

FERRAMENTAS TECNOLÓGICAS USADAS POR ESTUDANTES NA FACULDADE DE MEDICINA

TECHNOLOGICAL TOOLS USE BY STUDENTS IN THE MEDICAL SCHOOL

João Pedro Cardoso Faccio¹, Daniel Lima Fernandes².

1. Professor do curso de Medicina na Afya Centro Universitário de Pato Branco; 2. Aluno do curso de Medicina na Afya Centro Universitário de Pato Branco. E-mail: dnlf2004@gmail.com

Thematic Area: 1 - Health

RESUMO

Introdução: Com o avanço da tecnologia, as formas de aprendizagem no ensino superior sofreram alterações, especialmente na formação médica em que o acesso a informações atualizadas é essencial para a construção do saber teórico e prático. Nesse sentido, o presente trabalho teve como objetivo analisar as principais ferramentas tecnológicas usadas por estudantes de Medicina e suas contribuições para o processo de ensino e de aprendizagem. **Métodos:** Para isso, foi desenvolvida uma revisão narrativa de literatura, realizada a partir da análise de dois artigos científicos publicados em inglês e selecionados por abordarem diretamente o uso de tecnologias por estudantes de Medicina. **Resultados:** Os resultados demonstraram o uso generalizado de smartphones, plataformas de vídeo, redes sociais, aplicativos de saúde, podcasts, ferramentas de comunicação e ambientes virtuais de aprendizagem. Entre os recursos de maior destaque, sobressaíram o smartphone — utilizado para acesso rápido a conteúdos acadêmicos e aplicativos — e o YouTube, empregado como ferramenta complementar para a revisão e o aprofundamento da compreensão do conteúdo. Estudos também destacaram benefícios relacionados à flexibilidade, autonomia, facilidade de acesso à informação e maior engajamento dos estudantes. **Conclusão:** No entanto, foram identificadas limitações, como distrações, dependência de conectividade à internet e dificuldade em avaliar a confiabilidade das informações disponíveis. Conclui-se que as ferramentas tecnológicas desempenham um papel importante na educação médica, podendo potencializar o aprendizado quando utilizadas de forma crítica e equilibrada, além de complementar as atividades de ensino tradicionais.

Palavras-chave: Educação Médica. Estudantes de Medicina. Tecnologia Educacional. Aprendizagem.

ABSTRACT

With technological advancements, learning methods in higher education have evolved — particularly in medical training, where access to up-to-date information is essential for building both theoretical and practical knowledge. Accordingly, this study aimed to analyze the key technological tools used by medical students and their contributions to the teaching-learning process. To this end, a narrative literature review was conducted based on two scientific articles published in English that were selected for directly addressing the use of technology by medical students. The results revealed widespread use of smartphones, video platforms, social media, health apps, podcasts, communication tools, and virtual learning environments. Prominent resources included smartphones — used for quick access to academic content and applications — and YouTube, utilized as a supplementary tool for reviewing and deepening the understanding of course material. Studies also highlighted benefits such as flexibility, autonomy, ease of access to information, and increased student engagement. However, limitations were identified, including distractions, reliance on internet connectivity, and difficulty in assessing the reliability of available information. The study concludes that technological tools play a significant role in medical education; when used critically and in a balanced manner, they can enhance learning and complement traditional teaching activities.

Keywords: Medical Education. Medical Students. Educational Technology. Learning.

INTRODUCTION

In medical college, many times, the student faces a lot of ways to make progress in the subjects of the course. Because of that, some students try to find alternatives to facilitate their lives, in the most part of time, technological tools come to fill this space. Are platforms that could help to organize the study routine with tests, summaries and tips. Apart, these platforms are made by the students who was a more time in the college, helping both. On this way, the present academic work is important to understand how this students' relationship is made and how this can be their lives better.

Normally, notebooks, smartphones and tablets are used for the most part to study methods, integrating ancient knowledge with modernity¹. Furthermore, digital platforms, as YouTube and WhatsApp, even if they do not have this function as their primary one, has medical content and are an alternative exploited form to simplify access to classes, being widely used by students².

If used correctly, these alternatives contribute to ease of access to information, making the search faster and making it possible to learn in more places than usual. The autonomies also are something that has singulative changes, given that now, access to videos and educational materials could be done without costs being actively shared among the students, thereby fostering the sharing of different perspectives that were previously rarely addressed.

