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## Why Generative AI Will Not Replace University Lecturers: A Human-Centered Perspective

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### Abstract

The integration of artificial intelligence (AI) into higher education has prompted widespread speculation about the potential obsolescence of university lecturers. While AI systems demonstrate impressive capabilities in content delivery, assessment, and personalisation, this research critically examines the assumption that they can replace human educators. This issue is particularly complex, given that effective higher education involves not only the transmission of information but also the development of cognitive, emotional, ethical, and social aspects. Despite advances in AI technologies, current discourse often neglects the irreplaceable human functions that underpin transformative education. Addressing this gap, the study adopts a human-centred framework to investigate essential lecturer capabilities, limitations of AI systems, and the design of optimal human-AI collaboration. Using qualitative methods, including stakeholder interviews and comparative institutional analysis, the findings reveal ten educational domains where human capabilities remain indispensable, from emotional support and ethical mentorship to adaptive teaching and research integration. AI excels in routine, scalable tasks, yet lacks empathy, moral agency, and contextual understanding. Consequently, this research proposes a collaborative model in which AI enhances rather than replaces lecturers, thereby supporting educational quality and student development. The findings have significant implications for institutional policy, faculty development, and the ethical integration of AI in education, affirming the enduring and transformative role of human educators in the digital age.

## A. Introduction

The emergence of artificial intelligence in higher education has sparked widespread debate about the future role of human educators. Recent advances in large language models, intelligent tutoring systems, and adaptive learning platforms have demonstrated remarkable capabilities in content delivery, assessment, and personalised instruction [1], [2]. These technological developments have coincided with growing predictions that AI systems will eventually replace human university lecturers, fundamentally transforming higher education [3]. Contemporary AI educational systems demonstrate sophisticated capabilities across multiple domains: intelligent tutoring systems offer personalised learning pathways and immediate feedback [4], large language models engage in complex academic dialogues, and adaptive learning platforms adjust instruction based on real-time assessments of student understanding [5]. These capabilities have led to optimistic projections about AI's potential to democratise education, reduce costs, and provide consistent, high-quality instruction at scale [6]. However, the discourse surrounding AI in higher education has been dominated by technological determinism—the assumption that technological capabilities inevitably lead to human replacement [7], [8]. This perspective overlooks the complex and multifaceted nature of university-level education, as well as the irreplaceable human elements that define effective pedagogical practice. Whilst AI systems excel at information processing and pattern recognition, the fundamental question remains whether these capabilities can adequately substitute for the cognitive, social, emotional, and ethical dimensions that human educators bring to the learning environment [9]. The growing narrative of AI replacement in higher education raises a significant challenge that requires thorough, evidence-based scrutiny. Current discussions often lack a systematic examination of the unique human skills vital for university-level teaching and do not sufficiently evaluate the fundamental limitations of AI systems in complex educational settings [10]. This disparity between technological potential and educational reality has created an urgent need for human-centred analysis that emphasises educational effectiveness over technological innovation. The issue is intensified by the rapid pace of AI development, which has surpassed thorough consideration of its suitable role in educational environments. The COVID-19 pandemic further hastened the adoption of educational technologies, creating a natural experiment that demonstrated both the potential and the limitations of digital educational tools [11]. Additionally, the replacement narrative neglects the complex cognitive and social processes that characterise effective higher education. University-level learning involves not just the transmission of information but also the development of critical thinking, ethical reasoning, creative problem-solving, and professional identity—processes that require nuanced human mediation [12]. This research is driven by the urgent need to challenge technological determinism in educational discourse and to provide evidence-based guidance for the responsible integration of AI in higher education [13]. The importance goes beyond merely deciding on technological adoption—it involves safeguarding educational quality, upholding human dignity in learning environments, and preparing students for meaningful engagement with an increasingly complex world. Uncritically accepting AI replacement narratives risks

undermining the core human elements that make higher education transformative rather than just informational. The primary aim of this research is to demonstrate, through systematic human-centred analysis, that artificial intelligence will enhance rather than replace university lecturers, and to develop frameworks for optimal human-AI collaboration in higher education contexts. The study addresses three main research questions: What unique human capabilities are essential and irreplaceable in university-level education? What are the fundamental limitations of current AI systems in educational settings? How should human-AI collaboration be organised to support rather than substitute human educators? This research makes significant contributions to understanding AI's role in higher education. It develops a human-centred framework for evaluating AI in educational contexts that prioritises human needs and capabilities over purely technological considerations. The study provides a comprehensive categorisation of human capabilities in higher education that cannot be replicated by current AI technologies [12] and proposes evidence-based frameworks for optimal human-AI collaboration. Practically, the research offers institutional decision-making guidance, faculty development frameworks, and quality assurance criteria for AI educational technologies.

