

An investigation into the effectiveness of Self-Regulated Learning Enhanced Feedback (SRL-EF) on medical students' clinical reasoning development when using virtual patients

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Abstract

Research Questions: What is the impact of providing feedback on self-regulated learning when assessing medical students clinical reasoning (CR) using virtual patients (VPs)? Given that decades of research suggests knowledge is critical for CR development (1), what is the added value of evaluating SRL whilst undertaking VPs, and what is the acceptability of doing so?

Methodology: This research uses a mixed methods approach. Final-year medical students have been randomised into three groups that undertake 10 VPs under different feedback conditions. Participant performance on VP cases will be compared with performance on a 100-item SBA CR assessment before and after. Concurrent validity of the VPs will also be evaluated using data from performance across usual curriculum assessments. Focus groups will be undertaken to explore students' perceptions of the VPs, and the perceived impact of feedback on future study and assessment preparation.

Findings so Far: Pilot studies and usability testing have demonstrated that VPs are acceptable to learners but must have clear alignment with the curriculum and existing assessment methods. CR feedback needs to provide information on the process and outcome, requiring the assessment function of the VP to gather sufficient data across multiple CR components. Quantitative data will be available at the conference, including comparisons with other assessment approaches.

Questions for Discussion: What is the role of VPs as an assessment method for CR rather than traditional learning activities? What affordances do clinical decision support tools integrated into VPs give for training in authentic CR? What is the role of artificial intelligence in providing feedback to learners using VPs? Discussion from the session will inform the way in which findings from the research are disseminated and train the trainer intervention designed for faculty seeking to implement VPs as formative and summative activities across curricula.

One supervisor will attend, depending on approval.

References (maximum three)

1. Norman G. Research in clinical reasoning: past history and current trends. *Medical education*. 2005;39(4):418-427.