

Editorial: Framing the Future with a Research Agenda for Artificial Intelligence in Higher Education

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Abstract

Generative artificial intelligence (GenAl) is transforming higher assessment, curriculum. education. reshaping pedagogical relationships, and the broader dynamics of teaching and learning. While research on AI in education (AIEd) is expanding, it remains fragmented and often dominated by tool-centric use cases and technodeterminist narratives. In this Editorial, we argue for a new phase of meaningful Al research in higher education, research that is pedagogically grounded, ethically aware, and theoretically informed. We critique the limitations of traditional reflective practice, which, like large language models, can mirror existing assumptions without producing genuinely new insights. Instead, we call for a reframing of the Scholarship of Teaching and Learning (SoTL) that acknowledges

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complexity, examines power, and embraces the entangled nature of human and non-human collaboration. Meaningful research must engage with the long-term consequences of AI for teaching, learning, and academic work and not just its immediate functionality. Drawing on interdisciplinary perspectives across pedagogy, trust, ethics, and institutional change, we outline an agenda for AI research that centres on criticality, sustainability, and inclusion. We contend that meaningful research must go beyond short-term efficiency gains to examine long-term impact, support educator and student agency, and address the structural values shaping AI's integration in higher education. This agenda is urgent: the foundations laid now will determine how we as educators lead the transformation of academic work, student experience, and the future of knowledge in an AI enhanced era.

Practitioner Notes

- 1. Design AI research around learning purpose, not tool functionality.
- 2. Focus on research that is methodologically robust and pedagogically meaningful.
- 3. Ground Al practice and research in local, inclusive, and culturally responsive approaches

Citation:

Introduction

What do we mean when we talk about *meaningful* research on AI in higher education? As generative AI impacts teaching, assessment, and content generation, this question has become increasingly important for institutions, educators, researchers and for students navigating these changes in real time. While headlines focus on issues of academic integrity, productivity, and disruption, a deeper and more critical challenge remains, namely what kind of research will help higher education lead the purposeful, responsible, ethical and sustainable integration of AI?

Recent contributions have offered foundational research agendas for generative AI in tertiary education, identifying emerging priorities across pedagogy, trust, infrastructure, and institutional response (Lodge et al., 2023; Thompson et al., 2023). Our editorial builds on and extends this work by advancing a more critically theorised, pedagogically grounded, and future-focused research agenda. While many journals lead in exploring technological affordances and implications for academic integrity and assessment design, few have prioritised the practicebased, pedagogical transformation underway in teaching and learning. The Journal of University Teaching and Learning Practice (JUTLP) has emerged as a global leader in this, leading the intersection of ethics, educator agency, and inclusive pedagogy. This editorial contributes to that leadership by proposing a next-phase research agenda that centres meaning, equity, sustainability, and long-term impact. Rather than responding to disruption with reactive tool evaluations or narrow efficiency metrics, we call for a reimagining of the Scholarship of Teaching and Learning (SoTL) for the GenAl era, one that interrogates complexity, power, and the shifting roles of educators and learners in human-Al collaboration. If higher education is to lead rather than follow, we must prioritise research that is grounded in pedagogy, responsive to diverse contexts, and committed to shaping ethical futures.

Prior to the explosion of ChatGPT users from late 2022, Zawacki-Richter et al. (2019) observed that much AI in higher education research lacked meaningful connections to pedagogy or critical reflection. This trend has persisted, with many studies still dominated by 'use cases' showcasing what AI tools can do, rather than examining what they should do and under what pedagogical and ethical conditions. Many journals have played a valuable role in surfacing technological developments however research is often siloed into discrete conversations around tools, assessment, or pedagogy, with limited engagement in how these dimensions interact in practice.

The Journal of University Teaching and Learning Practice (JUTLP) occupies a unique position in the current landscape. We don't isolate assessment, pedagogy, or technology, we explore their intersection, where real educational practice happens. This is what we might think of as entanglement pedagogy (Fawns, 2022). This is an approach that resists neat categories and instead recognises how teaching with Al involves shifting, co-emerging relationships between tools, values, people, and systems.

