

Reframing Civic and Ethical Education in Higher Education in the Age of AI: Challenges and Strategic Responses

Zhun Gao

School of Marxism, Fujian Normal University, Fuzhou, Fujian, 350117, China

ABSTRACT

The rapid diffusion of artificial intelligence across higher education has transformed how students access information, communicate with peers, complete academic tasks, and form judgments about public life. These developments create opportunities for more responsive, inclusive, and data-informed learning, but they also intensify concerns about algorithmic filtering, synthetic misinformation, human–AI dependency, and the weakening of reflective agency. Building on these tensions, this article reframes a traditionally politicised discussion of student development as a broader question of civic and ethical education in international higher education. Rather than treating values education as one-way transmission, the article argues that universities should cultivate critical AI literacy, moral discernment, dialogic competence, and responsible participation in digitally mediated communities. The discussion proceeds in three steps. First, it identifies the distinctive features of AI-shaped educational environments, including multimodal content delivery, hybrid learning spaces, and increasingly interactive symbolic systems. Second, it examines four major risks for university students: algorithmic echo chambers, moral displacement in human–AI interaction, the spread of harmful or deceptive AI-generated content, and growing dependence on automated tools. Third, it proposes a reconstruction of educational pathways grounded in human-centred pedagogy, interactive civic learning, critical media and AI literacy, and institution-wide governance. The article concludes that the most effective educational response to AI is neither technological enthusiasm nor defensive prohibition, but a balanced framework in which technical innovation remains subordinate to human flourishing, academic integrity, intercultural understanding, and the development of independent judgment.

KEYWORDS

Higher education; Civic and ethical education; Artificial intelligence; Digital citizenship; AI literacy; Student development

1 Introduction

Artificial intelligence has moved from the periphery of higher education to its everyday infrastructure. Recommendation systems shape what students read, generative tools influence how they write, predictive analytics inform institutional decisions, and conversational agents increasingly mediate study, social interaction, and emotional support. As recent scholarship has shown, AI in higher education is no longer confined to intelligent tutoring systems or specialist laboratories; it now affects teaching, assessment, support services, and the broader ecology of student life (Zawacki-Richter et al., 2019; UNESCO, 2023). In this sense, the educational question is no longer whether universities should respond to AI, but how they should do so without reducing education to efficiency, automation, or behavioural optimisation.

In many institutional contexts, earlier debates about student formation were framed in highly political or nation-specific terms. For an international readership, however, a more useful framework is that of civic and ethical education: the set of educational practices through which universities cultivate responsibility, critical judgment, social trust, respect for difference, and informed participation in public life. This reframing does not eliminate questions of values; rather, it relocates them in a language that is more appropriate to globally diverse campuses and more responsive to the realities of multilingual, multicultural, and digitally mediated student communities. On contemporary campuses, especially those serving international students, educational challenges are shaped not only by formal curricula but also by platform logics, attention economies, and cross-border flows of information.

This article revises and internationalises the argument of the original Chinese manuscript. It retains the paper's core concern with student development in the AI era, but it replaces politically charged formulations with a more globally legible analysis centred on civic learning, ethical reasoning, and digital citizenship. The article proceeds in three stages. It first identifies the most salient features of value-oriented education under AI conditions. It then analyses the principal risks AI poses to university students' judgment, wellbeing, and autonomy. Finally, it proposes a set of strategic responses through which universities can align technological innovation with human-centred educational aims.

2 The Distinctive Features of Civic and Ethical Education in the AI Era

2.1 From Static Content Delivery to Intelligent, Multimodal Learning Ecologies

One of the clearest shifts produced by AI is the transformation of educational content from a relatively fixed body of materials into a dynamic and continuously updated information ecology. Text, image, audio, simulation, and automated feedback can now be combined in real time. From a pedagogical perspective, this creates important opportunities: complex ethical dilemmas can be explored through immersive scenarios, public controversies can be analysed through multimodal evidence, and students can receive adaptive support tailored to language proficiency, prior knowledge, or disciplinary background. These developments are particularly relevant for international students, who often benefit from multilingual scaffolding, personalised feedback, and alternative forms of participation.

Yet this transformation also changes the conditions under which values are encountered and interpreted. When educational content is filtered or sequenced by opaque systems, what students see as important, credible, or urgent may be shaped less by scholarly judgment than by commercial or technical logics. Universities therefore face a dual task: they must use AI to expand access and engagement, while also teaching students to interrogate the assumptions embedded in automated systems. In other words, the pedagogical question is not simply how to make content more attractive, but how to ensure that attractive content still supports critical reflection rather than passive consumption.

