

Artificial Intelligence: Social and Psychological Impact on Education

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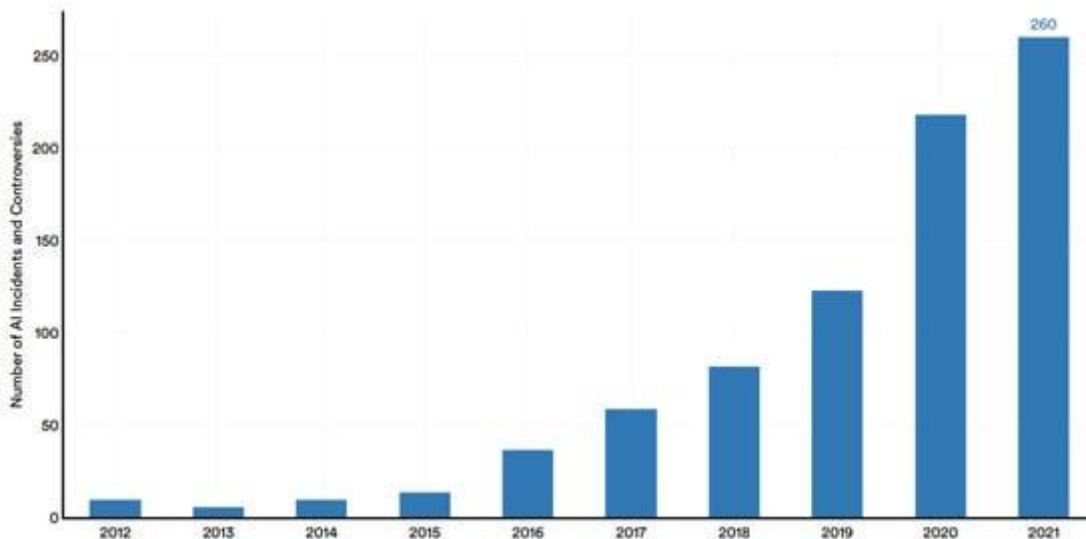
The growth of technological change in the 21st century has evolved into an integral part of contemporary life. Technological innovations have brought revolution in all aspects of human life, from agricultural production, to health and communications. (Bwoles et.al. (2014). Technological changes, during the last decade in particular, have brought the evolution of artificial intelligence with substantial social and psychological impact in the field of education. The educational sector has shifted in operating through distance learning through platforms, integrating smartphones, tablets and computers as primary tools of learning.

Artificial Intelligence can be utilized as a tool to turn education into a more personalized, interactive and effective experience for students. Amongst the benefits are ameliorated educational performance, enhanced time and resources' management and global access to education (Kamalov et. al, 2023). AI is also present in context, methods and evaluation systems. To be more specific, there are applications that reduce assessment time, recognise students' weaknesses and adjust the curriculum and the examination to their needs, which is a way to promote a more personified experience in the field of education. In addition, there are applications that translate articles in different languages, and thus these expand one's breadth of accessible resources at their disposal. According to CNN Greece (2022), use of AI can read a student's expression and detect if they are comprehensive of the lesson. According to students' opinion, AI can facilitate learning and redefine the way they learn. It can be a powerful tool to solve queries and not necessarily be a tool to plagiarize assignments, as it's nowadays perceived (Nagelhout, 2024).

The benefits of Artificial Intelligence include enhanced results, enhanced time and financial management and global access to education (Kamalov et. al, 2023). Indeed, personalized

learning holds a plethora of advantages, as, taking into account that students have different learning needs, Artificial Intelligence that holds the capacity to analyze data, recognize patterns and suggest material according to preferences, adjusts education to the personal needs and preferences of each student, resulting into a more positive experience from both the students' and the educator's aspect. Moreover, it can provide incentive, challenges or competition to students, which according to research can keep students engaged in a more consistent manner (Kamalov et. al, 2023).

On the opposite side of the spectrum, AI's evolution also hold challenges and moral concerns. During the period of 2012-2021, moral concerns increase and the users are exposed to hazards that they may not be aware of (see Chart 1). These include data protection and safeguarding, discrimination, plagiarism and academic integrity, as well as the relationship between the educator and the student:



Graph 1: Number of moral concerns regarding Artificial Intelligence (Checkpoint Team, 2024).

Data Protection and Safeguarding: Tools of Artificial Intelligence are included in educational institutes, and accumulate a large number of personal data, such as students' personal data, their performance data and their behavioral patterns.

Discrimination: Discrimination derives from the way the system operates. Material production is based on data that are already available online (the system is trained to detect these) and include different points of view, that can potentially affect the opportunities of a student to learn and consequently affect their learning and their access. Data that are accessible through the web, don't represent or replace existing bibliography.

Plagiarisms and academic integrity: one of the most notable disadvantages of the list is the concern of plagiarism, threatening academic integrity through the creation of ChatGPT,

Chatspot etc., which have the potential to produce assignments and articulated on the students' behalf. It is of vital importance to note that it is authentic – yet artificial- material, which may not be recognized by anti-plagiarism operating systems.

Educator-Student relationship: Network's usage is correlated to harassment and its addictive nature, qualities that are also correlated with AI usage. In the case of AI in particular, it can be used to copy someone's voice and produce words or instructions that were not said (Nagelhout, 2024).

It's worth mentioning that research of thematical analysis from policies of 24 different countries, concludes that the use of AI, is at general bond absent from discussions regarding establishing policies, while simultaneously it is prioritized to train educational staff to use it (Schiff, 2022). With a 30% increase in global cyber attacks and a growing sophistication of cyber criminals using advanced techniques and machine learning in the last two years, the top most attacked industries are education and research institutes, due to sensitive personal data and an increase in online users (Checkpoint Team, 2024).



Graph 2 Weekly Cyber Attacks per Organization: The education/research sector was the number one most attacked industry globally, seeing a 53% increase in Q2 2024 compared to Q2 2023, with an average of 3,341 attacks per organization every week (Checkpoint Team, 2024).

To conclude, the use of Artificial Intelligence in education certainly brings changes from a social and psychological perspective. It promotes individualized education, educational diversity, global access to resources and answers to queries, nevertheless, it also holds important perils regarding data protection, safeguarding and academic integrity, as well as psychological consequences of cyber-bullying, with hazards of breach of personal data. The use of technology depends on judicious use and legal frameworks to bring healthy boundaries to this new contemporary change.

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