



# Megatrends of Medical Education and Health Entrepreneurship in the 21st Century

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## Dear Editor,

Megatrends represent fundamental social, technological, economic, and political changes, which shape the business environment of the community. The impact of megatrends may persist for decades, regardless of the geographical location. The world is changing rapidly. Indeed, if the changes in the ages of agriculture took a hundred years. The change of industrial age into the information age lasted only two decades.

Therefore, with these rapid changes, we need to predict the future and prepare for it. Medical education is one of the most important ways to achieve sustainable development, as educating individuals for effective social participation is an important developmental goal. Besides its current significance, medical education will remain a priority in the future.

The concept of megatrends was introduced by John Naisbitt in 1982 with the publication of his book on megatrends (1). In brief, megatrends constitute major social, technological, economic, and political changes and have three basic characteristics:

- Megatrends are gradually developed, but their effects persist for almost a quarter of a century.
- Megatrends have an enormous impact on human life.
- Megatrends develop in different regions around the world and are not specific to a particular country or culture, although there may be differences in their magnitude in different places.

Considering the fast pace of global change, nothing is certain except change. Therefore, future analysis of scientific activities is indispensable to our predictions. Education is one of the important megatrends in the healthcare system. In the 20th century, the study of health education was restricted to the influence of medical education on future changes, while in the 21st century, the field of education is considered a megatrend on its own, the effects of which should be evaluated in other areas (2).

Generally, health incorporates different domains, including health facilities, electronic health, modern medical technologies (such as nanotechnology and biotechnology), health services (such as hospital services), public health, mental health, health care, and diagnostic and laboratory services (3). Considering the importance of health, education, and proper academic training, the most important megatrends in medical education are summarized in Table 1.

**Table 1.** The Top Ten Megatrends in Medical Education

No.	Megatrends
1	Globalization
2	Simulation
3	Increased cost of medical care and medical education
4	Redefinition of ideal medical characteristics
5	Importance of continuous training
6	Incorporation of an interdisciplinary approach and specialized training
7	Understanding medical education as part of health services
8	Need for lifelong education and support for medical professionals
9	Changes in training settings (from hospital to clinics and outpatient treatment centers)
10	Technology

Researchers believe that major changes will occur by 2025, such as acceleration of medical education to three years, clinical time allocation to non-hospital environments, increased attention to community needs, integration of educational systems for training nurses, pharmacists, social workers, and medical students, special attention to community health, and acquisition and application of managerial skills (4). Entrepreneurship can also play a valuable role, as it provides many occupational opportunities and facilitates technological advancements.

In addition, medical education needs to undergo se-

rious changes in accordance with practical work in clinical courses. These fundamental changes can present new ways to develop the students' clinical decision-making capacities through increasing student learning, thereby encouraging independent graduates and creative thinkers. Moreover, instructors should replace new teaching methods with traditional teaching methods for a deeper understanding of entrepreneurship among students (5).

Development of entrepreneurship thinking and behaviors using empirical learning approaches, coupled with E-learning, can lead to the improvement of skills and entrepreneurship in health education. However, some health entrepreneurs claim that university education is only based on traditional teaching methods and does not provide students with sufficient knowledge about entrepreneurship; the main reason for this is the lack of alignment with rapid global changes.

Health entrepreneurs are recognized as business owners, who offer important services in areas such as direct patient care, health education and research, executive work, and counseling. Since entrepreneurship provides an opportunity for identifying and accurately assessing the future of health infrastructure, the young workforce should be encouraged as entrepreneurs in the country (6).

In order to promote the educational process and develop an entrepreneurial mindset in medical education,

educational managers of the Ministry of Health should plan future studies in order to promote clinical development and educational excellence. In addition, faculty members can encourage doctoral students to conduct their dissertations in this area. It is also recommended to establish a research committee for continuous monitoring of effective variables in medical education considering the country's priorities and design a new educational curriculum.

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