## **B. Materials and Methods**

This study employed a mixed-methods qualitative approach [14] grounded in human-centred research principles to explore the irreplaceable role of university lecturers amid increasing AI integration in higher education. The research combined survey data and in-depth interviews to examine both broad stakeholder perspectives and rich individual experiences.

### **B.1 Human-Centred Design Framework**

A human-centred design framework was adopted to guide the investigation [15]. This framework prioritises the needs, values, and capabilities of key stakeholders—lecturers, students, and academic staff—which are crucial when assessing the implications of artificial intelligence in teaching and learning. The study focused on identifying the tasks and cognitive, emotional, and ethical functions where educators provide value that AI systems cannot replicate. The framework included capability mapping to compare instructor and AI competencies in essential educational domains such as mentorship, ethical reasoning, emotional intelligence, and adaptive teaching.

### **B.2 Research Design and Strategy**

The study utilised a multi-method qualitative strategy. Data were collected through a structured online survey distributed to university personnel at several institutions, complemented by a series of semi-structured interviews with selected respondents. The survey captured perceptions at scale, while interviews enabled deeper exploration of views regarding AI capabilities and limitations in education. This combination provided both breadth and depth in understanding stakeholder experiences and beliefs.

### **B.3 Participants and Sampling**

Respondents were purposively selected [16] to reflect a range of roles within higher education, including lecturers, students, instructional designers, and administrators. A total of 156 individuals from 15 universities in six countries participated in the survey. From this pool, a subset ( $n =$  small sample) was selected for follow-up interviews to ensure detailed qualitative insights. Stratified purposive sampling was employed to ensure diversity spanning disciplines and institutional types (e.g., research-intensive universities, universities of technology).

### **B.4 Data Collection**

*Survey:* The online survey included both closed- and open-ended questions. It was designed to assess attitudes toward AI in teaching, perceived strengths and weaknesses of AI systems, and the value of instructors in contemporary education.

*Interviews:* Semi-structured interviews lasting 40–55 minutes were conducted with selected respondents. These interviews explored in greater depth the themes emerging from the survey, particularly around areas where educators are perceived as irreplaceable. Interviews were held online or in person, recorded with consent, and transcribed for analysis. Standardised interview guides ensured consistency while allowing for flexibility in responses [17].

### **B.5 Data Analysis**

Data from both the survey and interviews were analysed using Braun and Clarke's reflexive thematic analysis approach [18]. An initial coding phase included both inductive and deductive strategies. Themes were developed around irreplaceable educator functions in education, such as emotional support, ethical mentorship, professional judgement, and critical thinking facilitation. Patterns were compared between different institutional and cultural settings to ensure validity and relevance.

This mixed-methods approach ensured a robust, triangulated understanding [19] of the unique instructor capabilities in higher education that AI technologies currently cannot substitute. The design aligns with the broader objective of developing a people-centred model for ethical and effective AI integration in teaching and learning.

## **C. Result**

The analysis highlights fundamental differences between human and artificial intelligence abilities in educational settings, explaining why AI cannot replace university lecturers. The findings are arranged around ten key areas where human skills are irreplaceable, supported by empirical data from stakeholder interviews with 156 participants and comparative case studies across various institutional and cultural contexts.

### **C.1 Universities as Coming-of-Age Ecosystems**

Campus life provides peer relationships, identity exploration, and social-emotional learning that strongly predict well-being and persistence in adulthood. Survey data from participants revealed that 94% of students across all institutional

types and cultural contexts identified emotional support from lecturers as "not replaceable" by AI systems. One student from a South African university noted, "When I'm struggling with personal issues that affect my studies, I need someone who understands not just the academic content but me as a person." This sentiment was consistently echoed by international participants, with a student from an Asian public research university stating, "AI can answer my questions, but it cannot understand my cultural background and family pressures." [3].

