toward creative and intellectual activities (Nguyen et al., 2024b). Additionally, studies on AI-enhanced educational systems reveal that collaborative AI usage contributes positively to problem-solving capabilities, knowledge generation, and academic efficiency. These findings collectively support the proposition that human–AI collaboration positively influences academic performance enhancement among academicians (Vendrell & Johnston, 2026).

H4: Ethical AI Awareness positively influences Responsible AI Adoption.

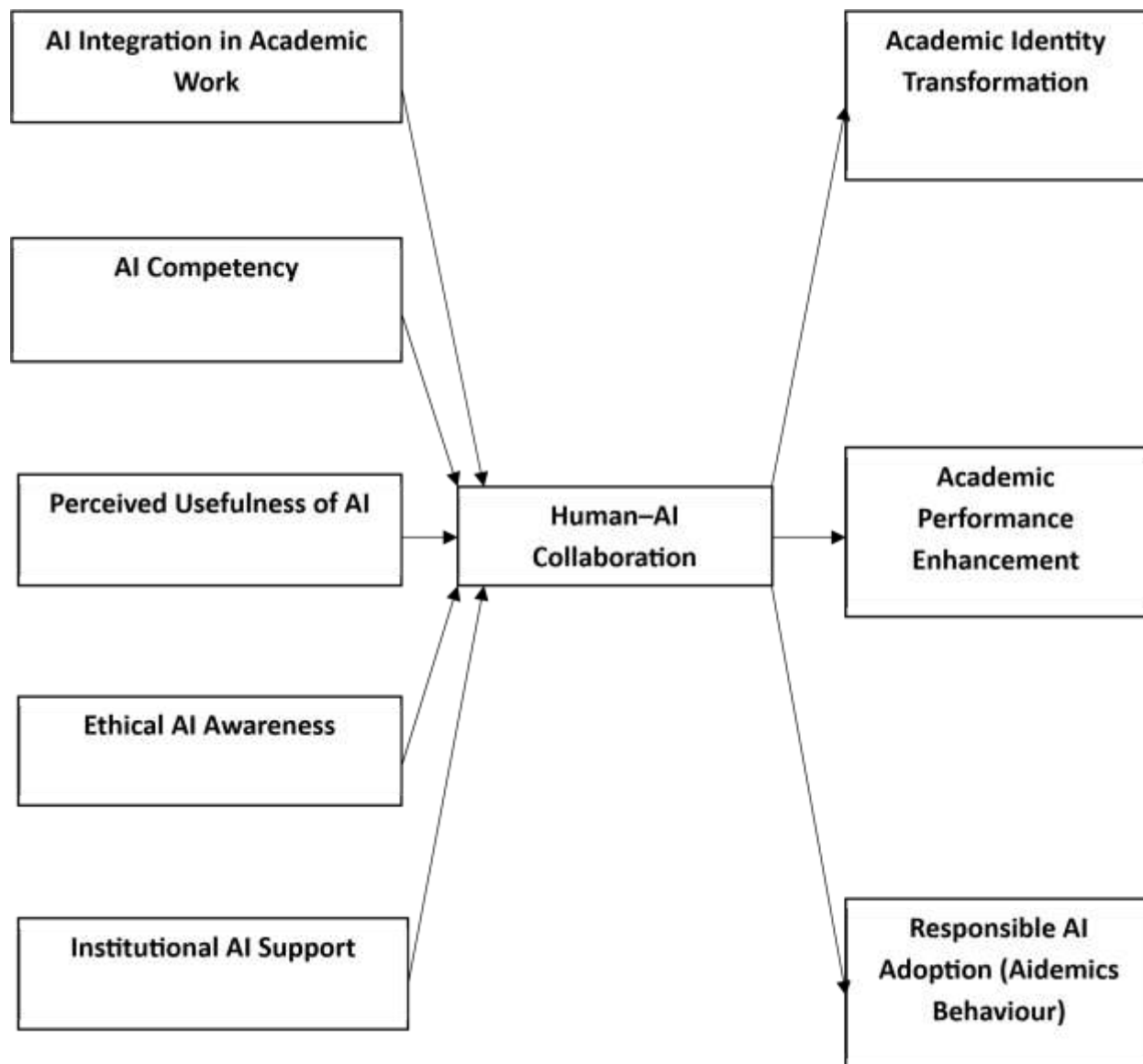
Ethical AI awareness refers to the understanding of ethical principles and concerns associated with AI technologies, including transparency, accountability, fairness, academic integrity, data privacy, and bias prevention. In higher education, ethical awareness has become increasingly important due to the rapid expansion of generative AI tools in academic activities (Ma et al., 2025). Existing literature suggests that ethical consciousness significantly shapes individuals' willingness to adopt AI responsibly and critically. Recent studies emphasize that responsible AI adoption requires users to possess strong awareness regarding plagiarism risks, misinformation, algorithmic bias, and ethical misuse of AI-generated content. Research further indicates that academics with higher ethical awareness are more likely to apply AI technologies cautiously, maintain academic integrity, and ensure transparency in AI-assisted academic work. Moreover, institutional ethical frameworks and responsible AI governance mechanisms positively reinforce ethical AI usage behaviour among educators. Consequently, ethical AI awareness significantly contributes to responsible AI adoption in higher education institutions.

