GenAI in Learning, Teaching and Assessment

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COMP3334
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Why did the instructor use GenAI for learning and teaching?

In computing studies, Xavier expressed concerns about students using GenAI to complete their homework, fearing that this would hinder their learning and create an unfair disadvantage for those who did not use GenAI. Nevertheless, he recognised the necessity of educating students on distinguishing between fair use and plagiarism when utilising tools like ChatGPT. He shared his experiences with the non-use of ChatGPT and its effects on students' learning in his subject.

How was GenAI used in this scenario?

At the beginning of the course, Xavier made it clear that COMP3334 was not suitable for students to use GenAI in assessments. He emphasised that submitted work may not be accepted for assessment purposes if its authenticity is questionable. Furthermore, he stressed that submitting GenAI-generated materials as one's own work or part of their work was an act of academic dishonesty. However, Xavier welcomed students to ask ChatGPT, as well as their teacher in class, all their questions for their own learning. In terms of assessment redesign, Xavier would ask questions in the final exam that only students who truly worked on the assignment before could solve.

What was the impact on student learning?

Xavier had his own framework for detecting whether students' assignment work was ChatGPT answers. In computing studies, he used a subject-specific plagiarism prevention tool named Baldr, which can compare documents using only properties linked to data compression. He would also compare students' work in terms of similarities with other students' and GenAI answers. In suspected cases, he would confront students with evidence for their submitted work. In general, he found that students' assignment work did not yield much similarity with ChatGPT answers, suggesting that students may have reshaped ChatGPT's code to avoid detection. However, he found a high correlation between students who used ChatGPT's answers and their failure to answer similar exam questions, which were purposefully designed by Xavier. Xavier believed that fundamental courses in his field did not benefit from GenAI, and to be able to discuss GenAI answers, students were required to master fundamental knowledge.

What were the challenges encountered during the implementation and what solutions were used?

Although Xavier initially specified that ChatGPT was not permitted in students' submitted assignments, he discovered numerous cases of students copying from one another and relying excessively on ChatGPT for their answers during his initial plagiarism checks. To educate students on distinguishing between fair use and plagiarism with ChatGPT, Xavier allowed students to withdraw any ChatGPT-assisted assignments without penalties. He received 84 withdrawals (approximately 30% of the class) and students continued their study with the understanding that further use of ChatGPT in this subject would result in official consequences for academic dishonesty.

Detection + sanction processes

Student vs student similarity → Observe ChatGPT answers → Extract patterns from ChatGPT, compare with similar assignments → Gain more knowledge about other patterns that are reused → Gather evidence per students

A. Confront students against evidence → Gather confession → Sanctions (should be lighter than if no confession)

B. Demonstrate your ability to catch cheaters → Offer students to withdraw their work if they cheated → Zero for confessed cases (lighter than if no confession) → Investigate fewer remaining cases