Bethan Staton and Madhumita Murgia, "[The AI revolution already transforming education](#)", *The Financial Times*, **May 21, 2023**

The text below was produced by ChatGPT-4 and summarises this article. The summary was originally only 450 words. My changes are indicated in [square brackets], or words ~~crossed out~~**. The "prompt" used was:** *Summarise the following text on AI in education in 500 words. Draw out the main ideas and uses of AI, as well as the difficulties and dangers. Avoid using the anecdotal information given about specific users. However, include the main ideas by Sal Khan.* **Words in bold** are defined below the text.

The emergence of artificial intelligence (AI) in education, particularly through tools like ChatGPT, has brought about significant changes and challenges. Students now have access to a powerful AI software that can generate sophisticated responses and help them complete **assignments** with ease. While concerns about AI-based plagiarism have led some institutions **to ban** such tools, others are cautiously exploring ways **to leverage** generative AI to enhance learning experiences.

The immediate impact of AI in education has forced schools and universities to rethink their teaching and assessment methods. Institutions like the University of Cambridge initially considered banning AI tools like ChatGPT but eventually decided to establish [fair use guidelines](#). Surveys have shown that many students have used AI tools for their studies, even in work contributing to their degrees. Students appreciate the convenience and efficiency provided by AI, but there are concerns about its impact on essential skills and the potential erosion of students' abilities [like **literacy** and **numeracy**].

Generative AI brings both possibilities and risks to education. On [the] one hand, it can improve students' writing skills and help them structure their arguments. [It can help with brainstorming, and understanding complex topics.] It can also provide visual aids and enhance the learning process. On the other hand, AI-generated essays and answers may lack originality and critical thinking. Educators [also] need to reconsider the purpose of **assessments** and ensure that students engage in meaningful thinking and communication.

Accuracy and bias are major challenges associated with generative AI. Language models like ChatGPT can "hallucinate"[: i.e.] ~~and~~ fabricate facts, citations, and sources. Additionally, AI-written text can exhibit biases learned from [internet] ~~training~~ data, including sexism, racism, and political partisanship. The "black box" effect, where it is unclear how AI arrives at its conclusions, further complicates the situation. Detecting AI usage for plagiarism ~~detection~~ remains unreliable.

Despite the risks and limitations, educators are increasingly exploring the possibilities of AI in the classroom. Tools like GPT-4, the underlying model of ChatGPT, have the potential to revolutionize education by providing **on-demand tutoring**, coaching, and personalized feedback. The founder of [Khan Academy](#), Sal Khan, [sees ChatGPT as "probably the biggest transformation of our life] and has developed an AI tutor called Khanmigo, which uses GPT-4 to engage students in debates, answer questions, and provide explanations. However, careful **oversight**, moderation filters, and pedagogical **soundness** are crucial to ensuring responsible use of AI in education. [Equity is also an issue as not all students and schools have good access to AI.]

There is a growing realization that generative AI should not be banned but used thoughtfully and critically. The focus should be on developing students' critical thinking skills, ["computational literacy,] overcoming challenges, and experiencing the satisfaction of their own work. While AI can be a valuable tool in the future, it cannot replace the most important aspects of human learning. Proper guidance and critical thinking are essential for **harnessing** the potential of AI in education and preparing students for the changes and challenges of the future.

Question: List the main strengths and weakness of generative AI like ChatGPT given in the text (answers below)?

Assignment = a mission or task, usually a homework in education; **to ban** = to prohibit, to outlaw, to exclude; **to leverage** = use as a lever, to provide extra strength; **literacy** = the ability to read; **numeracy** = the ability to use numbers; **assessment** = evaluation, appraisal; **accuracy** = conformity to fact, precision; **on-demand tutoring** = teaching support which students can request/demand; **oversight** = supervision; **soundness** = reliability, to be sound, sure, stable; **to harness** = to attach, to fasten (harness = equipment used to control an animal).

Strengths include: sophisticated responses, help with assignments, convenience and efficiency, improved writing skills, structured arguments, brainstorming, understanding complex topics, provision of visual aids, on-demand (and so individualised tutoring). **Weakness** include: plagiarism, concerns about essential skills, erosion of abilities, lack of originality, lack of critical thinking, the need to reconsider assessment, accuracy, hallucinations, biases including racism and sexism, "black box effects".