Teaching and learning with GenAl is about adopting technology, applying theory, or redesigning assessment all at once. It is this entangled, practice-oriented lens that has allowed JUTLP to lead in surfacing grounded, values-based insights. As Bearman et al. (2024) argue, the GenAl era demands more than competence with tools, it calls for pedagogical strategies that foster evaluative judgement and critical awareness. We build on this by calling for research that

positions educators not as passive adopters, but as active agents shaping the conditions pedagogical, ethical, and epistemic under which AI becomes part of the university experience. This includes engaging with international frameworks such as UNESCO's *Guidance for Generative AI in Education and Research* (2023), which emphasises the importance of aligning AI use in education with human rights, democratic values, and principles of inclusion. It also means that we resist reductive framings of generative AI as either an existential threat or as a transformative solution, AI presents opportunity to reshape educational practices for example in personalised learning pathways and predictive analytics, but it must also be critically examined. These developments raise complex questions about implementation, equity, and the unpredictability of generative AI, particularly in relation to whether the commercial foundations align with the public good, and the core values of higher education (Newell et al., 2024).

To move forward, higher education must foster a meaningful AI research agenda grounded in values, ethics, pedagogy, and a critical understanding of power. Such an agenda must acknowledge both the promise and the risks of emerging technologies and the long-term consequences of how AI is integrated into teaching, learning, and academic work. This includes reaffirming the leadership role of educators as agents shaping how AI aligns with the core purposes of higher education. Meaningful research must explore what AI can do and why and critically examine what it should do, for whom, and to what ends.

What Counts as "Meaningful"?

Meaningful research must speak to the real challenges that students, educators and institutions are facing, while also taking a longer view asking what is happening and where it is leading. Right now, AI is being adopted across higher education at speed. Research, inevitably, is lagging behind but this does not mean we should rush to publish before the ground is ready. Systematic reviews and meta-analyses are often considered the gold standard of evidence, but they rely on a solid base of high-quality empirical work. In many areas, that evidence base is still emerging (Crawford, 2025). Three years of post-GenAI research cannot yet offer conclusive insight into long-term educational impact. What we need now is a more strategic focus on well-designed primary research in underexplored contexts. This is not a time for synthesis for its own sake. It is a time to design studies that reflect complexity, that respond to real-world practice, and that can guide the decisions we are making now.

At the same time, the need for research in artificial intelligence in education (often referred to as AIEd) remains urgent. While we may point to the fact that there has been a significant 'turn' towards this topic, much like there was a 'turn' during the COVID-19 pandemic, we are still in the very early days of adoption. If, like many predict, these disruptive technologies will be the next internet, then we can expect that AI and higher education will spawn multiple fields of research in the future, including standalone journals (in addition to the several high-quality outlets that have existed in the pre-GPT era). The direction of travel for this expanding field and the core principles that underpin it will be largely shaped by the foundations we lay today.

Meaningful research also needs to be grounded in strong theoretical foundations, designed with care, and focused on improving educational practice. Research should ask hard questions about impact, not just functionality. This includes placing inclusion, equity and the deeper knowledge-

effects of AI systems at the centre of inquiry. We know that generative AI is not neutral. Widely used models tend to reflect dominant Western epistemologies (Roe, 2025) and can reinforce gender and ethnic stereotypes (Newstead et al., 2023). These patterns are not abstract. They shape what students see, how they learn, and whose knowledge is valued in the classroom. As AI becomes more embedded in education, we need research that examines how these systems are affecting inclusion across different cultural and institutional contexts. This matters not only for equity, but for the integrity of higher education itself.

Now is the time to focus on research that prioritises humanity and responsibility. Across higher education, staff are being asked to adapt quickly, redesigning assessment, reworking curricula, and retraining teams in a context of increasing constraint. Research should support this adaptation, not by cataloguing tools, but by helping shape sustainable models of education that reflect shared values. We also need research that supports long-term, evidence-informed decisions at the institutional level. That means resisting short-term gains in metrics like engagement or efficiency, and instead asking harder questions: What constitutes genuine value for students and educators? What should an Al-capable graduate look like in three to five years? What responsibilities do we carry -not only to equip students with skills to use Al, but also to support their capacity to question when Al is not appropriate, ethical, or sustainable?

