Exploring the impact of ChatGPT and generative AI in Higher Education

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Universities faced a dilemma when ChatGPT was released: should they embrace or ban it from higher education? In a previous PESGB blog post, it was argued that embracing ChatGPT as a new essay-writing tool will help students to improve their essay-writing abilities. Considering that ChatGPT can be compared with the calculator, and the benefits and drawbacks that technology brought, similar arguments can be raised in more complex contexts. Text and image generative AI tools can help students push further their own imagination and creativity, especially in design education where historically novel tools were employed. Universities should accept that AI tools might become a common practice and concentrate on teaching students about their affordances and limitations, and about responsible use. Indeed, many institutions are now working on policies that address just these issues.

Some universities, however, have decided to ban ChatGPT. One of the key issues reported is academic integrity, the fear of plagiarism and "unfair" advantage given to some students who explore their potentials compare to others. Fear has also been expressed about the originality of the ideas and the authenticity of the student's essays when using this tool.

At first, academics had no means of formally knowing if students have actually used generative AI. However, anti-chatGPT and GPTZero are two upcoming AI plagiarism detection systems, and Turnitin, an established tool, now has AI detection algorithms. However, these tools may lead to further confusion. For example, a Ian Bogost, a

professor in Arts and Sciences who utilises Turnitin to check his students' essay, got the result that some essays were 100 percent AI. Misrecognition and misreporting are common to AI detection programmes, and it seems that are sometimes triggered by students' use of automated grammar checkers or translators. The experience left Bogost wondering if his students had actually used any of these tools against the rules and what the general impact on education will be from now on.

In other words, there may be a thin line between using a tool to support one's own work (generate ideas, help to rephrase tricky paragraphs, or check grammar or syntax errors) and using that same tool to cheat on an assignment. If students rely solely on these tools, rather than on their own writing and creative skills, we need to question how they use their academic journey, and to which extend they are learning from that experience. In comparison to a calculator, young students begin learning how to do math calculations and later in life use calculators to perform more complex calculations quickly and without errors. Students should be able to still perform calculations, even if they do not have access to a calculator and so far, the presence of a calculator did not render the teaching maths redundant. There are surely some who still worry that calculators have had a deleterious effect on our ability to perform mental arithmetic. Yet, as we know, calculator-use is now a part of mathematics schooling. But when students use a calculator, they are not risking plagiarism: no one has authorship rights over arithmetic. Foundational models like ChatGPT and new AI generative tools have raised questions of copyright infringement, as discursive responses from ChatGPT tends not to attribute or reference its sources. According to a recent Stanford University report, the legal validity of training these tools on data curated from the internet remains unclear.

As highlighted in a news' article, ChatGPT is trained by biased datasets and may, sometimes in subtle ways, produce content that reinforces harmful biases and stereotypes. A calculator does not pose these problems, either. According to ChatGPT declared limitations, because this language model has access to prompts-datasets, it can create content that is outdated, inaccurate and deceptive and might even 'invent' historical events, biographies, case law or drug treatment in diseases. This raises additional ethical questions as to how these tools might used in higher education contexts.

Academics discuss whether these technologies will result in a significant change to academia and the way universities do assessments. For example, student evaluations may be based on classroom activities or non-written assignments. Some academics, such as Jim Clack, argue that ChatGPT challenges the very concept of academic integrity itself, which, he argues, is an outmoded concept, significantly connected with the university's power structures and awarding procedures, and not essentially linked to the educational process per se.

As it has been acknowledged in UNESCO's most recent opinion regarding the use of Chat GPT in higher education, universities should start exploring how they can use it as an educational tool. Language models can generate alternative ways of expressing an idea, can act as an opponent to create an argument, can be a guide to navigate a conceptual space and can assist on the design process of a task. Students should learn about AI ethics and acquire relevant AI skills as part of their curriculum. Clear guidance should be given to students and instructors about how and when ChatGPT can be used and when it cannot in ways consistent with academic integrity. This guidance should be collaboratively developed with students and not imposed on them.

We agree with UNESCO that Universities ought to teach students about the correct expectations they should have from AI tools. To give one example: design education focuses on perspective-taking, a fundamental skill that enables designers to generate solutions that address the needs, wants, experiences, and sometimes wishes of end-users. Text-to-image generators cannot identify user pain points or gather user requirements to guide actual design decisions. This core design skill is what sets designers apart in creating products that are not only aesthetically pleasing but also user-friendly, accessible, and satisfying to use. It is also an output that cannot be expected by a mainstream generative AI tool, at least not without meticulous and dedicated training by a human on specific aspects of the design problem space.

Generative AI tools are much more than calculators; they present ideas and concepts expressed publicly by other people in a manner that simulates human conversation. In the same way that using a calculator has never made anyone a mathematician, generative AI will not turn anyone into a scholarly writer either. It has, however, sparked a debate about how higher education can focus on and identify what is 'innately human,' such as critical thinking, curiosity, empathy, imagination, and playful experimentation.

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