

Digital teaching in medical education: A literature review

July 29 2022



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Research published in *JMIR Medical Education* found that digital teaching in medical education has grown in popularity in recent years.

The authors used a bibliometric approach to unveil and evaluate the [scientific literature](#) on digital teaching [research](#) in medical education, demonstrating recurring research topics, productive authors, [research organizations](#), countries, and journals.

The Web of Science electronic database was searched to identify relevant papers on digital teaching research in medical education.

Dr. Eva Schaden from The Medical University of Vienna says that "rapid advancements in [information technology](#) and worldwide internet access potentially allow for the full substitution of traditional face-to-face medical education with digital teaching methods (including but not limited to remote teaching)."

Often, digital teaching is used together with traditional approaches in so-called hybrid learning. Although it has received higher acceptance by students, blended learning did not exhibit a significant difference in comparison to the traditional methods based on final test scores.

Digital teaching in medical education shares similarities with other educational areas as it enhances self-directed learning and computer literacy skills.

In the context of medical education, digital teaching is applicable for teaching medical students, resident or specialty training, and continuing medical education of physicians.

There are several major potential barriers for digital teaching applications in medical education:

1. The presence of technology or infrastructure
2. Institutional support
3. Trained educators, and

4. Overall acceptance by the students

Thousands of scientific studies have explored different kinds of digital teaching applications in medical education.

Dr. Schaden and the research team concluded that the analyzed literature in the field contained 3978 publications. The literature received worldwide contributions with the most productive countries being the United States and the United Kingdom.

Reviews were significantly more cited, but the citations between [open access](#) versus non–open access papers did not significantly differ. Some themes were more highly cited, such as virtual reality, innovation, trial, effectiveness, and anatomy. Different aspects in [medical education](#) were experimented for digital teaching, such as gross anatomy education, histology, complementary medicine, medicinal chemistry, and basic life support.

Some studies have shown that digital teaching could increase learning satisfaction, knowledge gain, and even cost-effectiveness. This would be particularly useful for clinical teaching during pandemics, gaining insights into highly [infectious diseases](#) or rare diseases that do not have available cases in a local setting.

More information: Andy Wai Kan Yeung et al, Digital Teaching in Medical Education: Scientific Literature Landscape Review, *JMIR Medical Education* (2022). [DOI: 10.2196/32747](https://doi.org/10.2196/32747)

Provided by JMIR Publications

Citation: Digital teaching in medical education: A literature review (2022, July 29) retrieved 20

June 2024 from <https://medicalxpress.com/news/2022-07-digital-medical-literature.html>

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