Integrating AI Literacy in Higher Education: A Collaborative Approach Between Staff and Students

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Background

A resource to educate students in the ethical, efficient & safe use of Generative AI is needed

Pro-innovation approach advocated by key stakeholders:
- Department for Education[1]
- Joint Information Systems Committee (JISC)[2]
- The Quality Assurance Agency (QAA)[3]
- The Russell Group of Universities[4]

The Team

Students & staff from
Faculty of Medicine and Dentistry (FMD)
Technology Enhanced Learning Team (TELT)
Library Services Team

E-module Aim

A co-creation project to support:
- Students as educators[5]
- Student development of AI literacy[6]

Commitment to harness the power of artificial intelligence (AI) to enhance students' educational experiences[7] → Key sections, including topic summaries, study strategies, practice questions, and feedback → Real-life examples and relatable scenarios were incorporated to enhance accessibility and applicability → Questions of varying difficulty levels were made to test students' understanding and encourage critical thinking

Examples of Student Co-created Content & Learning Points

Let's create your own case scenarios using AI

Step 1: Choose a topic or condition you are interested in, for dentistry this could include:

- Adult periodontitis
- Adult proximal caries
- Child initial caries lesion
- Child dental abscess

Quiz Question 1

When using AI like ChatGPT to create patient cases and answers for revision, which of the following is a potential disadvantage?

- Limited contextual understanding and potential for incomplete responses
- Efficient generation of diverse patient scenarios
- Accurate simulation of physical examination skills
- Accessibility and convenience for students

Check

Exchange of knowledge, ideas, and expertise occurred during the collaboration.

Unique insights that emerged from the combination of academic and practical perspectives.

Continuous feedback loop during the co-creation process improved the overall quality.

AI for student learning and research

Module Settings Participants Grades Reports More

Module introduction Introduction to AI Finding information Writing Critical thinking Revision Clinic-based learning Other uses of AI i
Module summary Template i

Creating MCQs, flashcards and patient cases

The following activities will guide you in how to create flashcards, multiple-choice questions and patient revision cases (SCR) using AI. At the end of each activity you will be asked to test your knowledge and reflect on how you might use these effectively in your educational journey. You will be encouraged to develop skills in Critical AI Literacy to safely navigate the use of AI in this context.

Activity 1: Making multiple-choice questions (MCQs)

This activity will guide you through what makes a good MCQ and how to make these types of questions using AI. You will also have the opportunity to share your best MCQ with students and contribute to the creation of a revision bank over time. But remember - be critical and **do not** assume their accuracy!

CLICK on Activity 1 below to get started!

- Activity 1 - Create your own MCQs using AI

Activity 1: Knowledge check / learning reflection

Having completed the MCQ Activity, it is time to test your knowledge and reflect on using AI in this way.

CLICK on the Summary Quiz below to complete Activity 1.

- Summary Quiz and Reflection Questions for Activity 1

Impact

Over 10,000 students enrolled
Adapted by SBM, integrated into MBBS 1 & BDS1 programmes
77-86% satisfaction rate across all sections

STUDENT FEEDBACK

I found the activities very useful for learning and helped me apply my knowledge.

The revision section provided very useful guidelines of using AI to help with time management, a skill many students need…

Finding out the advantages and limitations of AI, and when to realise that it's not reliable

Criticising AI. Not always what you think

I think the revision module was the most useful because it showed me how I can use AI in a very productive way to help me with my exams

Next Steps

Inspire students & staff within FMD and across other faculties to collaborate and co-create

References:
1. Department for Education Generative artificial intelligence in education: Departmental statement. 2023.
2. Joint Information Systems Committee (JISC). A Generative AI Primer. 2023; Available at: https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/ (Accessed: 21.08.2023).
3. The Quality Assurance Agency (QAA). QAA briefs members on artificial intelligence threat to academic integrity. 2023; Available at: https://www.qaa.ac.uk/news-events/news/qaa-briefs-members-on-artificial-intelligence-threat-to-academic-integrity# (Accessed: 21/11/2023).
4. The Russell Group of Universities. Russell Group principles on the use of generative AI tools in education. 2023; Available at: https://russellgroup.ac.uk/news/new-principles-on-use-of-ai-in-education/ (Accessed: 21.08.2023).
5. van Diggele, C., et al., Interprofessional education: tips for design and implementation. BMC Medical Education, 2020. 20(2): p. 455.
6. Ng, D.T.K., et al., Conceptualizing AI literacy: An exploratory review. Computers and Education: Artificial Intelligence, 2021. 2: p. 100041.
7. Alasadi, E.A. and C.R. Baiz, Generative AI in Education and Research: Opportunities, Concerns, and Solutions. Journal of Chemical Education, 2023. 100(8): p. 2965-2971.

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