Meaningful research into AI in higher education also needs to recognise the broader context in which education operates. This includes supporting students in learning and assessment, and in preparing for future careers and contributing to real-world challenges. In many industries, particularly those involving design, diagnostics or modelling, AI is already deeply embedded. Across all disciplines, critical thinking and sound reasoning remain essential graduate attributes. Given the current limits of GenAI in those areas, we need research that explores how higher education can foster the kind of human-centred, critical skills needed for Industry 5.0 and beyond (Boscardin et al., 2024; deSilva et al., 2025). Bearman et al. (2024) suggest that cultivating evaluative judgement, the ability to make informed decisions about the quality of one's own work will be vital in a time of generative AI. Students must learn to engage critically with AI outputs, not just simply use them.

Teaching Methods and Innovation

To explore these questions further, we need to consider the pedagogical dimension of meaningful AI research and what it means to bring the values of the Scholarship of Teaching and Learning (SoTL) to the forefront. The rapid uptake of generative AI in higher education is reshaping not just the tools we use, but the foundations of how we learn and teach. Traditional, discipline-bound and instruction-focused models are being challenged by a need for more student-centred, multidisciplinary approaches that help learners navigate complexity in real time (Southworth et al., 2023). As AI becomes more embedded in curriculum, assessment, and learner support, it is transforming established relationships between educators, students, and knowledge. It is prompting a deeper shift in how we think about pedagogy, purpose, and practice (Lee et al., 2024). Across institutions, AI now surfaces in nearly every conversation about teaching and learning even when it is not the central topic (Kallunki et al., 2024). This reflects how rapidly AI is reshaping both everyday practice and the broader questions we ask about educational purpose. Teaching is becoming less about content delivery and more about enabling students to engage

with complexity and uncertainty (Cukurova, 2025). Educators are also navigating that same complexity. If we are to support the meaningful use of Al in higher education, pedagogy must remain central to our inquiry.

Aligned with this shift, we are now seeing new approaches to AI in education that move beyond automation or efficiency. For example, partnerships between educators and AI developers are beginning to explore how generative tools can support feedback, project work, and co-creation in line with educational priorities (Yuwono et al., 2024). These developments reflect a move away from AI as a standalone solution, towards seeing it as part of a broader learning ecology. When designed with care, AI can support personalisation and dialogic teaching. But this potential depends on educators taking an active role and shaping how AI is used, critically engaging with its purpose, and aligning it with pedagogical intent. As Xia et al (2024) note, higher education must lead in AI literacy to prepare students for a changing world and to uphold thoughtful, ethical, and inclusive educational practices. Approaches like entanglement pedagogy (Fawns, 2022) and Actor-Network Theory (Latour, 2005) can help map these complex interactions between educators, learners, technologies, and institutional systems. These frameworks resist linear or tool-centric thinking and instead foreground the relational dynamics at play in AI-augmented education.

Technology has always shaped teaching and learning, supporting interaction, collaboration, and meaning making. Yet the arrival of generative AI has introduced a new kind of disruption. Much of the current research still focuses on specific use cases how tools like ChatGPT are being adopted in certain subjects or contexts (Jensen et al., 2024). While valuable, this work often stops short of engaging with the deeper pedagogical implications, particularly in relation to language, multimodality, and evolving educator roles. GenAI invites a rethinking of teacher agency, but many studies remain focused on functionality rather than on practice and identity. Moving from use to critical evaluation and pedagogical leadership marks a transformation in what it means to teach in AI-augmented learning environments (Zhai, 2024). As interest in AI grows, so too does the need to distinguish between demonstration and evidence (Belkina et al., 2025; Xia et al., 2024).