2.2 From Bounded Classrooms to Hybrid and Platformed Educational Spaces

AI also alters the spatial organisation of higher education. Learning no longer occurs only in classrooms, libraries, or institutional learning-management systems. It unfolds across messaging apps, short-video platforms, collaborative writing tools, discussion forums, virtual simulations, and AI-enabled support services. The university has become a hybrid environment in which formal and informal learning spaces are tightly entangled. This shift can be productive. Hybrid spaces make it easier to support students across time zones, facilitate international collaboration, and offer flexible entry points for students who might otherwise feel marginalised in face-to-face settings.

At the same time, hybridisation weakens the university's control over educational context. Students do not simply move between "online" and "offline" worlds; they inhabit complex platform environments in which commercial incentives, peer influence, and algorithmic amplification shape attention and interpretation. For civic and ethical education, this means that universities can no longer assume that normative learning occurs primarily through formal instruction. They must instead build educational designs that connect classroom dialogue, digital participation, co-curricular activity, and institutional support. Ethical learning in the AI era is therefore distributed, iterative, and environmental rather than confined to a single course or event.

2.3 From One-way Messaging to Interactive Symbolic Environments

A third defining feature is the rise of interactive symbolic systems. Students increasingly encounter values not only through lectures, readings, or institutional statements, but through chatbots, avatars, simulations, dashboards, and algorithmically generated prompts. These systems do not merely transmit information; they stage interaction. They invite response, mimic dialogue, and often appear responsive to student emotion and identity. This can deepen engagement. Simulated cases in medicine, law, engineering, or business, for example, can place students in ethically charged situations that require judgment under pressure.

However, interaction should not be mistaken for depth. AI-generated dialogue can create an illusion of understanding without the reciprocity, accountability, or vulnerability that characterise genuine human encounters. The educational significance of these symbolic systems therefore depends on their framing. Used critically, they can support deliberation and perspective-taking. Used uncritically, they can flatten ethical complexity into smooth but superficial performance. Universities should accordingly treat AI-mediated interaction as a pedagogical instrument that requires design, moderation, and interpretive follow-through.

3 Major Risks for University Students

3.1 Algorithmic Filtering, Informational Fragmentation, and Echo Chambers

Recommendation systems can expose students to a wider range of information, but they can also narrow horizons by repeatedly reinforcing prior preferences. The risk is not merely misinformation in the narrow sense; it is the gradual reorganisation of attention around familiarity, emotional intensity, and identity affirmation. Students may come to inhabit tightly bounded informational worlds in which disagreement appears illegitimate, nuance seems unnecessary, and complexity is filtered out in favour of speed and certainty. These risks are especially acute for first-year and international

students, whose social and informational routines are still being formed.

For civic and ethical education, the problem is twofold. First, algorithmic filtering can fragment the public sphere within the university itself, making it harder to build shared reference points for discussion. Second, it can intensify social segmentation by grouping students into highly specific taste, language, or ideological clusters. The result is not simply diversity of opinion but, in some cases, hardening separation between communities that no longer encounter each other under conditions favourable to dialogue. Universities should therefore regard echo chambers not only as an informational problem but also as a pedagogical and relational one.

3.2 Human–AI Interaction and the Displacement of Moral Agency

The spread of emotionally responsive AI systems raises a second concern: the possible displacement of moral agency. Students now interact with tools that can advise, reassure, praise, persuade, and simulate empathy. These functions may be helpful when used as supplements to human support. For some students—particularly those navigating linguistic insecurity, loneliness, or academic stress—AI tools can provide low-threshold assistance at moments when formal services are unavailable. Yet the very convenience of such tools may weaken students' willingness to engage in slower, more demanding forms of human relationship and moral deliberation.

The problem is not that students will “confuse” humans and machines in a simplistic sense. Rather, repeated interaction with highly compliant systems may normalise a style of engagement in which friction, ambiguity, and accountability are minimised. Students may become accustomed to rapid, personalised responses that do not require them to negotiate difference, tolerate uncertainty, or assume responsibility for how advice is interpreted and acted upon. In this respect, the ethical challenge of human–AI interaction lies less in technological novelty than in the habits of mind and relation it may cultivate. Universities should therefore frame AI companionship and advising tools within a broader discourse of responsibility, care, and human oversight.