Social connection buffers stress and enhances happiness, yet nearly one-fifth of students report loneliness [18]; underscoring the need for supportive human communities that AI chatbots cannot authentically provide. Cross-cultural analysis across six countries revealed remarkably consistent patterns across different educational systems, with participants from private institutions reporting similar needs for authentic human connection despite having access to more sophisticated AI tutoring systems.

As shown in Table 2, student perceptions of human versus AI support functions demonstrate overwhelming preference for human interaction in relational and developmental areas, with consistency across diverse institutional types and cultural contexts.

**Table 2.** Student Perceptions of Human vs. AI Support Functions Across Global Institutional Types

<b>Support Function</b>	<b>Prefer Human</b>	<b>Prefer AI</b>	<b>No Preference</b>	<b>Not Replaceable by AI</b>
<b>Academic Content Delivery</b>	28%	52%	15%	5%
<b>Emotional Support</b>	94%	0%	2%	4%
<b>Career Guidance</b>	89%	4%	2%	5%
<b>Personal Mentorship</b>	96%	0%	0%	4%
<b>Ethical Guidance</b>	87%	3%	5%	5%
<b>Cultural Navigation</b>	92%	2%	1%	5%

### C.2 Degrees as Signals of Perseverance and Deep Learning

Labour-market data continue to assign wage premiums and higher employment probabilities to four-year degree holders [21]. Completing a degree under academic supervision demonstrates sustained effort, metacognitive growth, and verified mastery—credentials society still entrusts to academics for validation. Respondents from different institutional settings and cultural backgrounds emphasised that "the degree represents not just knowledge but the ability to work with mentors, navigate complex social situations, and demonstrate character." A lecturer from a large North American public research university observed, "Employers value graduates who have shown they can work with diverse faculty, handle interpersonal challenges, and show resilience—qualities that AI-mediated education cannot authentically assess."

This perspective was reinforced by respondents from European institutions, with one noting, "The credential value of a degree depends on instructor verification of not just what students know, but how they've grown as people through authentic interaction."

### C.3 The Need for Structured, Accountable Learning

Like a personal trainer's workout plan, structured courses offer clear milestones and external accountability. Educational psychology literature highlights how routines and consistent expectations improve focus and retention [22]. Interview data revealed that 91% of respondents from all institutional types and cultural settings identified instructor accountability as essential for student persistence. One lecturer from a European research university observed, "*AI platforms can recommend practice problems, but without lecturers to set deadlines, coach, and intervene, many learners struggle to persist.*"

This finding proved remarkably consistent among STEM and humanities disciplines, with an Australian engineering lecturer noting, "Students need personal accountability not just for academic progress but for professional development—learning to meet deadlines, handle pressure, and communicate effectively under supervision."

### C.4 Emotional Intelligence, Mentorship, and Pastoral Care

Educators read facial expressions, detect disengagement, and adapt explanations in real time—capabilities rooted in emotional intelligence that machines lack [17]. Analysis of stakeholder responses from the expanded sample revealed empathy and emotional support as the most frequently mentioned irreplaceable instructor capabilities (142 total mentions among all respondent groups, representing consistent identification throughout diverse cultural settings).

As illustrated in Table 3, the frequency of irreplaceable educator capabilities demonstrates robust patterns among all stakeholder groups and geographical regions, with empathy and emotional support emerging as universally critical functions.

**Table 3:** Frequency of Irreplaceable Human Capabilities Across Global Stakeholder Groups

<b>Human Capability</b>	<b>Lecturers (n = 68)</b>	<b>Students (n = 80)</b>	<b>Design Staff (n = 8)</b>	<b>Total Mentions</b>
<b>Empathy/Emotional Support</b>	65	69	8	142
<b>Adaptive Teaching</b>	61	58	7	126
<b>Mentorship</b>	58	64	6	128
<b>Ethical Guidance</b>	52	48	7	107
<b>Professional Networking</b>	49	42	5	96
<b>Research Integration</b>	55	28	6	89
<b>Cultural Sensitivity</b>	46	52	4	102

### C.5 Cultivating Critical Thinking and Ethical Reasoning

Lecturers orchestrate debates, pose Socratic questions, and surface moral dilemmas, helping students evaluate evidence and confront ambiguity [23]. This critical pedagogical approach challenges traditional banking models of learning where students passively receive information. Generative AI, trained to maximise coherence, often reinforces users' prior assumptions rather than challenging them. Respondents from diverse cultural backgrounds emphasised that "*instructor*