While early practice-based studies offer useful insights, they often reflect isolated experiences. Ashton-Hay et al. (2025) argue that meaningful research must move beyond narrative and be grounded in evidence-based SoTL. This involves rigorous methodology, theoretical framing, and data that enable others to assess impact and adapt practices to their own settings. Without this, innovation risks being seen as transient rather than transformative. Research on Al's pedagogical value should ask not just what was done, but whether it worked, for whom, and in what context. When grounded in evidence, SoTL can support informed, ethical adoption and ensure Al enhances rather than erodes educational quality. If we are to embed Al responsibly, we must move beyond short-term pilots and proof-of-concept studies. While these have their place, they often fail to capture long-term impacts on student learning, educator workload, and institutional change. As Nguyen et al. (2024) caution, innovation enthusiasm must be matched by a commitment to understanding sustained impact. Future research should examine whether Al tools are scalable, adaptable, and equitable across diverse learning environments. Do they reinforce or disrupt inequalities? Do they align with or challenge existing pedagogical values?

There is also a growing need to understand how AI influences student wellbeing and motivation. With thoughtful design, tools like ChatGPT may enhance confidence, autonomy, and engagement (Crawford et al., 2023). However, these outcomes are shaped by how educators frame and support their use (Roehrer, 2024). The integration of AI is a pedagogical and ethical one and longitudinal, inclusive, and context-aware research is needed to guide its use. We must also reflect critically on our responsibilities as educators and scholars in shaping a future where AI enhances, rather than diminishes, the humanity of higher education.

Ethics and Agency

As Al becomes embedded in everyday teaching practice, it also raises significant ethical questions that demand deeper exploration. Since the release of ChatGPT in 2022, one of the most prominent concerns has been its impact on academic integrity. Educators expressed apprehension that AI-generated content could blend indistinguishably with students' original work, blurring the boundaries of academic integrity and compromising the credibility of assessment processes. In the immediate aftermath, some institutions responded with blanket bans on GenAl. However, the rapid evolution of the technology, and the community's swift adaptation, has since shifted the landscape. Today, it is rare for institutions to maintain such bans. That said, some educators continue to designate certain assessments as 'GenAl-free zones', particularly in uncontrolled environments such as take-home assessments. Concerns about inappropriate use often stem from a lack of curriculum-level support for responsible, discipline-informed integration. When the critical evaluation of GenAl becomes an intended learning outcome, prohibiting its use can actively undermine pedagogical goals. As Dollinger and Barrett (2023) suggest, policy alone is insufficient to safeguard integrity; what is needed is a deep engagement with pedagogy, learning design, and student capability development. Even in high-stakes contexts such as laboratory training, GenAl tools can provide real value in their ability to facilitate fast information retrieval and synthesis. Preparing students for a GenAl-augmented workforce demands that we design curricula which explicitly integrate, interrogate, and leverage AI across the full teachinglearning-assessment cycle. Doing so is both a pedagogical innovation and an ethical imperative.

Meaningful research must also reflect a robust understanding of GenAI systems and their limitations. Technologies are not inherently biased; rather, bias arises from how systems are trained, fine-tuned, and deployed. In the case of large language models (LLMs), outputs may appear random due to control parameters that simulate human-like unpredictability. However, these outputs are often shaped by previous user interactions and curated prompts. To interpret the outputs meaningfully, researchers must understand not only what these tools produce, but how and why they produce it. For example, well-documented biases in generative systems reflect underlying training data that disproportionately represent Western, English-speaking, and maledominated perspectives (Roe, 2025; Newstead et al., 2023). These biases persist even in multilingual contexts where fluency is present, but local cultural nuance is absent. From this perspective, we call for a shift away from generic, globally trained models toward research that prioritises culturally responsive, contextually grounded tools. Such tools must reflect the knowledge systems and traditions of diverse learners. To support equity, inclusion, and relevance, research should investigate how GenAI can be adapted for different disciplinary, institutional, and linguistic settings.