3.3 Synthetic Content, Misinformation, and Student Wellbeing

The proliferation of AI-generated content creates further risks for judgment and wellbeing. Synthetic text, audio, and video can now be produced at scale, with a degree of fluency that makes low-effort deception both cheap and persuasive. This affects students academically, socially, and psychologically. Academically, students may rely on fabricated references, plausible nonsense, or oversimplified summaries. Socially, manipulated media can damage trust within peer communities. Psychologically, continuous exposure to emotionally charged, sensational, or unrealistically polished content can intensify anxiety, inadequacy, and fatigue. UNESCO's recent guidance emphasises that generative AI in education requires strong attention to privacy, safety, transparency, and human-centred governance.

These harms do not affect all students equally. Students working in a second language, students with limited disciplinary confidence, and students under acute performance pressure may be especially vulnerable to apparently authoritative but misleading AI outputs. In addition, the combination of personalised feeds and synthetic media can create what might be called epistemic fatigue: a condition in which students become uncertain not only about specific claims, but about the reliability of evidence itself. Once this occurs, the educational task extends beyond fact-checking. Universities must help students rebuild habits of verification, source comparison, and calibrated trust.

3.4 Tool Dependency, Academic Integrity, and Weakened Autonomy

A final risk concerns dependency on automated tools. Generative AI can undeniably support learning: it can help students brainstorm, translate, summarise, or prototype ideas, and it may reduce barriers for students who are new to academic discourse. But overreliance can weaken autonomy. When students outsource planning, drafting, interpretation, or even self-expression to automated systems, they may achieve short-term efficiency at the cost of long-term intellectual growth. Kasneci et al. (2023) note that educational applications of large language models entail both substantial promise and significant risks, including inaccuracies, bias, and the erosion of independent learning if human judgment is not preserved.

The issue is not simply cheating, although academic integrity is part of the picture. More fundamentally, tool dependency can erode students' sense of authorship, agency, and competence. If every difficult task can be delegated, frustration tolerance declines; if every paragraph can be machine-polished, students may struggle to recognise their own voice; if every decision can be supported by automated suggestions, practical judgment may atrophy. A university response that focuses only on prohibition will miss this deeper developmental challenge. The task is to define forms of AI use that genuinely augment learning while preserving the student's role as an accountable thinker and author.

4 Reconstructing Educational Pathways

4.1 A Human-centred Framework for AI-enabled Teaching and Student Development

The first strategic response is to anchor AI use in a clearly human-centred educational framework. AI should be treated as an instrument that supports, rather than substitutes for, pedagogical judgment and relational care. This principle is now widely reflected in international guidance, which stresses that the ethical use of AI in education requires transparency, proportionality, privacy protection, and meaningful human oversight (UNESCO, 2023; Floridi et al., 2018). In practice, this means universities should define where automation is helpful, where it is risky, and where it is inappropriate. AI can assist with formative feedback, accessibility support, multilingual scaffolding, and routine administrative tasks. It should not displace the core human work of mentoring, ethical dialogue, academic judgment, or pastoral care.

A human-centred framework also requires attention to international and intercultural diversity. Students do not enter AI-enabled classrooms with identical linguistic resources, digital habits, or assumptions about authority and authorship. Policies should therefore be clear but not culturally naïve. Institutions should state what counts as acceptable AI assistance, how disclosure should work, and how students can seek help without stigma if they are unsure. Such clarity is particularly important for international cohorts, who may be navigating new norms of citation, collaboration, and originality.

4.2 Interactive Civic and Ethical Learning Beyond One-way Transmission

The second response is to move from one-way value messaging to interactive civic and ethical learning. Universities should create structured opportunities for students to deliberate on real and emerging problems: algorithmic discrimination, deepfakes, labour displacement, surveillance, misinformation, and the environmental costs of large-scale computation. Here AI is not only an object of regulation but also a topic through which universities can teach responsibility, fairness, and public reasoning. Ethical reflection becomes more durable when students are asked to interpret ambiguous cases, justify competing priorities, and consider the effects of technical design on different communities.

Pedagogically, this can be realised through simulations, case-based seminars, debate formats, role-play, and collaborative annotation of AI outputs. The goal is not to stage abstract moralism but to cultivate habits of deliberation. Students should learn to ask who benefits, who is excluded, which assumptions are embedded in a model, what evidence supports a claim, and what forms of harm remain invisible if decisions are optimised only for efficiency. Such approaches are especially effective when they include cross-cultural dialogue. International classrooms can become sites where students compare regulatory traditions, cultural assumptions, and ethical vocabularies rather than merely consuming standardised guidance.

