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The Architecture of Agency: Navigating Critical Thought in the AI-Driven Classroom

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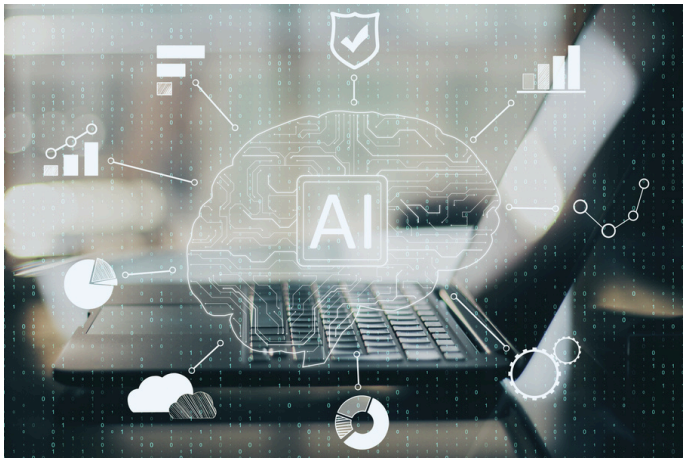
Generative Artificial Intelligence (AI) has become increasingly visible in higher education. In our classroom today, students often use AI tools to work on assignments, develop ideas, improve their writing, or make sense of difficult academic material. For many students, these tools offer a convenient starting point, especially when they are unsure how to begin a task assigned by lecturers.

AI has brought many benefits and opportunities. It can save time, offer suggestions, and provide students with another source of support in their learning. At the same time, its growing presence in the classroom invites us, as educators, to think carefully about what we want our students to gain from a university education. The issue, therefore, is not simply whether students should use AI. A more important question is how they use it. If AI is used thoughtfully, it can complement the learning process, but if it is used as a replacement for thinking, students may complete their academic tasks without fully engaging with the intellectual work behind them. Therefore, three important areas need to be addressed: human agency, critical reflection, and preparation for an AI-integrated workplace.

Preserving Human Agency in the Machine Age

One fundamental requirement for meaningful learning is human agency. In the context of artificial intelligence, human agency refers to the ability to retain control over one's thinking, choices, and decisions rather than allowing AI to perform all the work (Nosta, 2025). Nielsen (2025) further characterises human agency through three related concepts: self-direction, active thinking, and remaining in charge. In an academic context, these concepts involve students making sound decisions about what to learn, critically evaluating the information presented to them, and remaining accountable for the work they produce.

These three aspects matter especially in academic learning, where students are expected to take an active role in developing and expressing their own ideas. When students rely heavily on AI to formulate their main arguments or synthesise complex concepts, they may give up part of this learning process. They may complete the assessments, but they may have fewer opportunities to develop independent thinking. Therefore, our teaching methods should continue to provide students with opportunities to demonstrate their own understanding. Assessments can still incorporate AI, but students should be able to explain their choices, connect ideas to contexts, and show how they reached their conclusions. In other words, AI may assist the students, but it should not replace their voice as the thinker behind the work.



Navigating the Efficiency versus Reflection Trade-off

Generative AI offers remarkable efficiency gains, enabling students to draft text, summarise literature, and generate information within seconds. However, this speed introduces a significant trade-off. Over-reliance on rapid automated outputs can bypass the slow, reflective processes essential for deep critical thinking. Real learning happens through 'productive struggle', which means the effort students make to figure out difficult concepts rather than taking a quick shortcut (Hiebert & Grouws, 2007).

When tasks are automated to maximise speed, learners may become less involved in critically evaluating information. Holmes et al. (2019) emphasise that without intentional space for critical reflection, students may produce polished, highly structured assignments without undergoing the underlying intellectual development required to evaluate accuracy, detect bias, or understand nuance. Ultimately, a better future depends not on how quickly our students can generate answers, but on how deeply they are taught to think.

Preparing for an AI-Integrated Workforce

Rather than prohibiting AI tools, education must focus on building the judgement necessary to navigate an AI-integrated economy. Modern industries do not simply value speed; they require professionals who can take initiative, make independent decisions, provide human direction, and critically evaluate AI-generated outputs (Ono, 2026). Therefore, education should prepare students not merely to use AI efficiently but to critically evaluate its outputs and remain responsible for the decisions and work they produce.

Future workplaces will evaluate graduates not merely on how quickly they can generate content but on their ability to rigorously check AI-generated outputs, refine strategies, and use human judgement when AI falls short. By teaching students to treat AI as a collaborative counterpart subject to human verification, educators equip them with hybrid skills essential for future professional environments. Ultimately, modern education should not compete with technology but cultivate human agency and critical reasoning alongside it.

To give students greater ownership of their learning, universities should prioritise human thinking over instant AI-generated answers. Technology should enhance student talent rather than replace it, ensuring learners stay firmly in control of their own writing ideas. Preparing students for an AI-integrated workforce is not about competing with machine speed but about fostering the critical thinking, ethical grounding, and strategic thinking required to guide technology toward a better future.



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