

Engaging, Interactive and Immersive: Transforming Cases-Based Learning (CBL) with the Help of AI

Adapting clinical cases to diverse learning contexts poses resource and time challenges, particularly in terms of keeping students engaged and effectively assessing their critical thinking and problem-solving skills.

I. Challenges in Case-based Learning

Curating a quality collection of clinical cases is a problem we face. Adapting those cases to specific learning contexts that can vary significantly in terms of desired outcomes, learner profiles, curriculum, pedagogies, and assessment adds to the difficulty¹.

Assessing students' critical thinking and clinical reasoning skills through CBL presents another significant hurdle that remains to be addressed. Time constraints and potential biases from instructors are real issues that cannot be overlooked, and learners' receptiveness to honest feedback poses an equally challenging obstacle².

II. Crafting Engaging Clinical Cases with AI

Writing case studies engaging and reflective of high clinical practice fidelity has proven far more difficult than expected. The lengthy and convoluted cases can easily become tedious chores for students, leading to boredom and disengagement.

To solve this problem, the creators of Scope (EMRLD Health) and med2lab have partnered to embed med2lab's case study generator AI within Scope, enabling easy Generative AI (GenAI) construction of case studies. Med2lab's case study GenAI eliminates hours of authoring time while Scope's knowledge resources allow the author to verify that the generated case is accurate, correct, and conforms to both the science and to accepted standards of care. Scope then automates turning the case into a microlearning game. Once the case is completed, send a URL to students who will be directed into the gamified case within Scope's interactive EMR environment, which mimics the real-world practice setting and allows students to generate case reports ready to be presented. Such immersive learning experiences prepare students for real-world practice as future physicians.

In a community-based learning platform like Scope, besides authorizing and gamifying cases, instructors can access case studies authored by fellow professors or students for adaptation in classroom teaching or as assignments outside the classroom.

The agile design provides significant flexibility and adaptability for a case-based learning platform. Taking Scope as an example, it can function as an independent online learning platform or serve as an effective tool to facilitate active learning in the classroom. For instance, the instructor can display his version of the case on the screen for everyone, then have the students individually or in groups answer each question on their own laptop or tablet, with their responses appearing on the instructor's version of the case on the screen in real-time once submitted. This approach allows the instructor to turn the game of Scope case studies into an active learning experience in the classroom.

III. Harnessing AI-Driven Assessment for Instant Feedback and Continuous Improvement

Frequent and accurate assessment is essential for continuous improvement, particularly in self-directed and life-long learning³. Multiple approaches to assessment are necessary to minimize bias and reduce monotony, ensuring a comprehensive evaluation that measures a wide range of skills and knowledge in medical education.

Both Scope and Med2Lab are assessment-based learning platforms and evaluate learning in distinct ways. Their partnership enables users to seamlessly navigate between the two, allowing for assessment from different perspectives. Such collaboration provides users with a more complete view of their learning.

For example, Scope facilitates formative self-assessment and allows teachers to assess students by observing their responses to each question in real time. This allows teachers to quickly adapt their teaching to address students' needs. The instant feedback feature also effectively supports self-directed learning. Meanwhile, Med2Lab AI-driven assessment offers students instant feedback as they work through case scenarios, guiding them toward sound clinical decision-making and coaching them as they learn.

In summary, by utilizing med2lab's case study GenAI within Scope, users can generate numerous case studies within a very short period of time, validate them, and turn them into interactive games for learners. An intuitively designed case-based learning platform can enhance the authenticity of case-based learning by immersing learners in a real clinical context where quick decisions must be made under time pressure, and this experience can be further enriched by an AI-assisted assessment and coaching platform where learners can receive instant feedback for continuous improvement.

References

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