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The Future is Connection:

Collaboration, Creativity and Compassion in a Digital Society

Whose appraisal? A Freire-informed, think-aloud study of allied health students' use of Generative AI in evidence appraisal

Daniel Cury Ribeiro, Leanne Chalmers, Ryan Lopez, Merrolee Penman
Curtin University

Background

Generative AI (GenAI) can now produce artefacts such as essays, literature reviews, and worked rationales which challenge assessment designs that reward the products of thinking over the practice of it (Bearman et al., 2024; Corbin et al., 2025; Dawson et al., 2024). In evidence-based practice (EBP) education, students are required to appraise study quality, interpret effect sizes, and integrate findings into clinical decisions (Lehane et al., 2019). GenAI can now generate convincing outputs for each of these tasks. Observational data on what students do cognitively when they use GenAI in EBP tasks are scarce. Depending on how students use it, GenAI may scaffold the reasoning that EBP education is designed to develop or may bypass it (Vendrell & Johnston, 2026).

Aim

This study explores how allied health students engage with GenAI, how much they rely on it, and how they reason about its use when completing an EBP evidence-appraisal task.

Methods

This is an exploratory qualitative study using a concurrent think-aloud protocol with allied health students who have completed an EBP unit. The unit must have included critical reasoning as a learning outcome. Participants complete a structured 60-minute EBP task involving a clinical scenario. During this task, participants verbalise their reasoning and rationale for using or declining GenAI. A researcher facilitates this process through non-directive questions.

Sessions are audio-recorded, transcribed verbatim, and analysed in two stages. In the first stage, transcripts are coded deductively and inductively against the six critical thinking processes in Vendrell and Johnston's (2026) framework: conceptual interpretation, inferential reasoning, evaluative judgement, metacognitive regulation, intellectual curiosity, and epistemic integrity. This stage identifies whether and how reasoning is handed over to GenAI.

In the second stage, an interpretive analysis informed by critical pedagogy (Freire, 2005) examines how students position themselves in relation to AI-generated knowledge. Freire described a banking model of education, in which an authority deposits knowledge into passive students. This model offers a lens for examining uncritical acceptance of GenAI output, should that be present (Freire, 2005). Freire located authority in the school system and in the teacher who deposits knowledge into students (Freire, 2005). GenAI is a further candidate for that position in higher education. Unlike a teacher or an institution, it is designed by companies whose incentive is engagement and commercial return rather than student learning (Bartsch et al., 2025).

Findings

Data collection is in progress. This study will generate think-aloud data on how allied health students engage cognitively with GenAI during EBP appraisal tasks, mapping where GenAI use aligns with or diverges from the reasoning processes EBP education is designed to develop. The interpretive analysis will explore the degrees of agency students exercise over AI-generated knowledge and the conditions in which they exercise or relinquish it, which process-level coding alone cannot capture.

Conclusion

Findings may inform teaching and assessment design in EBP units and provide a think-aloud protocol that can be adapted to examine GenAI use in reasoning tasks across health professions education.

Keywords: Critical pedagogy, generative artificial intelligence, critical thinking

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