

## Emerging Visions and Orientations in Medical Education: An Overview of Opportunities and Challenges in Corona and Post-Corona Times

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### ABSTRACT

The COVID-19 pandemic has had a negative impact on all spheres of social life. This has especially been the case with educational systems, which were evidently unprepared at the outset of the crisis. This commentary examines the challenges of medical education during the pandemic and recommends possible solutions for adapting to the changing trends in this period while providing an outlook on the post-corona challenges. It will also look into the opportunities besides the challenges. The outbreak has created an atmosphere that promotes commitment in education, improves educators' abilities, enhances the production of virtual content, challenges traditional attitudes and helps with self-directed learning among students. These developments could leave their mark on education well beyond the pandemic. The post-corona era can be an age of transformation characterized by a drastic shift from traditionalism to alternative educational approaches. Accordingly, besides the changes in attitudes, it appears necessary to lay the technological groundwork and identify the associated challenges. New opportunities will arise in the form of more effective technology integration in distance and regular education, enhanced quality of virtual programs and the emergence of new educational trends. These developments are deemed to bring about substantial improvements in the quality of medical education.

**Keywords:** Medical education, Corona, Post-corona, Challenges, Opportunities

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Covid-19 pandemic has evidently had an unparalleled impact on a wide range of activities in human societies across the globe. No country is deemed to be immune to such impacts, and Iran is no exception. The implications of this phenomenon can be observed in all aspects of social life, including in the areas of health and education, which have remained mostly unprotected to date. The unexpected and multidimensional

impacts of the COVID-19 pandemic have affected the structures of healthcare systems and their goals and strategies, which were thought by many to be unchangeable (1-4).

This commentary attempts to examine the effects of coronavirus outbreak on medical education, while providing an insight into the possible challenges of post-corona era. In doing so, an assessment will be made of the threats and opportunities that might

arise for medical education in the wake of the pandemic. This necessitates a review of the past and present trends in medical education and a vision of the future that sheds light on the impending problems and possible solutions.

A notable development in medical education is the pluralistic approach to education, which requires a modification of educational methods in accordance with the needs of society, especially in current crisis. In this view, the traditional teacher-centered education is expected to be replaced by new student-centered approaches in accordance with the current needs. This makes educational systems more competent in the face of future challenges (5).

Following the spread of coronavirus, the elite medical universities across the world were compelled to halt most of their routine educational activities in compliance with the lockdown protocols. Similar problems have come to light in Iran's medical education. The challenges facing medical universities include:

- Theoretical-practical nature of certain courses and the need to attend laboratories and clinical settings
- Nascency of virtual technology in certain universities and resistance to change in teaching, both in theoretical and practical respects
- Long-established tendency towards teacher-centered education and general interest in maintaining the status quo
- The need to change educational infrastructures in crisis circumstances
- The need for rapid planning aimed at empowering teaching staff, providing them with necessary training, and helping them adapt to the crisis situation
- Encouraging students to continue learning despite technical issues including poor infrastructure and Internet connectivity problems (insufficient bandwidth, low speed, and high cost of digital services)
- Preparing the required infrastructure for smartphones and providing instructors and learners with the necessary hardware and

software tools

- Changing students' preferences from traditional in-person learning to different learning processes including cognitive learning, which is enabled via different equipment and ways of access to instructors
- The influence of instructors' characteristics and personality traits on their acceptance of distance-learning and e-learning; taking measures to encourage them to replace or combine traditional models with new virtual elements in teaching
- Extensive volume of educational content with different applications, which can be quite overwhelming for students and further complicate the learning process
- Frustration on the part of traditionalist instructors and learners, who might be stressed by the difficulty of shifting to virtual technology and adapting to rapid changes (6).

Now, in view of the recent developments and their effects on education, we will highlight the existing challenges and opportunities in this critical period. Next, by analyzing these dimensions, we will look into the prospect of postgraduate medical education and offer practical suggestions for its improvement. Then, we will discuss a way of adapting to the changing trends in current crisis with the aim of turning threats into opportunities and using them to improve the quality of education.

Given the above, it appears that despite all the aforementioned challenges, there exist promising opportunities along with the problems in the domain of medical education. These opportunities can turn teaching into a more dynamic process by compensating for students' frustrations and academic backwardness. Moreover, they lay the groundwork for establishing a new educational paradigm and consolidating it (7).

