



Digital Excellence Impact Case Studies

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AI-Enhanced Quizzing:
Elevating Education

Shweta Kuba





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Introduction and Background

This case study presents an exploration of the Quiz platform Quizizz, its features, cross validating its outputs with prompts and associated challenges to enhance student learning and engagement.

In the present era of Generative Artificial Intelligence (GenAI), the integration of interactive tools has become a necessity for creating an engaging and effective learning environment. These approaches allow learners to actively participate in the learning process and enhance their understanding of the subject matter. Educators can create a more personalised and student-centred approach to teaching, which in turn can lead to better academic outcomes and improved learner satisfaction.

Shweta Kuba is Senior Lecturer in Bioinformatics with a passion for innovative teaching methodologies, she has embarked on a journey to explore GenAI-powered tools to enrich the learning experience and help her students develop the critical thinking skills and creativity they need to succeed in their future endeavours. This also includes how to improve engagement in a growing cohort of diverse students.

Through collaboration with Digital Learning Specialist Simon Patterson, she was introduced to Quizizz, an online quiz platform offering promising features aligned with her teaching objectives.

Objectives

Shweta wanted to elevate her teaching practices, boost student engagement, and enhance overall satisfaction by utilizing GenAI-powered tools. The goal was to craft adaptable and inclusive learning experiences that catered to the diverse needs of students.

Implementation

Shweta signed up for the Quizizz platform and joined the Teesside University school group giving lifetime access to the GenAI premium features including generating quizzes from text, office documents, YouTube videos and Websites. These could then be further developed using the Quizizz 'Enhance' feature which can, convert question types, replace with similar questions and even convert to real world scenarios.

Challenges & Workarounds

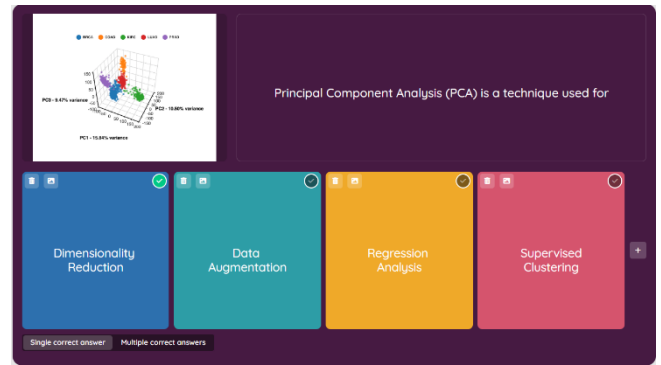
Even with Quizizz's potential, Shweta faced hurdles in crafting some quiz questions, particularly for niche subjects and at an appropriate level. To overcome this, she employed a hybrid strategy, using GenAI chatbots like Microsoft Copilot and ChatGPT for broad topics and specialised questions, respectively.

This approach ensured comprehensive subject coverage while leveraging both GenAI capabilities and human expertise.

Outcomes

The integration of AI-enabled features of the Quizizz platform brought tremendous improvements in my students' learning outcomes and teaching practices. Formative assessment through the Quizizz platform has enhanced student engagement and improved learning outcomes.

The data-driven insights provided by the platform have helped to provide targeted interventions, and adapted teaching strategies informed by student performance. This helped generate personalised assessments to cater for the diverse learning needs of the students. Additionally, it brought lots of enthusiasm, humour and motivation among students.



Impact on Learning

Through the integration of this teaching approach, higher levels of student engagement, motivation, and academic performance have been achieved. This approach has created an inclusive learning environment that caters to the diverse needs of all our students, leading to a dynamic, personalised and enriching educational experience. The approach has fostered a sense of empowerment among our students, as they can continuously improve through the emphasis on accessibility and inclusivity.

Future Applications and Expansion

Teaching complex topics to students from diverse backgrounds is a difficult task for both staff and students. Students often find it challenging to comprehend the concepts, leading to a loss of interest in the lecture. To counter this, Shweta is planning to explore more Gen-AI tools and collaborating with the Digital Learning Specialist team to continue to create an immersive and inclusive learning experience. Some of the planned approaches to this within the quiz platform include:

- Narration by popular characters, such as those historically relevant, to explain topics.
- Using AI to mimic different styles of teaching, such as a mixture of a humorous and serious tone.

Along with these tools, Shweta plans to include practical activities such as case studies, role plays, and scenario presentations to provide an enriching and diverse learning experience for her students.

By incorporating these synchronous and asynchronous activities, she plans to create a dynamic, interactive and peer learning environment that caters to the different learning styles and improves the knowledge retention of the students.

Recommendations

To achieve better learning experiences for students, Shweta highly recommends working alongside the Digital Learning Specialist team at Teesside University to explore the vast array of AI-enabled tools that can be tailored to students' unique needs. Utilising such tools will not only improve student engagement and learning outcomes but also enable educators to stay ahead of the curve and tackle the challenges that arise due to the constantly evolving landscape of education.

Conclusion

Incorporating GenAI technology in teaching practices can bring significant benefits to the learning experience. By leveraging Gen AI, we can create personalised and interactive learning experiences that cater to each student's needs and learning style. This leads to higher student engagement, improved knowledge retention, and a deeper understanding of the course materials. Additionally, AI-powered tools can facilitate collaboration among students and encourage inclusivity in the classroom by providing equal learning opportunities to all with different learning preferences.

The use of Gen-AI-powered formative assessments has proven to be a valuable tool in creating a more effective and efficient learning experience for our students.

Additional Resources & Useful Information

- [Digital Transformation CPD.](#)
- [Teesside University's Knowledgebase-Guides.](#)
- For help & support with Digital Pedagogy, Adobe or MIEE related queries contact elarning@tees.ac.uk & adobehelp@tees.ac.uk