Digital Excellence Impact Case Studies

2023/2024

Developing students' understanding of the potential influence of AI in education

By Billy Russell

Billy Russell
Senior lecturer in Education
SSSHL
Billy.Russell@tees.ac.uk

"

"AI helps to create wide range of ideas acting as a scaffold to your work."
Student Feedback

Developing students' understanding of the potential influence of AI in education through the critical evaluation of pre-developed AI resources and the development of their own AI generated resources

Background

Within an Education Studies Level 5 module focussed on developing students' practical teaching skills and use of technology.

Approach

Taught over two sessions, activities were designed with three primary outcomes in mind: to develop students' understanding of AI in education, to develop students' ability to evaluate AI in educational settings, and to develop the students' own ability to create educational resources using AI. The sessions were facilitated by an experienced teacher who had undergone specific training and research to upskill in AI prompting techniques.

These sessions were structured into several key phases:

1. **Introduction and Evaluation**: The first session began with an introduction to AI and its potential applications in education. The facilitator shared their own journey of learning AI prompting, highlighting the importance of understanding how to communicate effectively with AI tools to generate

"

"During my sessions, I emphasised the value of AI as a tool for generating and refining ideas. Signifying a shift from teachers creating resources, to critiquing AI generated resources."
Billy Russell

useful outputs. Students engaged with pre-prepared AI generated resources, such as lesson plans, and evaluated these using their wider learning.

2. **Hands-On Practice**: In the second session, students were given the opportunity to use Microsoft Co-pilot to generate activities, worksheets, and other teaching materials for a subject area of their choice. These materials were then refined through a scaffolded series of prompts. This allowed students to observe how variations in their input affected the quality and relevance of the AI-generated content.

3. **Critique and Discussion**: After creating their resources, the students participated in a critique session where they evaluated the AI outputs. This involved assessing the accuracy, creativity, and pedagogical value of the materials. The facilitator guided the discussion, helping students to identify strengths and weaknesses in the AI-generated content and to consider how they might refine their prompts to achieve better results.

4. **Pre and Post Surveys**: To evaluate the impact of the activity, students completed a survey before and after the session. The pre-survey assessed their initial attitudes towards AI in education, their confidence in using AI tools, and their expectations for the activity. The post-survey aimed to capture any changes in these attitudes, as well as feedback on the activity itself.

IDEA REFINEMENT

Select one of the ideas for further exploration (you can tweak them if you would like) and then do the following.

- adjust the activity for your preferred age-range/level of education
- provide scaffolds for learners of low to high ability
- implement some form of technology enhanced learning into the activity.

Has it done this effectively? Share with the person next to you before sharing with the class

> " *I was very much against AI at the beginning but now I feel much more open minded towards the use of it. I like the way Billy showed us how it can be used to aid us not only as students but as future teachers*"
>
> ***Student Feedback***

Outcomes

The outcomes of the teaching activity were multifaceted, reflecting both the immediate impact on the Students and broader implications for the integration of AI in education.

1. **Developing Understanding of AI in Education**: Students reported a significant increase in their understanding of AI and its applications in teaching. The hands-on practice with Microsoft Co-Pilot helped demystify the technology, making it more accessible and less intimidating. Many students expressed newfound confidence in their ability to use AI tools to enhance their teaching practice.

2. **Evaluating the Use of AI in Education**: The critique fostered critical thinking and evaluative skills. Students learned to assess AI-generated content not just for its face value, but for its pedagogical effectiveness. This critical lens is essential for educators who must ensure that any tools they use in the classroom meet high standards of educational quality. The pre and post surveys revealed notable shifts in attitudes towards AI, with many students developing a more positive outlook on its potential benefits when used thoughtfully and strategically.

3. **Creating educational resources using AI**: Students developed practical, hands-on skills for creating appropriate classroom resources. This allowed students to appreciate the value of AI in generating and refining ideas, whilst also maintaining a critical stance on the end product. This will support them as future practitioners, in a future, AI influenced educational landscape.

Overall, the teaching activity demonstrated the potential of AI to transform educational practices, while also highlighting the importance of ongoing professional development and critical engagement with new technologies. The feedback from students will inform future iterations of the activity, ensuring it continues to meet the evolving needs of educators and addresses the ethical challenges posed by AI in education.

Contact Information

For more information or to explore the use of interactive tools in education, please contact Digital Transformation (DX) in SLAR.

> *"Education has to adapt to the use of AI"*
>
> ***Student Feedback***