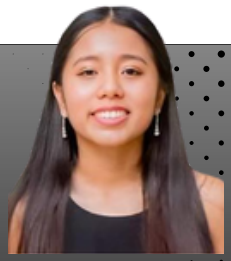
# Health and Technology: Artificial Intelligence and Digital Educational Instruments impact on Medical Education.



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Throughout history, technology's employment in Medicine has turned into a key pillar for clinical procedures along with medical education. In previous years, Artificial Intelligence (AI), in conjunction with digital resources like Anki and Kahoot, has reshaped how medical students access information and engage in the learning process. This article will address how medical training is being impacted by technology focusing on AI, Anki, and Kahoot.

**The Role of Artificial Intelligence (AI) in Medicine**

Medicine is no exception to AI's revolution. This technology has been implemented to enhance study methods through summaries and diverse resources, resulting in an effective and interactive learning experience. According to a study by Jiang et al., AI plays a key role in education, particularly in clinical simulations and medical data analysis, allowing students to practice in safe, controlled environments. (1)

As previously mentioned, one of the AI tools is its ability to generate practice exams tailored to the student's abilities, providing instant feedback on their strengths and weaknesses, and helping them enhance their knowledge. This kind of resource is valuable for students since it allows them to be self-taught and make the most of time.

In addition, AI is being applied in other areas such as diagnosis and imaging, among others. Techniques like image recognition and genomic data analysis are transforming how doctors identify diseases. Castro et al. suggest that AI demonstrates high performance in interpreting magnetic resonance images and CT scans, enabling more accurate and faster diagnoses. This advancement not only enhances the quality of diagnoses but also allows medical students to familiarize themselves with radiological images, with AI supporting them and continuously reviewing their learning process. (2)

**Digital educational instruments: Anki and Kahoot**

Besides AI, platforms such as Anki and Kahoot have become relevant among medical students due to their interactiveness and accessibility.

Anki is a platform that employs a Spaced Repetition System (SRS), enabling concept review through strategically timed intervals that enhance long-term memory retention. Ayala et al. suggest that spaced repetition, using tools like Anki, has proven to be one of the most effective techniques for learning and retaining information among medical students. This method is particularly useful in fields that require memorization of large

volumes of information, such as anatomy, pharmacology, and disease diagnosis. The authors' pilot study demonstrated that Anki significantly contributes to long-term memory retention throughout medical training.(3)

On the other hand, Kahoot is a game-based learning platform that enables students to engage in interactive and competitive quizzes. This tool has proven to boost engagement, commitment, and motivation due to its dynamic and entertaining evaluation mechanism. According to Fernandez et al., the use of Kahoot in Pathologic Anatomy showed that it effectively measures the level of retained knowledge among students, enhancing their learning process. The study demonstrated that this platform is a valuable tool for reinforcing key concepts while keeping students motivated and involved in their studies. In medical education, Kahoot can be utilized to create practice exams in a fun and competitive format, increasing interest and helping students assess their prior knowledge before taking actual exams. (4)

**AI's impact on Global Health and new study formats based on digital education instruments**

The integration of technological tools in medical education enhances access to high-quality educational resources, which is particularly valuable in underdeveloped countries with limited educational opportunities. These accessible, often free tools, promote a more equitable medical education by reducing barriers such as geography and financial circumstances.

Additionally, the use of digital tools in medical education facilitates the creation of global learning networks where professionals and students can share resources, research, and experiences. This collaboration not only enhances the quality of education but also creates international engagement to address global health challenges.

**Ethical considerations and challenges**

While technology has advanced rapidly in medical education, it has also introduced ethical considerations and challenges. One fundamental concern is the risk of technology diminishing human interaction. Empathy, clinical judgment, and patient communication are essential skills that cannot be easily replicated by a machine.

Furthermore, students may engage in passive memorization or misuse simulation tools, which can reduce their ability to demonstrate critical and reflective thinking in real-life situations. While these tools are valuable resources, they should complement active learning and direct patient interaction rather than replace them.

Finally, the use of AI in medical diagnosis raises concerns about privacy and data security. Managing vast volumes of information necessitates urgent measures to prevent misuse. It is essential for digital policies to prioritize the protection of patient information.

**Conclusion**

Technology, particularly AI and digital platforms like Anki and Kahoot, is transforming medical education by enhancing accessibility, efficiency, and diversity. These tools enable medical students to deepen their learning, improve diagnostic accuracy, and engage in simulations to strengthen their knowledge. However, their implementation must be balanced, preserving the critical role of human participation in medical practice and ensuring the protection of patient data. When guided by ethical principles, technology has the potential to not only advance medical education but also improve global health as a whole.