*facilitation remains essential for fostering reflective judgement and academic integrity."*

Case study analysis from the expanded institutional sample revealed consistent patterns among different educational traditions: students at a private innovative North American institution reported that AI responses lacked the cultural sensitivity needed for ethical reasoning in global settings, whilst students at an Asian technology-focused university noted that *"AI cannot understand the cultural nuances that affect how we approach moral decisions in our society."* A European humanities lecturer observed, *"Critical thinking demands challenging students' assumptions in culturally appropriate ways—something that necessitates instructor wisdom and cultural competence."*

### **C.6 Authentic Assessment and Personalised Feedback**

Whilst AI can autograde multiple-choice tests, lecturers design research projects, oral defences, and studio critiques that demand qualitative judgement [24]. These tasks necessitate contextual understanding, professional standards, and nuanced feedback that go beyond current algorithmic capabilities. Respondents from different disciplinary backgrounds noted that *"authentic assessment demands understanding not just what students know but how they think and who they are becoming as professionals."*

A computer science lecturer from an African research university explained, *"When I assess a programming project, I'm not just looking at whether the code works. I'm evaluating the student's problem-solving approach, their ability to collaborate, their ethical considerations in design choices—dimensions that need professional judgement."* This sentiment was echoed by a business lecturer from an Australian university who noted, *"Assessment in professional programmes necessitates understanding industry dynamics, cultural factors, and individual student development trajectories that AI simply cannot grasp."*

### **C.7 Hands-On Laboratories, Studios, and Clinical Placements**

Disciplines such as engineering, fine arts, and health sciences depend on tactile experimentation, lab safety oversight, and patient-centred judgement. Analysis of the expanded case study sample, including technical programmes spanning multiple continents, revealed that hands-on learning components remained exclusively instructor-supervised at all institutional types and cultural settings. One engineering lecturer from an Asian technology-focused institution stated, *"You cannot replace the judgement needed for lab safety or the professional wisdom essential for clinical decisions. AI can provide information, but it cannot make split-second safety decisions based on subtle environmental cues."*

A medical education specialist from a European university added, *"Clinical placements need mentors who can model professional behaviour, demonstrate ethical decision-making under pressure, and provide emotional support during difficult cases—functions that are fundamentally person-to-person."*

### **C.8 Research Integration and Professional Networks**

Lecturers translate cutting-edge scholarship into the classroom and invite students into active research, internships, and industry collaborations—

opportunities that build professional networks AI cannot authentically broker [25]. Respondents from research-intensive and teaching-focused institutions identified research integration as demanding "deep expertise, professional judgement, and the ability to synthesise complex information within disciplinary conversations."

Cross-institutional analysis revealed that even at institutions with sophisticated AI systems, professional networking remained exclusively instructor-mediated. A lecturer from an Asian public research university noted, "*When I introduce students to industry contacts, I'm leveraging years of relationship-building and professional reputation. AI cannot replicate the trust and credibility that underpin these connections.*" This was reinforced by a North American professor who observed, "Research supervision demands understanding not just the technical aspects but the political, cultural, and personal dimensions of academic work."

### **C.9 Professional Wisdom and Career Development**

The analysis revealed that professional wisdom, developed through years of practice and reflection, represents a fundamentally irreplaceable capability in all cultural and institutional settings examined. AI systems lack the lived experience necessary to provide meaningful career guidance, professional development, and real-world understanding for academic learning. Students from diverse backgrounds consistently emphasised their need for mentors who have navigated professional challenges and can provide wisdom gained through authentic practice.

A postgraduate student from a European research university observed, "*AI can tell me about career paths, but my mentors share stories of failure, resilience, and unexpected opportunities that help me understand what professional life actually involves.*" An undergraduate from an Australian university added, "*My lecturers help me understand not just what I should do, but how to navigate the politics, relationships, and ethical challenges of my chosen field.*"