On the other hand, is also important to discuss the detrimental effects of excessive technology on academic life, reflecting on the difficulty of finding reliable sources amidst the vast amount of content on the internet. Another aspect is the digital dependency that long periods of screen time can cause, creating conflicts between in-person and digital academic interactions. Thus, it is relevant to understand which technological tools are used by medical students and how these resources are integrated into the learning process.

METHODS

This academic work uses a narrative literature review to organize information's about the student's relation with technological tools in medical school. To this objective, for identifying high-quality studies, the conceptual criterion was used. The main data base used was SCIELO and the search includes articles published in English, studies involving medical students, research related to the use of technologies in the academic process, articles available in full text, recent publications and excluded articles that did not address medical students,

studies focused solely on qualified physicians, studies with no direct relation to learning, duplicates.

RESULTS

The studies analyzed revealed that different technological tools are part of medical students' academic routines, serving purposes ranging from content access to communication and learning support. The main tools identified were smartphones, educational videos, social media, medical apps, podcasts, scientific update platforms, and virtual learning environments. The study by Izquierdo-Condoy et al. found widespread use of smartphones for academic purposes, particularly for accessing videos, social media, and apps aimed at updating knowledge¹. Similarly, Azer et al. identified frequent use of platforms such as YouTube, WhatsApp, and Zoom, alongside devices like laptops, tablets, and smartphones². These findings suggest that technology is integrated into various aspects of medical practice, serving as a tool for teaching, communication, and the supplementation of academic activities.

Among the technological tools identified, smartphones and YouTube stood out in the academic routines of medical students. Izquierdo-Condoy et al. observed that 88.2% of participants used smartphones for academic purposes, highlighting their importance as a means of quickly accessing content, medical apps, professional update platforms, and audiovisual materials¹. In this context, YouTube also proved significant, being used by 83.1% of the students evaluated by Azer et al., primarily as a resource to complement traditional instruction². The widespread use of these tools may be attributed to their ease of access, practicality, and the ability to review content at various times and in different settings. Furthermore, educational videos allow for the visualization of concepts, procedures, and theoretical material, contributing to a more dynamic and accessible learning experience.

The use of technological tools in medical education offers significant benefits, particularly due to increased flexibility, ease of access to information, and the ability to supplement classroom content. Azer et al. found that a large proportion of students considered technology useful for enhancing engagement with academic activities and expressed interest in greater integration of these resources into the medical curriculum². Similarly, Izquierdo-Condoy et al. highlighted the importance of mobile devices as tools that facilitate quick access to educational content and resources during training¹. However, the use of these technologies also presents limitations, such as potential distractions caused by social media, reliance on internet connectivity, and the difficulty of evaluating the quality of information available online. Furthermore, excessive use of digital resources can reduce face-to-face interaction and

foster more superficial learning if not combined with appropriate teaching strategies. Therefore, these tools should be used critically and as a complement to the theoretical and practical components of medical training.

CONCLUSION

Analysis of the studies showed that technological tools are widely integrated into the academic routines of medical students, particularly smartphones, video platforms, social media, medical apps, and virtual learning environments. These resources help expand access to information, facilitate content review, and foster greater flexibility and autonomy during the training process.

Despite the observed benefits, the use of these technologies requires a critical and balanced approach, considering limitations such as distractions, the variable quality of information, and a potential reduction in face-to-face interaction. Therefore, technological tools should be viewed as resources that complement medical education, capable of enhancing learning when combined with reliable sources, proper guidance, and traditional theoretical and practical activities.

REFERÊNCIAS BIBLIOGRÁFICAS

1. Izquierdo-Condoy JS, Arias-Intriago M, Nati-Castillo HA, Gollini-Mihalopoulos R, Cardozo-Espínola CD, Loaiza-Guevara V, et al. Exploring smartphone use and its applicability in academic training of medical students in Latin America: a multicenter cross-sectional study. *BMC Med Educ.* 2024;24:1401. doi:10.1186/s12909-024-06334-w.
2. Azer SA, Alhudaithi D, AlBuqami F, AlWaily H, AlRabah R, AlKhashan R. Online learning resources and social media platforms used by medical students during the COVID-19 pandemic. *BMC Med Educ.* 2023;23:969. doi:10.1186/s12909-023-04906-w.