



Mixed-method assessment of deep learning in fourth-year dental students

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Background

The challenge was to swiftly develop and deploy innovative clinical assessment methodologies that would allow students to demonstrate competence in the required clinical procedures prior to graduation.

What we tried

A mixed assessment method of deep learning was implemented to evaluate the attainment of clinical competence while engaging students in a meaningful learning experience. This involved completion of a structured viva voce examination and simulation-based experience. The VVE consisted of 13 image-assisted questions addressing various approaches to restore endodontically treated teeth. This section evaluated the knowledge, clinical reasoning, problem-solving, and decision-making readiness of each student, who elaborated verbally on the diagnosis, treatment-planning, and clinical procedures involved in the restoration of endodontically treated teeth. One faculty member evaluated each student.

How did we evaluate it?

Qualitative feedback

What did we find?

Based upon informal feedback, faculty felt the alternative assessment was comprehensive, reflected the students' level of knowledge, and demonstrated student skills essential for completing the procedure. Similarly, students (n = 21) reported that the assessment modality was successful and valuable (85%) and a fair alternative to the actual clinical procedure. Moreover, students suggested including this educational experience as part of the course going forward in order to augment preclinical training. Overall, the ACA experience created an educational environment conducive to the assessment of deep learning and higher-order thinking within the context of the related competency.

What main lessons did we learn?

- Students reported that the assessment was successful and valuable, and a fair alternative
- Care should be taken to adequately plan the logistics of distribution and completion of examiner checklists