[COLUMNIST] AI as a new guru: The good, the bad, the ugly

Dr Abdul Mutalib Embong, Muhammad Mursyid Mohd Zaini
01/10/2024 11:30 MYT

While AI is transforming education by personalizing learning experiences, fabrication, falsification, and plagiarism are the core misconducts that can be manipulated by those who use AI. -Filepix/Pixabay

ARTIFICIAL Intelligence (AI) is nothing new. It refers to the ability of a digital computer or computer-controlled robot to perform tasks autonomously or with human guidance.

AI Brief

- *AI is increasingly integrated into various sectors such as telecommunications, transportation, life sciences, smart cities, agriculture, e-government, and finance, enhancing efficiency and decision-making.*
- *Countries worldwide, including the US, China, and Singapore, are heavily investing in AI research and technology to maintain competitive advantages and drive economic growth. The US leads with significant private investment and a large number of top AI researchers.*
- *AI is transforming education by personalizing learning experiences and automating tasks like grading. However, it also raises concerns about academic integrity, with issues such as cheating, fabrication, and plagiarism becoming more prevalent. Educators need to use AI responsibly and teach students to do the same to maintain the integrity of academic work.*

AI has become a common tool in many industries, replacing human workers in certain tasks. Easy to say, AI functions like the human mind and, to a certain extent, human physical energy.

It endows some characteristics and components of human intelligence; be it the ability to reason, discover meaning, generalize, or even use language.

It is human nature; everyone wants and dreams to be rich. The craving is independent of one's economic status.

AI is rapidly gaining attraction in several key sectors, including telecommunications, transportation, life and medical sciences, smart cities, agriculture, e-government, and finance.

Developed countries work to the fullest to improve their standing in global competition and direct AI onto a route that profits the economy and people.

The study by Analysis Group, commissioned by Facebook in 2016, found that AI's efficiency in specific sectors could significantly enhance business processes and decision-making, leading to increased knowledge and information access.

However, the study projected a more conservative overall economic impact of AI, estimating a gain of $1.49-2.95 trillion across all sectors over the next decade.

From France to Japan, most countries invest in AI research and technology. As of 2024, the US leads the way, with nearly 60% of the world's top AI researchers based on the continent, and it has attracted $249 billion in private investment for AI projects.

China and the UK follow closely, with Canada subsequently on the list.

In education, several nations are investing in AI to compete in the fourth industrial revolution. Singapore's "Smart Nation" strategy, for example, aims to position the country as a leader in AI by 2030 by bringing together researchers, government, and industry.

The core concept of the plan is to leverage AI to personalize education for each student, particularly those with special needs.

This technology could offer personalized feedback and motivation, automate the grading process, and employ machine learning to analyze student responses individually to classroom pedagogy.

Needless to say, the world of academia is using AI on a daily basis. It involves machine learning creating new content like text, images, videos, and sounds.

AI applications like ChatGPT, Google Gemini, Dall-E, and Murf are at the fingertips of the IT savvy.

Among young learners, AI can provide real-time responses, allowing them to understand their learning pace appropriately.

For new learners, AI may be used to gain skills and competency at their personal tempo.

At an advanced level, AI can produce virtual simulations that allow users to explore restricted procedures or scientific phenomena.

As AI gives a wide array of tools and applications that can significantly improve the teaching and learning process, it empowers both educators and students to achieve better and broader learning outcomes.

However, there are headaches as well. AI has become a goldmine of cheating and a major concern for educators.

Instead of using AI to gather data that can assist with research work, homework, or assignments, most students or researchers use it as a shortcut for the tasks given.

Fabrication, falsification, and plagiarism are the core misconducts that can be manipulated by those who use AI.

Back in early 2024, there were a few cases reporting so-called "scholars" producing hundreds of research papers in a year. This is because some free AI tools can generate hundreds of research papers in a short period.

It is normal for cheating to take place everywhere, even in schools. However, experienced teachers who have studied and labored long in teaching can easily detect cheating without any software.

Experience, wisdom, and maturity do count.

There must always be suspicions. Flawless grammar, cohesiveness, coherence, and well-structured ideas should be an alarm to teachers.

Once, I caught a student who copied and pasted a machinery diagram generated by AI!

Fortunately, recent advancements in technology have led to the development of tools capable of identifying the originality and generic nature of academic work, ranging from simple essays to complex statistical analyses.

It is crucial that educators familiarize themselves with these tools to ensure the integrity of their students' work.

At a certain point, there should be harsh punishments or penalties for wrongdoers, yet it needs vigorous assessment to catch the culprits.

However, this is not really the true solution to academic dishonesty. There is more to curbing breaches of academic integrity.

The fundamental premise is that students should understand and recognize that they are committing an offense of academic misconduct. This act involves stealing an idea or ideas and subsequently claiming them as their own.

Teachers need to engage with students on how AI can support them in their learning and not the other way around.

There must be some strategies to use AI in the right manner so that it does not deteriorate the novelty of knowledge.

The impact of AI in education is widespread and transforming every walk of life. The primary approach to addressing AI in the discipline entails a humanitarian approach, prioritizing the needs and well-being of students in its development.

Despite the hiccups, AI is significantly reshaping the world and prompting critical considerations for all.

By doing so, we can leverage the power of AI to drive economic growth, promote social justice, and encourage sustainable progress worldwide.

And it all starts from the learning process.

Dr. Abdul Mutalib Embong and Muhammad Mursyid Mohd Zaini are members of RIG 4, Centre of Fundamental and Continuing Education (PPAL), Universiti Malaysia Terengganu (UMT).