

OpinionAI

## You won't be able to rely on a calculator every day!

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In the late 80's, as a young and enthusiastic student, I vividly recall moaning to my mathematics teacher about why I couldn't use a calculator to complete my exam. The teacher's stern response was a phrase that I've never forgotten: "You won't be able to rely on a calculator every day!" Now, decades later, the irony of that statement seems almost laughable as we find calculators built into our PC's, laptops, smartphones,...in fact I even have a calculator built into my fridge! Readily accessible at any time.

The fact is, when I was wearing school shorts and being an argumentative pain in my teachers behind, calculators were perceived as a crutch that would diminish a student's ability to develop critical thinking and problem-solving skills. As time passed and calculators became a staple in classrooms, educators recognised their value as a tool for teaching and learning. They were no longer seen as a threat to students' mental prowess, but as a valuable aid that could help them solve complex problems more efficiently.

Fast forward to the present day, and we are faced with a new revolution in the education sector. Large Language Models (LLMs) such as ChatGPT are making waves, much like calculators did, and with it, similar arguments against this technology is coming into fruition. There is immediate resistance from some academics, who perceive the use of such tools as a mechanism that will lead students to rely on LLM's without thinking for themselves. However, this sentiment echoes the same preconception of calculators. It is important to remember that both calculators and LLMs are tools designed to assist students in their learning journey, not to replace their inherent problem-solving abilities.

By teaching students how to use LLMs effectively and ethically, we can foster a learning environment that encourages critical thinking and creativity, much like how the use of calculators eventually became an integral part of mathematical education. Furthermore, these LLMs are not just being used by university students,- companies spanning multiple sectors are using LLM's to improve research efficiency, create content, identify bottlenecks in projects and aid hiring processes - and this is just the tip of the iceberg. By incorporating LLMs into the educational process, we

can equip students with the ability to leverage AI technology for various tasks, and better prepare them for the future job market.

The question then, is how universities embrace this new technology correctly. The answer is through engagement, and a rethink of our approach to assessments. Traditional assessments often focus on knowledge repetition, which can now be easily manipulated by AI tools. Instead, we need to create problem-based assessments that require students to think critically, analyse complex situations, and apply their knowledge to real-world problems.

Moreover, we should develop assessments that not only test students' understanding of the subject matter but also specifically focus on utilising LLM technology. Such assessments will require students to demonstrate their understanding of the LLM's capabilities and limitations, while simultaneously developing their problem-solving skills. For instance, students could be tasked with using ChatGPT to analyse a complex case study and propose potential solutions, showcasing their ability to integrate the technology with their own critical thinking. This approach could also foster collaboration between students, as they tackle LLMs together and share their insights gained from these tools.

LLMs are going to become increasingly integrated into all forms of industry, as such; the ability to use LLMs effectively is likely to become a sought-after skill. Developing assessments and engaging with students on how to use these LLMs means we will equip them with the knowledge and skills necessary to navigate future jobs markets.

Despite what some may think, it is important to remember that LLMs like ChatGPT were not designed to replace human intellect but rather to enhance it. Whether we like it or not, the future is already here, the technology isn't going away. We need to embrace the potential of these new tools and incorporate them into our teaching and assessment or else we will fall behind the curve. LLMs are not the enemy unless we make them so. The question we should be asking ourselves isn't if we should allow students to use LLMs, it should be how can we do it in a way which enables them to thrive in a world of potential. My mathematics teacher didn't understand the potential ubiquitous nature of the calculator and we need to ensure that we don't make the same mistake. After all, I think I can probably download ChatGPT onto my fridge!

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