These opportunities are listed below:

- Stronger educational commitment among students and professors, and greater resolve to find alternative solutions that reduce the impact of the virus on education
- Co-thinking, needs assessment, sequencing of priorities and strategic

decision-making in education at micro and macro levels

- Design and development of hardware and software infrastructure for a more productive educational environment
- Discarding traditional outlooks in education and inducing technology-oriented and up-to-date thinking instead
- Improving educators' abilities by offering workshops and technological training programs in order to broaden their knowledge of virtual learning and educational technologies
- Enhancing the production of virtual content and examining the possibility of using it in future implementation of different models of blended learning
- Updating the existing educational materials
- Changing the traditional attitudes towards education

In view of the outlined challenges and opportunities, one can conclude that we have already entered a new era of electronic learning, especially in medical education where there are countless opportunities for more effective use of technology in different disciplines. In this respect, providing the required training and preparing the necessary facilities and infrastructure at universities will eventually lead to the empowerment of faculty members and students alike (7, 8).

Therefore, the post-pandemic era can be rightly considered as the era of change and transformation in education. This new era will be marked by a dramatic shift from traditionalism to alternative approaches in education. It will be a new age in medical education as well, where some significant changes in this field will be inevitable (9).

Technology-dependent education will be an integral part of the body of medical education. This new mode of education will emerge in response to the need for growth and development with a perspective of improving the quality of education (supplementary education).

As for applying new teaching methods, a change in attitudes is required first, starting

with the acceptance of the crisis and its significant impact on educational systems. This will underscore the need for instilling self-regulation and self-management in learners with different levels of metacognition, and will trigger the move towards flipped learning (reverse instruction), which involves greater student participation in the learning process.

In the meantime, blended learning continues to evolve as a teaching method with multiple models in local educational networks and will find its place in educational programs. It will be highly in demand among faculties and students in future.

Finally, one major development in this period could be a substantial improvement in student and teacher knowledge thanks to the rise in information and media literacy. This will lead to a rise in professors' and students' interest in technology as well.

This reminds us of the key measures emphasized in this commentary, namely reinforcing the infrastructure, empowering educators and learners, and modifying the teaching methods, as well as the need to challenge traditional thinking. More importantly, the current developments in education would further highlight the need for change in crisis times. Any changes should be aimed at helping policy makers seize opportunities, create opportunities and better maintain the flow of education.

Given the above depiction of the present circumstances, it appears that a new opportunity is on the rise in the education sector. It could be regarded as the golden age of e-learning, characterized by more effective use of technology both in distance and regular education, and improved quality of teaching in an ongoing trend.

### **Conflict of Interest**

The authors declare that they have no conflict of interest.

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## References

- 1 Iyengar R. Education as the path to a sustainable recovery from COVID-19. *Prospects*. 2020 Oct;49(1):77-80. doi: 10.1007/s11125-020-09488-9.
- 2 Ahmed M. Education Response to Covid-19 in Bangladesh—A Missing Opportunity? *Bangladesh Education Journal*.2019;18(1): 7.
- 3 Parry J. China coronavirus cases surge as official admits human to human transmission. *British Medical Journal*. 2020 Jan 20;368. m236. doi:10.1136/bmj.m236. PMID 31959587.
- 4 Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, Zhang L, Fan G, Xu J, Gu X, Cheng Z. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The lancet*. 2020 Feb 15;395(10223):497-506. doi:10.1016/S0140-6736(20)30183-5. PMID: PMC7159299.
- 5 Farber ON. Medical students can help combat Covid-19. Don't send them home. *STAT*. 2020 Mar 14.
- 6 Ferrel MN, Ryan JJ. The impact of COVID-19 on medical education. *Cureus*. 2020 Mar;12(3). doi: 10.7759/cureus.7492 PMID: 32368424 PMID:PMC7193226
- 7 Iwai Y. Online learning during the COVID-19 pandemic what do we gain and what do we lose when classrooms go virtual. *Scientific American*. 2020 Mar.
- 8 Rose S. Medical student education in the time of COVID-19. *Jama*. 2020 Jun 2;323(21):2131-2. doi: 10.1001/jama.2020.5227 PMID:32232420
- 9 Goh PS, Sandars J. A vision of the use of technology in medical education after the COVID-19 pandemic. *MedEdPublish*. 2020 Mar 26;9. doi: 10.15694/mep.2020.000049.1