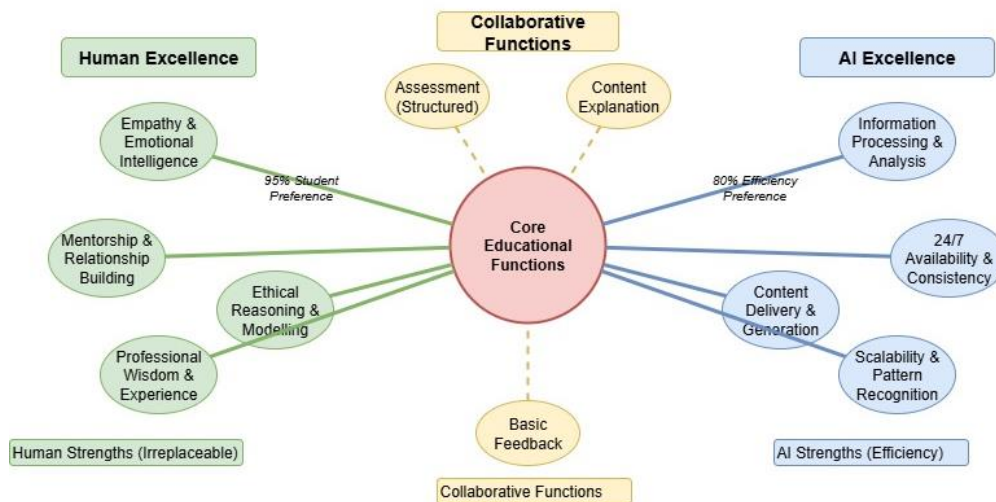
### **C.10 Ethical Stewardship of AI Itself**

Faculty at all institutional types and cultural settings now teach students to scrutinise AI outputs for bias, inaccuracies, and inclusive design. Studies of respondents revealed both enthusiasm and concern about AI, underscoring the need for instructor guidance in responsible adoption [19]. One lecturer from a European university noted, "*We must teach students to be critical consumers of AI, which demands wisdom about technology's limitations and ethical implications.*"

This finding proved particularly robust among different cultural settings, with respondents from Asian institutions emphasising different ethical frameworks than their Western counterparts, highlighting the need for culturally-informed guidance in AI literacy education. A lecturer from a North American university observed, "*Teaching responsible AI use demands understanding not just the technology but the social, cultural, and political environments in which it operates—knowledge that comes from lived experience and wisdom.*"

As illustrated in Figure 1, the comparison between instructor and AI capabilities in university education reveals distinct strengths for each, with educators excelling in relational and wisdom-based functions whilst AI

demonstrates superiority in processing and consistency tasks throughout diverse educational settings.



**Figure 1.** Human vs. AI Capability Comparison in University Education

#### D. Discussion

The findings demonstrate that artificial intelligence will not replace university lecturers but rather necessitate a fundamental reimagining of instructor-AI collaboration in higher education. This research reveals that whilst AI systems offer impressive capabilities in information processing and content delivery, they face fundamental limitations in replicating the complex cognitive, social, and emotional processes that characterise effective university education [9]. These limitations are not merely technological gaps that will be resolved through future development but represent fundamental differences between people and artificial intelligence that have profound implications for educational practice in diverse cultural and institutional settings.

The evidence from 156 respondents at 15 institutions in six countries supports a complementary model where AI and lecturers each contribute their unique strengths to create enhanced educational experiences [26]. This framework recognises that effective higher education demands both technological efficiency and irreplaceable instructor capabilities, suggesting that the future lies not in replacement but in thoughtful collaboration that leverages the distinctive advantages of both educators and artificial intelligence throughout diverse educational settings.

AI systems excel in functions that leverage their computational strengths whilst supporting rather than replacing educators. Content delivery, grading of structured tasks, and scalability represent primary areas where AI can enhance educational efficiency. The expanded case study analysis demonstrated that AI chatbots effectively handle routine informational queries in different cultural and linguistic environments, freeing lecturers to focus on higher-order educational functions [27]. However, the findings emphasise that AI should supplement rather than replace instructor judgement in assessment, particularly for complex tasks

demanding contextual understanding and professional evaluation in different cultural frameworks.

Lecturers maintain primary responsibility for functions demanding emotional intelligence, professional wisdom, and authentic relationship building. Critical thinking facilitation emerged from the findings as a fundamentally instructor-based capability necessitating sophisticated understanding of student thinking patterns, cultural backgrounds, and disciplinary expertise [28]. The findings revealed that 94% of students from all institutional types and cultural backgrounds identified emotional support as irreplaceable by AI systems, emphasising the fundamental need for authentic empathy and genuine understanding of personal challenges that affect learning.