H5: AI Colonialism Concerns negatively moderate the relationship between Human–AI Collaboration and Academic Identity Transformation.

AI colonialism refers to the unequal concentration of technological power, data ownership, algorithmic governance, and AI infrastructure among dominant nations and multinational corporations, potentially reinforcing global knowledge inequalities and marginalizing local epistemologies (Alfredo et al., 2023b). Although human–AI collaboration can positively transform academic identities by enhancing innovation, efficiency, and digital engagement, concerns regarding AI colonialism may weaken this transformation by creating fears of dependency, loss of intellectual autonomy, and erosion of local academic values. Recent literature on AI ethics and digital colonialism argues that unequal access to AI technologies can intensify existing socioeconomic and epistemic disparities within global higher education systems. Studies further indicate that concerns regarding surveillance, algorithmic control, and technological dependency negatively affect trust and acceptance of AI systems among professionals. Additionally, humancentered AI research emphasizes that maintaining inclusivity, transparency, and human agency is essential for sustaining positive

AI-driven professional transformation. Therefore, AI colonialism concerns may negatively moderate the relationship between human–AI collaboration and academic identity transformation among academics.

CONCEPTUAL MODEL



FINDINGS AND DISCUSSIONS

RQ1: How does AI integration in academic work influence human–AI collaboration among academics in higher education?

The findings revealed a significant positive relationship between AI integration in academic work and human–AI collaboration among academicians in Kerala higher education institutions. The majority of respondents indicated that AI tools improved efficiency in teaching preparation, research activities, academic writing, data analysis, and administrative functions. Academics who frequently integrated AI technologies into their professional activities demonstrated higher levels of collaborative engagement with AI systems. Statistical analysis showed a positive and significant influence of AI integration on human–AI collaboration, thereby supporting Hypothesis H1. The results suggest that increased exposure to AI technologies encourages academics to adopt a collaborative rather than resistant approach toward AI-enabled work environments. The findings align with the Technology Acceptance Model, which emphasizes that perceived usefulness significantly influences technology adoption behavior. Participants viewed AI as

a supportive tool capable of enhancing productivity while reducing repetitive workload. However, respondents also emphasized the importance of maintaining human oversight and critical judgment when using AI-generated outputs. This indicates that academics increasingly prefer a human-in-the-loop approach where AI functions as an assistive partner rather than a replacement for human expertise.

RQ2: How does AI competency influence responsible AI adoption (Academics behaviour) among academics?

The analysis revealed that AI competency has a strong positive effect on responsible AI adoption among academics. Respondents possessing higher levels of AI-related knowledge, technical skills, and familiarity with AI applications demonstrated more ethical, critical, and balanced AI usage behavior. The regression results confirmed that AI competency significantly predicts Academics behaviour, thus supporting Hypothesis H2. The findings indicate that AI competency is a critical determinant of responsible AI adoption in higher education institutions. Academics with stronger AI literacy were more capable of verifying AI-generated information, identifying inaccuracies, and applying AI ethically within academic settings. The results reinforce the argument that responsible AI usage depends not only on technological availability but also on users' competency and critical understanding. The emergence of Academics reflects a shift from passive technology consumption toward informed and ethically guided human-AI collaboration. These findings highlight the importance of AI training, digital literacy development, and continuous professional upskilling among academicians.

RQ3: How does human-AI collaboration influence academic performance enhancement among academics?

The findings demonstrated that human-AI collaboration significantly contributes to academic performance enhancement. Respondents reported that collaboration with AI tools improved research productivity, teaching effectiveness, time management, content development, and decision-making efficiency. The statistical results indicated a significant positive relationship between human-AI collaboration and academic performance enhancement, thereby supporting Hypothesis H3. The results suggest that collaborative engagement with AI technologies can enhance overall academic effectiveness when appropriately managed. AI systems were perceived as valuable tools for generating ideas, simplifying analytical processes, automating repetitive tasks, and supporting academic innovation. However, respondents emphasized that AI-generated outputs still require human supervision, contextual interpretation, and intellectual refinement. This finding supports Human-AI Collaboration theory, which argues that optimal outcomes emerge when human intelligence and machine intelligence complement each other. The findings further indicate that AI should be viewed as an augmentation tool that enhances academic capabilities rather than replacing academic professionals.

RQ4: To what extent does ethical AI awareness influence responsible AI adoption among academics?

