

## 2024 Showcase 1 – Abstract

### Improving student engagement in the medical sciences through meaningful learning experiences

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My teaching practice is designed to cultivate deeper student engagement in medical laboratory and biomedical science programs. The core principle is to shift away from rote memorisation and establish an active learning environment that fosters a thorough understanding of scientific concepts, critical thinking skills, and the development of practical competencies.

Abstract scientific concepts can be dry and impersonal. My practice incorporates anecdotes, case studies, and relatable examples that resonate with students. These stories illustrate the practical application of knowledge in medical laboratory and biomedical science careers, making the learning process more engaging and stimulating (Bain, 2004). Student feedback consistently highlights the effectiveness of this approach in enhancing learning and retention (e.g. "super-engaging and puts stories with concepts which helps me learn and remember things so much better," Anon., T1, 2024 Teacher Feedback Report).

A foundation tenet of the SCM is that traditional assessments that emphasise memorisation often fail to gauge a student's true understanding. I design assessments that go beyond mere recall. These assessments can take many forms, such as problem-solving exercises, case studies, or simulated laboratory tasks. By requiring students to not only recall information but also apply it to solve real-world problems encountered in the field, this approach fosters a deeper understanding of the subject matter and equips them with the necessary skills to excel in their chosen careers. Their knowledge is assessed via application, not regurgitation (Ashford-Rowe et al., 2014; Wiggins & McTighe, 2005).

Another key aspect of the SCM is minimising cognitive load; a significant barrier to student engagement is information overload and anxiety over memorising large swathes of content (Mayer et al., 2001). My practice addresses this concern by explicitly differentiating between assumed knowledge (previously covered topics) and new information being introduced. This allows students to focus their attention efficiently and leverage their existing knowledge base to build upon new concepts (Ambrose et al., 2010).

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Rote learning focuses on memorising isolated facts, which can quickly become outdated in a rapidly evolving field like medical science. My teaching prioritises the development of critical thinking and information literacy skills. Students are encouraged to learn how to effectively research topics, critically evaluate scholarly articles, and synthesise information from diverse sources. This equips them with the tools they need to stay current with advancements in the field and become lifelong learners (McKeachie & Svinicki, 2013).

## References

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