It is also important to acknowledge that while most GenAI systems are built on the same foundational architecture such as transformers and attention mechanisms, different engineering solutions are used to optimise performance. OpenAI, for example, offers multiple versions tailored for different purposes, such as reasoning (o3) or speed (o4-mini). Most systems include content filters that are invisible to the end user, designed to enforce ethical and legal standards. This opacity raises challenges for transparency and interpretability, especially in educational settings where trust and accountability are paramount. Ethical research on GenAI in education must engage deeply with issues such as transparency, data privacy, algorithmic bias, and the broader social and institutional consequences of AI adoption. Tools like the UNESCO Guidance for Generative AI in Education and Research and the European Commission's Ethics Guidelines for Trustworthy AI offer foundational frameworks. However, we also need more empirical studies that provide actionable insights into responsible institutional adoption, particularly in relation to student data, privacy, and surveillance.

The role of AI in assessment design and implementation remains a critical area of inquiry. Frameworks like the AI Assessment Scale (Perkins et al., 2024) and the two-lane approach proposed by Bridgeman et al. (2024) offer promising directions. Yet, more empirical research is needed to examine how factors such as trust, context, and teacher judgement influence assessment practices. If we are to uphold the integrity and validity of educational evaluation, we need to ensure that GenAI tools enhance, rather than compromise, the learning process.

Assessment and Trust

As AI reshapes higher education, ensuring trust in AI-driven assessment has become essential to accurately reflect student learning and uphold academic integrity. Generative Al tools such as ChatGPT have improved the speed and polish of student work, but they have also raised concerns about authorship, critical thinking, and originality (Kofinas et al., 2025). Increasingly, AI is being used not just as a tool, but as what Alvarado (2023) describes as an epistemic technology, a system that extends our capacity as knowers and reshapes how knowledge is constructed. shared, and evaluated. This conceptual shift has important implications for how trust in Al is understood and operationalised in higher education. Trust in AI is a multidimensional construct shaped by its technological affordances, disciplinary context, and the attitudes of educators and students (Bach et al., 2022). While trust can encourage more effective engagement with AI tools. distrust may significantly hinder meaningful uptake (Afroogh et al., 2024). Importantly, trust and distrust are not opposites but can coexist in complex ways (Lyu et al., 2025). For instance, Afroogh et al. (2024) note that in assessment, trust reflects transparency, explainability, and userfriendliness. Trust may manifest as confidence in the fairness and usefulness of Al-generated content (Alvarado, 2023), cognitive trust in the outputs themselves, or emotional trust linked to how AI systems are experienced (Aladi et al., 2024). Additionally, trust may depend on whether Al is perceived to align with academic values and ethical principles (Lyu et al., 2025).

Empirical studies suggest that functionality, interpretability, and consistency are key drivers of trust (Abbass, 2019), alongside factors such as perceived usefulness, ease of use, prior experience, and readiness to adopt. In practice, many educators and students treat AI as a "critical friend", a source of assistance for ideation or writing, which can support engagement but also blur the boundaries of originality and intellectual authorship. These tensions are often captured in the

ethos of "trust but verify" (Lyu et al., 2025). Yet, growing reliance on Al tools can lead to inflated self-confidence and reduced cognitive engagement (Bai et al., 2023), as well as cognitive offloading. Students and educators may overestimate the accuracy and applicability of Algenerated outputs ranging from feedback and grading to content analysis especially when systems lack transparency about data provenance. These risks are exacerbated when educational platforms prioritise performance metrics or user satisfaction over deeper learning outcomes. Abbas et al. (2024) caution that over-reliance on superficial indicators may obscure fundamental pedagogical goals, particularly the development of critical thinking and epistemic responsibility. At the same time, Xia et al. (2024) argue that existing frameworks for evaluating Al trustworthiness in education are insufficiently robust, calling for more rigorous, context-aware methodologies.