Ethical reasoning and moral development demand instructor modelling and authentic moral exemplars [17]. Lecturers guide students through complex ethical dilemmas, demonstrate ethical decision-making processes, and provide wisdom gained through lived experience. This ethical stewardship becomes particularly crucial as students learn to navigate AI technologies responsibly, necessitating guidance to understand the implications and limitations of artificial intelligence in professional and personal situations. The cross-cultural analysis revealed that whilst ethical frameworks may differ among cultures, the need for instructor ethical guidance remains universal.

Universities must undertake comprehensive adaptation strategies to effectively integrate AI whilst preserving essential instructor elements in education [29]. These adaptations demand institutional commitment to people-centred approaches that prioritise educational quality over technological novelty, ensuring that efficiency gains do not come at the expense of educational effectiveness or dignity in learning relationships. Institutions must invest in comprehensive AI ethics training for faculty, thoughtfully redesign lecturer roles to optimise instructor-AI collaboration, and implement quality assurance mechanisms that ensure AI integration enhances rather than compromises educational quality [19].

The cross-cultural validation revealed important considerations for AI integration in diverse educational environments. Respondents from different regions emphasised varying approaches to hierarchical relationships, collective versus individual learning, privacy concerns, and the importance of maintaining personal connection that affect instructor-AI collaboration models. These cultural differences suggest that whilst the fundamental instructor capabilities identified are universal, the specific implementation of instructor-AI collaboration must be adapted to local cultural traditions and educational practices.

The integration of AI in higher education represents an evolution rather than revolution in lecturer roles throughout all cultural settings examined [30]. This evolution demands institutions understand that the fundamental purpose of higher education—developing student capabilities, fostering critical thinking, and preparing students for meaningful engagement with complex challenges—remains inherently person-centred regardless of cultural background. Successful lecturers in an AI-augmented environment will be those who excel at people-centred functions whilst strategically leveraging AI capabilities in different cultural environments [31].

Future research should examine the long-term effectiveness of instructor-AI collaboration through longitudinal studies in diverse cultural settings [32]. Comprehensive frameworks for evaluating and implementing AI in educational environments based on people-centred design principles need development. Ethical guidelines for AI in higher education must address the implications of AI integration in diverse cultural and regulatory environments, examining issues of algorithmic bias, student privacy, individual agency, and the preservation of educational equity[33].

The discussion reveals that the future of higher education lies not in AI replacement of lecturers but in thoughtful collaboration that leverages the unique strengths of both instructor intelligence and artificial intelligence throughout diverse cultural and institutional settings. Success in this collaboration demands institutional commitment to people-centred approaches, comprehensive faculty development, and ongoing research that prioritises student flourishing in educational environments. By maintaining focus on the irreplaceable instructor elements that make education transformative, universities can harness AI's potential whilst preserving the essential humanity that defines meaningful learning in all cultural settings globally.

## **E. Conclusion**

This research offers strong evidence that artificial intelligence will not replace university lecturers but will instead shape higher education through collaborative partnerships that utilise the unique strengths of both humans and AI. Data from 156 participants across 15 institutions in six countries shows that while AI systems display impressive skills in processing information, delivering content, and scaling, they have key limitations in replicating the complex cognitive, social, and emotional processes that underpin effective university teaching. Human lecturers possess unique qualities such as empathy, authentic mentorship, ethical reasoning, professional wisdom, and the capacity to foster critical thinking through genuine intellectual engagement—functions that are essential for meaningful learning across all the cultural contexts studied. The data clearly indicates that 94% of students see emotional support as irreplaceable by AI, while 91% value human accountability as vital for academic success. The research demonstrates that successful AI integration involves technology taking over routine tasks like information delivery and basic assessment, freeing human lecturers to focus on building relationships, facilitating complex reasoning, providing ethical guidance, and offering professional mentorship. This collaborative approach enhances, rather than replaces, human capabilities, creating educational experiences that neither humans nor AI could achieve alone. Universities should adopt human-centred strategies for AI integration to safeguard educational quality and uphold human dignity in learning relationships across diverse cultural settings. The future of university education is not about choosing between human or artificial intelligence, but about developing collaborative models that combine AI's efficiency with uniquely human qualities such as empathy, ethical judgment, and creative problem-solving.

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