Case Study 20: University of the West of England, Bristol

Using Co-Pilot to Teach Critical Reasoning in Social Sciences

What issue were we trying to address and why?

The assignment in this case study is the result of a great deal of personal research in facilitating criticality and reasoning capacities without requiring significantly more time, energy, and emotional energy from students with Specific Learning Difficulties. Often criticality and critical reasoning is taught alongside extensive close reading which requires significant attention to detail, capacity to read unfamiliar documents, discussing abstract ideas, reliance on working memory and long stretches of concentration – things that many students will struggle with. There is a good amount of pedagogical/psychological evidence suggesting that familiarity and practice often enable greater engagement with all of these skills, but it can be overwhelming to begin. Therefore, this assignment enables students to engage critically with a Copilot-drafted assignment and improve it using peer-reviewed sources and critical reasoning. It also enables students to understand the significant flaws present in many Large Language Models (LLMs) as a whole and discourages inappropriate use (read: plagiarism) for future assignments.

What we did

Copilot and Microsoft Word are the digital learning tools used in this assignment. These were chosen because the assignment was designed to be as accessible as possible. Students have access to both Copilot and Word with their student registration, so the vast majority of students with their own computers will be able to access these pieces of software easily. Students were given several essay titles to use as prompts and they were asked to use Copilot to generate an essay answer. They were then invited to prompt Copilot to make certain changes, such as adding references or changing the length. From here, they then copied their final output into Microsoft Word and this was then annotated using the comments function with various improvements, including logical errors, inadequate, inappropriate and/or absent sources, and errors in structure and presentation. The assignment is informed by an inquiry-based learning pedagogy which is grounded in the constructivist philosophy, and values the importance of student's own investigations. This pedagogy also encourages skills required in both undergraduate and postgraduate study, and feeds into the graduate skills that are so important for our students' futures, such as IT fluency, self-motivation and critical reasoning capacities.

Who was involved

Sociology lecturer Beth Benker and CHSS Social Science Foundation Year students while avoiding disadvantaging students with Specific Learning Disabilities/ Difficulties/ Differences.

How do you plan to develop the intervention/ activity?

This assignment will be used for a piece of empirical research with my colleague Dan Gray on the use of AI in higher education contexts. There are accessibility benefits to these technologies which are under-utilised in Higher Education (HE) contexts.

- **Resist showing students too much**: allowing them to explore both LLMs and the literature in their own time enables them to engage much more easily later on.
- **Encourage students to talk to each other:** as students are getting used to both pieces of software their learning community can reinforce their learning better than the teaching staff in the room.
- **Ensure that prompt questions are not too advanced**: questions that are too hard will lose students immediately.
- **Do your research on UWE's AI guidance:** given how new LLMs are, guidance can change to reflect new developments quit quickly.
- **Do your research on LLMs just before the assignment, too**: they are often changing, and so their capacities are also changing – for example, ChatGPT had a major update in 2023, so now it can use new information in its answers. This could catch you out in the teaching room!

Further Information

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