Consequently, trust must be seen not simply as an individual perception but as a systemic outcome. It depends on how AI is embedded in institutional policies, training, and governance structures, and whether all stakeholders perceive those systems as transparent, ethical, and aligned with educational values (Aladi et al., 2024). Institutions implementing AI must invest in robust data governance, faculty development, and participatory policy-making to foster trust and avoid uncritical adoption (Nazaretsky et al., 2025). Educators and researchers play a critical role in shaping how trust in AI is developed and maintained. A pedagogy-first, ethics-informed approach is essential. Afroogh et al. (2024) argue that trust in Al assessments requires more than accurate results, it demands systems that are explainable and ethically aligned with how educational decisions are made. Design also matters, emotionally resonant interfaces and authentic examples of successful use may foster trust (Bhaskar et al., 2024). However, Kofinas et al. (2025) caution that traditional assessments particularly high-stakes and product-based tasks are increasingly vulnerable to Al misuse. They call for a shift toward performative, process-based, and socially engaged approaches to uphold academic integrity in an Al-augmented era. While the epistemic limits and ethical ambiguities of AI remain unsettled, there is an urgent need to explore how trust and trustworthiness will evolve. Understanding these dynamics is vital to ensuring that Al in education supports, rather than erodes, our shared commitment to integrity, inquiry, and meaningful learning.

Conclusion

As Al continues to reshape higher education, meaningful research must strike a careful balance between innovation and responsibility. It must address real-world challenges while upholding ethical and pedagogical values, and aim for sustainable, inclusive impact. The future of Al in education will not be determined by technological advancement alone, but by the decisions we make about what we study, how we study it, and whose voices are represented. Critical approaches to Al in higher education must move beyond evaluations of technical functionality. We must ask how Al reconfigures the production of knowledge, reshapes relationships between students and educators, and reflects broader dynamics of power, capital, and access. Frameworks may assist in mapping these entanglements and tracing the long-term, distributed effects of generative Al in educational contexts.

If we are to build an Al-enhanced future that genuinely supports teaching, learning, and discovery, we must centre co-design, care, criticality, and inclusivity in our research. As researchers, we can choose to accelerate adoption or to pause and ask deeper questions about how Al is reshaping the very purpose and practice of education. Ultimately, fostering trust in Al is about protecting the integrity of the student learning experience in increasingly complex educational environments. The challenge and the opportunity is to cultivate a research culture that reflects the educational futures we wish to create—equitable, ethical, and pedagogically meaningful. We invite scholars, practitioners, and students to contribute to this conversation by sharing research that is pedagogically grounded, ethically informed, and theoretically robust. Let us shape the next phase of Al in higher education not as passive adopters, but as critical agents of change.