4.3 Critical AI Literacy, Media Literacy, and Resilience Against Epistemic Harm

A third response is the systematic cultivation of critical AI literacy. This literacy goes beyond operational competence or prompt-writing skill. It includes understanding model limitations, recognising synthetic manipulation, questioning source credibility, and reflecting on how automated systems shape visibility, desire, and judgment. Existing scholarship on higher education already suggests that many AI initiatives have prioritised technical functionality more than critical pedagogy; educators therefore need frameworks that reconnect AI adoption with educational values (Zawacki-Richter et al., 2019; Popenici & Kerr, 2017).

For universities, critical AI literacy should be embedded across the curriculum rather than restricted to orientation sessions or computing courses. Students in the humanities need to understand synthetic media and data infrastructures; students in engineering need to reflect on social consequences and fairness; students in business, medicine, law, and education need domain-specific guidance on accountability and responsible use. Workshops should address practical topics such as verifying citations, identifying hallucinated claims, comparing outputs across tools, documenting AI assistance, and recognising emotionally manipulative or addictive platform design. Crucially, literacy initiatives should also connect to wellbeing. Students need strategies for managing attention, resisting compulsive platform use, and protecting their sense of self from continuous comparison with machine-generated ideals.

4.4 Institution-wide Governance, Assessment Redesign, and Shared Responsibility

The fourth response is institutional. Universities should not leave AI-related ethical education to isolated enthusiasts or individual instructors. They need coordinated governance that links policy, curriculum, student support, assessment design, and staff development. Assessment is a particularly urgent area. If students are evaluated only through decontextualised take-home tasks, institutions may unintentionally reward unreflective AI use. More robust assessment

ecologies combine drafts, oral explanation, process documentation, peer review, in-class performance, and reflective commentary. These formats make learning visible and reduce the incentive to treat AI as a shortcut to finished products.

Shared responsibility also means involving multiple stakeholders: faculty, librarians, student affairs teams, counselling services, digital learning specialists, and student representatives. Governance frameworks should include transparent data practices, channels for reporting harm, review processes for new AI tools, and explicit protections for vulnerable groups. In international universities, this governance should also account for linguistic diversity, unequal access to digital resources, and differing legal or cultural expectations about privacy and expression. A credible institutional response to AI is therefore not merely technical compliance. It is the construction of an educational environment in which innovation remains answerable to inclusion, trust, and human development.

5 Conclusion

AI is reshaping higher education not only by changing instructional tools but by altering the informational, relational, and moral environments in which students develop. In this context, the language of civic and ethical education is more productive for an international audience than narrower, politically coded vocabularies. It makes it possible to discuss student formation in terms of responsibility, judgment, dialogue, and public participation without collapsing these questions into narrow political doctrine or technical management.

The central argument of this article is that universities should respond to AI neither with uncritical celebration nor with blanket resistance. What is required is a reconstruction of educational pathways that keeps human flourishing at the centre of technological change. Such a reconstruction depends on four commitments: human-centred pedagogy, interactive ethical learning, critical AI literacy, and institution-wide governance. Together, these commitments can help universities support students not only as users of intelligent systems, but as reflective, socially responsible, and intellectually autonomous members of increasingly complex digital societies.

References

- [1] Bender E. M., Gebru T., McMillan-Major A., & Shmitchell S. (2021). On the dangers of stochastic parrots: Can language models be too big? In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (pp. 610–623). ACM.
- [2] Floridi L., Cows J., Beltrametti M., Chatila R., Chazerand P., Dignum V., Luetge C., Madelin R., Pagallo U., Rossi F., Schafer B., Valcke P., & Vayena E. (2018). AI4People—An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. *Minds and Machines*, 28(4), 689–707.
- [3] Holmes, W., Bialik M., & Fadel C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
- [4] Kasneci E., Sessler K., Küchemann S., Bannert M., Dementieva D., Fischer F., Gasser U., Groh G., Günnemann S., Hüllermeier E., Krusche S., Kutyniok G., Michaeli T., Nerdel C., Pfeiffer F., Poquet O., Sailer M., Schmidt A., Seidel T., ...Kasneci G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274.
- [5] Popenici, S. A. D., & Kerr S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. *Research and Practice in Technology Enhanced Learning*, 12, Article 22.
- [6] UNESCO. (2021). *Recommendation on the ethics of artificial intelligence*. UNESCO.
- [7] UNESCO. (2023). *Guidance for generative AI in education and research*. UNESCO.
- [8] Zawacki-Richter O., Marin 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, Article 39.