

# Medical Education in the Digital Era

## *La educación médica en la era digital*

How will the new information and communication techniques impact on medical education? The emergence of the internet in daily life has modified the way of accessing knowledge in every academic field and it should not be wondered that such drastic changes generate uncertainties and fears among educators, who often see in these new technologies threats rather than opportunities.

Medical education remained almost unaltered for centuries, with professors imparting knowledge through master lectures and passive students as receptors of this information. However, the end of the XX century changed this status quo and teaching was transformed into a participatory process, in which professors and students have an active role. The student is expected to show creativity and critical judgment and the professor to facilitate and moderate the teaching-learning process, withdrawing from the center of the scene to empower the student.

The forms to transmit knowledge have varied with the evolution of humanity. Initially, this was conveyed through oral language and later, with the addition of writing, the information could be stored. Typography invented by Guttenberg allowed widespread distribution of knowledge and the advent of the media, especially the radio and television, incorporated the possibility of mass diffusion. Since the 80's, a new revolution is included and digital technology enters our lives, affording the remote access to information, without geographical or temporal barriers.

The web provides access to an almost immediate universe of information, marking another of the distinctive aspects of current education, speed, in a world where immediacy has become an asset.

The use of the internet offered the student great autonomy, and e-learning brought great advantages: quality educational material, time flexibility, simulation learning, etc.; however, some negative facts have not been completely resolved. The rate of abandonment and demotivation are high and many students are unable to establish an adequate bond at the time of replacing conventional dialogue by digital language.

For professors formed in the more traditional models of teaching, there is sometimes lack of an adequate training to take a stand in this new way of relating with the student, and they face an asymmetry in the management of new technologies. While the student born in the digital era uses the web naturally, many

educators are digital immigrants.

The implementation costs are still high and the access to technology is often dissimilar.

Distance learning is supported by technological, methodological and evaluative criteria.

The educational objective should have adequate technology and platforms to guarantee availability, inter-operability, durability, reusability and cost-effectiveness standards.

The methodology chosen will determine the success of a distance educational program. Contents, communication, types of accessible tools and essentially the role of the tutor will be crucial for the interactive teaching-learning process. In health sciences, where the acquisition of skills in addition to theoretical knowledge and experience are indispensable, probably mixed models combining on-site and distance activities will frequently be the most adequate, profiting from the best of each model.

The evaluation process should comprise not only theoretical contents but also training and practice.

Just as in the evolution of humanity each new technology was added to the previous one to enrich it and not to eliminate it, it is important to bear in mind that e-learning should not replace teaching, but complement it.

However, it is essential for professors and students to prepare in order to draw the utmost profit from an undeniable technological progress, and this demands a great effort to achieve adaptation to new forms of interaction.

The Argentine Society of Cardiology is committed with continuous quality medical education, as expressed in its Mission and Vision, and this responsibility extends to all professionals living in our country, so migration to on-line learning models allows this task to be more efficiently accomplished.

However, to achieve this end it is fundamental to understand that distance education is not the same as self-learning, that critical and interactive processes are required and that the real patient does not respond exactly as the patterns created by simulators; therefore, medical criterion and experience added to knowledge, will still be the best tool for good praxis.

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