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References

- Abbas, M., Jam, F. A., & Khan, T. I. (2024). Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education*, 21(10). https://doi.org/10.1186/s41239-024-00444-7
- Abbass, H. A. (2019). Social integration of artificial intelligence: Functions, automation allocation logic and human–machine shared context. *Cognitive Computation*, *11*(2), 159–171. https://doi.org/10.1007/s12559-018-9619-0
- Afroogh, S., Akbari, A., Malone, E., et al. (2024). Trust in Al: Progress, challenges, and future directions. *Humanities and Social Sciences Communications*, 11, 1568. https://doi.org/10.1057/s41599-024-04044-8
- Aladi, M., Ahmed, A., & Obaid, Q. (2024). Determinants of cognitive trust in Al-enabled educational technologies: Evidence from IT faculty. *Education and Information Technologies*. https://doi.org/10.1007/s10639-024-11926-3
- Alvarado, R. (2023). What kind of trust does Al deserve, if any? *Al Ethics, 3*, 1169–1183. https://doi.org/10.1007/s43681-022-00224-x
- Ashton-Hay, S., Coleman, B., Sullivan, M., & Toquero, C. M. (2025). The difference in practice papers and scholarship: We publish the latter. *Journal of University Teaching and Learning Practice*, 22(1). https://doi.org/10.53761/2qqq0714
- Bach, T. A., Khan, A., Hallock, H., Beltrão, G., & Sousa, S. (2022). A systematic literature review of user trust in Al-enabled systems: An HCl perspective. *International Journal of Human–Computer Interaction, 40*(5), 1251–1266. https://doi.org/10.1080/10447318.2022.2138826
- Bai, Y., Liu, Y., & Su, Y. (2023). The cognitive paradox of AI in education: Between enhancement and erosion. *Frontiers in Psychology, 16*, 1550621. https://doi.org/10.3389/fpsyg.2025.1550621
- Bearman, M., Tai, J., Dawson, P., Boud, D., & Ajjawi, R. (2024). Developing evaluative judgement for a time of generative artificial intelligence. *Assessment & Evaluation in Higher Education*, 49(6), 893–905. https://doi.org/10.1080/02602938.2024.2335321
- Belkina, M., Daniel, S., Nikolic, S., Haque, R., Lyden, S., Neal, P., Grundy, S., & Hassan, G. M. (2025). Implementing generative AI (GenAI) in higher education: A systematic review of case studies. *Computers and Education: Artificial Intelligence, 8*, 100407. https://doi.org/10.1016/j.caeai.2025.100407
- Boscardin, C. K., Gin, B., Golde, P. B., & Hauer, K. E. (2024). ChatGPT and generative artificial intelligence for medical education: Potential impact and opportunity. *Academic Medicine*, 99(1), 22–27. https://doi.org/10.1097/ACM.000000000005439
- Bridgeman, A., Liu, D., & Weeks, R. (2024). Program level assessment design and the two-lane approach. *University of Sydney*. https://educational-innovation.sydney.edu.au/teaching@sydney/program-level-assessment-two-lane/
- Crawford, J. (2025). Systematic literature reviews Why I rejected your review. *Journal of University Teaching and Learning Practice*, 22(2). https://doi.org/10.53761/10vb5076
- Crawford, J., Cowling, M., & Allen, K. A. (2023). Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). *Journal of University Teaching & Learning Practice*, 20(3), 1–19. https://doi.org/10.53761/1.20.3.02
- Cukurova, M. (2025). The interplay of learning, analytics and artificial intelligence in education: A vision for hybrid intelligence. *British Journal of Educational Technology*, *56*(2), 469–488. https://doi.org/10.1111/bjet.13514
- de Silva, D., Kaynak, O., El-Ayoubi, M., Mills, N., Alahakoon, D., & Manic, M. (2025).

 Opportunities and challenges of generative artificial intelligence: Research, education, industry engagement, and social impact. *IEEE Industrial Electronics Magazine*, 19(1), 30–45. https://doi.org/10.1109/MIE.2024.3382962