The study found that ethical AI awareness positively and significantly influences responsible AI adoption among academics. Respondents who demonstrated greater awareness regarding AI ethics, academic integrity, data privacy, transparency, and algorithmic bias were more likely to engage in ethical and responsible AI practices. The findings confirmed Hypothesis H4. The findings emphasize the growing importance of ethical awareness in AI-enabled academic environments. Academics increasingly recognize the risks associated with plagiarism, misinformation, hallucinations, and biased AI outputs. Consequently, ethical considerations have become central to responsible AI usage in higher education. The study indicates that academics who possess strong ethical awareness are more cautious, reflective, and accountable when integrating AI into teaching and research activities. These findings reinforce the need for institutional ethical guidelines, AI governance frameworks, and responsible AI policies within higher education institutions to ensure sustainable and trustworthy AI adoption.

RQ5: Does AI colonialism concern moderate the relationship between human-AI collaboration and academic identity transformation?

The findings revealed that AI colonialism concerns negatively moderate the relationship between human-AI collaboration and academic identity transformation. While human-AI collaboration generally contributed positively toward transforming academic roles and practices, concerns regarding technological dominance, unequal access to AI resources, data dependency, and epistemic inequalities weakened this relationship. Therefore, Hypothesis H5 was

supported. The findings highlight emerging anxieties surrounding the broader socio-political implications of AI integration in higher education. Respondents expressed concerns that AI technologies are predominantly controlled by technologically advanced nations and corporations, potentially reinforcing global academic inequalities and marginalizing local knowledge systems. Such concerns create uncertainty regarding the long-term impact of AI on academic autonomy, intellectual independence, and professional identity. Although academics acknowledge the transformative benefits of AI collaboration, fears relating to dependency and loss of human agency remain significant challenges. The findings suggest that institutions must adopt context-sensitive, inclusive, and ethically grounded AI policies that protect academic diversity and promote equitable access to AI technologies.

CONCLUSION

The present study examined the emerging phenomenon of Aidemics and explored how artificial intelligence is transforming academic work, professional identity, and human–AI collaboration in higher education institutions. The findings reveal that AI integration, AI competency, ethical AI awareness, and human–AI collaboration significantly contribute to responsible AI adoption and academic performance enhancement among academicians in Kerala. The study further demonstrates that academics increasingly perceive AI as a collaborative partner capable of improving efficiency, productivity, and innovation in teaching, research, curriculum development, and administrative functions. However, the findings also emphasize that effective AI adoption requires strong human oversight, ethical judgment, and critical thinking to ensure responsible and sustainable usage within academic environments. The emergence of Aidemics reflects a shift toward balanced human–AI collaboration where technological capabilities complement rather than replace human intellectual contribution.

At the same time, the study highlights important concerns relating to AI colonialism, technological dependency, and the potential erosion of academic autonomy and human agency. Although AI-driven transformation offers substantial opportunities for higher education institutions, unequal access to AI technologies and the dominance of global technological actors may create new forms of epistemic inequality and professional uncertainty. Therefore, the study concludes that higher education institutions must adopt inclusive, ethical, and context-sensitive AI policies that promote digital literacy, responsible AI practices, and equitable technological access among academics. Institutional support through AI training, ethical governance frameworks, and professional development initiatives will be essential in fostering sustainable human–AI collaboration in academia. The study contributes to the growing discourse on AI in higher education by introducing empirical insights into the concept of Aidemics and offering a foundation for future research on ethical and human-centered AI integration in academic work.

LIMITATIONS AND FUTURE RESEARCH

The present study provides important insights into the emerging phenomenon of Aidemics and ethical human–AI collaboration in higher education; however, certain limitations should be acknowledged. First, the study was geographically limited to academicians from higher education institutions in Kerala, which may restrict the generalizability of the findings to other regions, countries, or educational contexts with different technological infrastructures and institutional cultures. Second, the study adopted a cross-sectional research design, capturing respondents' perceptions at a single point in time. Since AI technologies and academic practices are evolving rapidly, perceptions and usage patterns may change over time. Third, the study relied on self-reported responses collected through structured questionnaires, which may be influenced by respondent bias, social desirability bias, or subjective interpretation of AI-related experiences. Additionally, although the study examined major variables such as AI integration, AI competency, ethical AI awareness, and human–AI collaboration, other potentially influential factors including technostress, organizational culture, digital readiness, trust in AI, and disciplinary differences were not extensively explored.

Future research can address these limitations by conducting longitudinal studies to examine how academics' perceptions, competencies, and AI adoption behaviors evolve over time with continuous technological advancement. Comparative studies across different states, countries, and educational systems would provide broader insights into the global applicability of the Aidemics concept and the cultural dimensions of AI adoption in academia. Future researchers may also employ mixed-method or qualitative approaches to gain deeper understanding of the lived experiences, ethical dilemmas, and psychological impacts associated with human–AI collaboration in academic environments. Moreover, future studies can expand the conceptual framework by incorporating additional variables such as digital trust, AI anxiety, institutional innovation climate, technostress, and organizational readiness. Further investigation into AI

colonialism, epistemic inequality, and policy-level implications of AI integration in higher education would also contribute significantly to the emerging body of knowledge on ethical and sustainable AI-enabled academic transformation.

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