

ASCILITE 2025

Future-Focused:

Educating in an Era of Continuous Change

AI nudging in education: A panel discussion on the effectiveness of persuasive AI in digital learning

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Higher education faces declining student engagement, resulting in poor motivation and course completion rates. Students struggle with workload management, social disconnection, and limited meaningful interactions with instructors and peers (Naylor et al, 2017). These challenges are intensified in digital learning environments where isolation is common. Artificial Intelligence (AI)-driven nudging systems offer potential solutions through timely, personalised feedback to improve motivation, increase behavioural engagement, and reduce dropout rates by restoring connection and teacher presence. This panel examines tensions surrounding persuasive AI through the EngageAI project, which uses persuasive AI technology to deliver personalised behavioural nudges to enhance student's learning experience. Four panellists will discuss: Does AI nudging's technical promise translate into meaningful outcomes? Are we empowering learners or creating algorithmic dependency? Can persuasive AI survive institutional constraints like budget limitations, privacy policies, and educational conservatism? The panel explores whether AI nudging represents adaptive learning's future or technological control over student behaviour.

Keywords: AI ethics, student autonomy, persuasive technology, online learning, educational innovation

Area of Focus and Theoretical Framework

Student engagement in digital learning presents a critical challenge, with fully online courses experiencing attrition rates six times higher than the national average of 12-16% (Universities Australia, 2022; Wang et al., 2023). As institutions increasingly adopt AI-driven solutions, persuasive technologies like nudging systems offer both opportunities and ethical challenges. This panel examines the intersection of persuasive technology and educational ethics, focusing on AI-driven nudging systems for student engagement. The discussion draws on three theoretical frameworks: Persuasive Technology Theory (Fogg, 2003), which explains how technology influences behaviour through motivation, ability, and triggers; Self-Determination Theory (Deci & Ryan, 2000), which questions whether AI nudging supports or undermines learner autonomy and intrinsic motivation; and AI ethical frameworks (Ashok et al., 2022), addressing intelligibility, accountability, fairness, autonomy, privacy, and governance. Using the EngageAI project at the University of South Australia as a case study, which develops personalised, context-aware nudging tools, this panel explores the tensions between technological innovation, ethical responsibility, and practical implementation in educational AI.

Panel Discussion Topics

This panel addresses critical questions that higher education institutions are navigating as they increasingly adopt AI technologies:

- Can systems designed to guide student behaviour enhance learner independence? The panel will explore whether AI nudging represents supportive scaffolding or digital paternalism.

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- How do AI nudging systems perform across diverse student populations? The discussion will examine whether these technologies inadvertently perpetuate educational inequities or create new forms of digital divide.
- What happens when technological solutions meet institutional constraints? The panel will debate whether AI nudging systems can realistically be implemented given budget limitations, privacy requirements, and organisational resistance.

Panel Composition and Perspectives

A/Prof Rhoda Abadia, co-lead investigator of EngageAI and Associate Dean (Online), will present AI nudging's technical promise, demonstrating how personalized interventions can boost student retention and engagement in online courses while arguing these technologies represent the future of scalable, adaptive educational support. **A/Prof Srecko Joksimovic**, Co-Director of C3L and co-leader of the EATEL SIG on Responsible and Equitable AI, will challenge the panel on ensuring AI nudging supports meaningful human development rather than algorithmic dependency, while maintaining equitable outcomes across diverse learners. **Dr Gosia Ludwichowska-Alluigi**, EngageAI co-lead and Program Facilitator (Online) with expertise in consumer behaviour, will examine how diverse student populations experience nudging systems and what they need from AI-driven support. **Mr Martin McCaron**, Executive Director Student Experience at University of Adelaide, will address institutional realities of implementing AI nudging at scale—examining whether persuasive AI can navigate budget constraints, privacy policies, competing priorities, and institutional conservatism, focusing on the gap between innovation and organizational readiness.

Moderator: Dr Reid Honan, Online Course Facilitator STEM, University of South Australia Online

Symposium Format and Engagement Strategies

The 55-minute session begins with live polling on three key propositions to establish baseline audience positions (10 minutes), followed by three structured 10-minute discussion rounds addressing whether AI nudging creates empowered or digitally dependent learners, its impact on diverse learners, and its institutional feasibility. Each round includes 2-minute opening statements, 4-minute cross-examination, and 4-minute audience Q&A. An interactive problem-solving segment (10 minutes) has audience members work in small groups to develop ethical AI nudging implementation criteria while panellists facilitate and provide expert input. The session concludes (5 minutes) with final polling to track perspective changes as panellists identify areas of consensus and ongoing disagreement.

References

- Ashok, M., Madan, R., Joha, A., & Sivarajah, U. (2022). Ethical framework for Artificial Intelligence and Digital technologies. *International Journal of Information Management*, 62, 102433.
<https://doi.org/10.1016/j.ijinfomgt.2021.102433>
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Fogg, B. J. (2003). *Persuasive technology: Using computers to change what we think and do*. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA
- Universities Australia. (2022). *Higher Education Facts and Figures*.
<https://universitiesaustralia.edu.au/publication/higher-education-facts-and-figures-2022/>
- Wang, M.T., & Eccles, J.S. (2013). School context, achievement motivation, and academic engagement: longitudinal study of school engagement using a multidimensional perspective. *Learning and Instruction*, 28, 12-23.

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