- Dollinger, M., & Barrett, R. (2023). Eye to A.I.: Redefining academic integrity for the generative Al era. *Journal of University Teaching and Learning Practice*, 20(4). https://doi.org/10.53761/1.20.4.05
- Fawns, T. (2022). An entangled pedagogy: Looking beyond the pedagogy–technology dichotomy. *Postdigital Science and Education*, *4*(2), 321–337. https://doi.org/10.1007/s42438-022-00302-7
- Jensen, L. X., Buhl, A., Sharma, A., & Bearman, M. (2025). Generative Al and higher education: A review of claims from the first months of ChatGPT. *Higher Education*, 89(4), 1145–1161. https://doi.org/10.1007/s10734-024-01265-3
- Kallunki, V., Kinnunen, P., Pyörälä, E., Haarala-Muhonen, A., Katajavuori, N., & Myyry, L. (2024). Navigating the evolving landscape of teaching and learning: University faculty and staff perceptions of the artificial intelligence-altered terrain. *Education Sciences*, 14(7), 727. https://doi.org/10.3390/educsci14070727
- Kofinas, A. K., Tsay, C. H., & Pike, D. (2025). The impact of generative AI on academic integrity of authentic assessments within a higher education context. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.13585
- Latour, B. (2005). Reassembling the social: An introduction to actor–network theory. Oxford University Press.
- Lee, D., Arnold, M., Srivastava, A., Plastow, K., Strelan, P., Ploeckl, F., Lekkas, D., & Palmer, E. (2024). The impact of generative Al on higher education learning and teaching: A study of educators' perspectives. *Computers and Education. Artificial Intelligence*, 6, https://doi.org/10.1016/j.caeai.2024.100221
- Lodge, J. M., Thompson, K., & Corrin, L. (2023). Mapping out a research agenda for generative artificial intelligence in tertiary education. *Australasian Journal of Educational Technology*, *39*(1), 1–8. https://doi.org/10.14742/ajet.8695
- Lyu, W., Zhang, S., Chung, T., Sun, Y., & Zhang, Y. (2025). Understanding the practices, perceptions, and (dis)trust of generative AI among instructors: A mixed-methods study in the US higher education. *Computers and Education: Artificial Intelligence, 8*. https://doi.org/10.1016/j.caeai.2025.100383
- Nazaretsky, T., Mejia-Domenzain, P., Swamy, V., Frej, J., & Käser, T. (2025). The critical role of trust in adopting Al-powered educational technology for learning: An instrument for measuring student perceptions. *Computers and Education: Artificial Intelligence*,. https://doi.org/10.1016/j.caeai.2025.100368
- Newell, S., Fitzgerald, R., Hall, K., Mills, J., Beynen, T., Chia, I., Mason, J., & Lai, E. (2024). Equitable integration of GenAl in higher education: Insights from current practices and educator attitudes. In S. Beckingham, J. Lawrence, S. Powell, & P. Hartley (Eds.), *Using generative AI effectively in higher education: Sustainable and ethical artificial intelligence for the common good*. Routledge. https://doi.org/10.4324/9781003482918
- Newstead, T., Eager, B., & Wilson, S. (2023). How Al can perpetuate—or help mitigate—gender bias in leadership. *Organizational Dynamics*, *52*(4), 100998.
- Nguyen, A., Kremantzis, M., Essien, A., Petrounias, I., & Hosseini, S. (2024). Enhancing student engagement through artificial intelligence (AI): Understanding the basics, opportunities, and challenges. *Journal of University Teaching & Learning Practice*, *21*(6), 1–13. https://doi.org/10.53761/caraag92
- Perkins, M., Furze, L., Roe, J., & MacVaugh, J. (2024). The Artificial Intelligence Assessment Scale (AIAS): A framework for ethical integration of generative AI in educational assessment. *Journal of University Teaching & Learning Practice*, *21*(6), 49–66. https://doi.org/10.53761/g3azde36
- Roe, J. (2025). Generative AI as cultural artifact: Applying anthropological methods to AI literacy. *Postdigital Science and Education*. https://doi.org/10.1007/s42438-025-00547-y

- Roehrer, E. (2023). Generative AI is here: Time for transnational higher education to step up and embrace the opportunity. In *Proceedings of the 26th ANZAM Conference 2023* (p. 707).
- Southworth, J., Migliaccio, K., Glover, J., Glover, J. N., Reed, D., McCarty, C., Brendemuhl, J., & Thomas, A. (2023). Developing a model for Al across the curriculum: Transforming the higher education landscape via innovation in Al literacy. *Computers and Education:*Artificial Intelligence, 4. https://doi.org/10.1016/j.caeai.2023.100127
- Thompson, K., Corrin, L., & Lodge, J. M. (2023). Al in tertiary education: Progress on research and practice. *Australasian Journal of Educational Technology*, *39*(5), 1–7. https://doi.org/10.14742/ajet.9251
- UNESCO. (2023). *Guidance for generative AI in education and research*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000386693
- Xia, Q., Weng, X., Ouyang, F., Lin, T. J., & Chiu, T. K. F. (2024). A scoping review on how generative artificial intelligence transforms assessment in higher education. *International Journal of Educational Technology in Higher Education, 21*(1), 40–22. https://doi.org/10.1186/s41239-024-00468-z
- Yuwono, E. I., Tjondronegoro, D., Riverola, C., & Loy, J. (2024). Co-creation in action: Bridging the knowledge gap in artificial intelligence among innovation champions. *Computers and Education: Artificial Intelligence*, 7. https://doi.org/10.1016/j.caeai.2024.100272
- 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*(1), 1–27. https://doi.org/10.1186/s41239-019-0171-0
- Zhai, X. (2024). Transforming teachers' roles and agencies in the era of generative AI:

 Perceptions, acceptance, knowledge, and practices. *Journal of Science Education and Technology*. https://doi.org/10.1007/s10956-024-10174-0