



## IMPACT OF COVID-19 PANDEMIC ON HIGHER EDUCATION AND RESEARCH

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**ABSTRACT**

COVID-19 outbreak has caused a downward spiral in the world economy and caused a huge impact on the higher education system. The sudden closure of campuses as a social distancing measure to prevent community transmission has shifted face-to-face classes to online learning systems. This has thrown the focus on utilizing eLearning tools and platforms for effective student engagement which may have limitations of accessibility and affordability for many students. The pandemic has exposed the shortcomings of the current higher education system and the need for more training of educators in digital technology to adapt to the rapidly changing education climate of the world. In the post-pandemic situation, the use of eLearning and virtual education may become an integral part of the higher education system. The higher education institutions and universities need to plan the post-pandemic education and research strategies to ensure student learning outcomes and standards of educational quality.

**KEYWORDS :** COVID-19, higher education, eLearning, virtual education, teaching-learning

**INTRODUCTION**

COVID-19 infection was reported originally from Wuhan, China in late December 2019 and quickly spread throughout the world and was declared a pandemic by the WHO on 11th March 2020 (WHO, 2020). The COVID-19 outbreak had a devastating impact on human life and shattered economies around the world (Xiang et al., 2020) with a massive jolt to the education systems both in developed and developing countries. The COVID-19 pandemic quickly led to the closure of universities and colleges around the world with government instructions to follow social distancing that could help to flatten the infection curve and reduce total fatalities from the disease. The most important pandemic precaution called "social distancing" or "physical distancing" has attempted to reduce interpersonal contact and thereby minimize the kind of community transmission that could develop quickly in dense social networks like the university campus (Weeden & Cornwell, 2020).

**Rise of Digital Technology for eLearning and Virtual Education**

The impact on higher education has been dramatic and transformative and a common trend in education systems around the world has been to respond to the pandemic with "emergency eLearning" protocols, marking the rapid transition from face-to-face classes to online learning systems. The educational institutions are facing a challenge to adapt to this change and trying to choose the right technologies and approaches for educating and engaging their students. The campus closure and sudden switch from in-person face to face education to remote instructions is just a baby step experiment in the long journey to offering online education which including effective student engagement tools and teacher training. This may pave for stronger bonds between universities, online education companies, and technology providers post-pandemic. The universities will need to pay serious attention to having educators trained and equipped with digital technology for a smooth teaching-learning process. The government will have to step up and commit to sustained programs for professional development to boost educators teaching Capabilities.

The pandemic has exposed the vulnerabilities and shortcomings of the current education systems and has also emphasized the need for digital literacy development, particularly in times like these, for both developed and developing countries. The greater digitalisation of educational services and communication may become a norm post-pandemic. The current situation has challenged deeprooted notions about the role of higher education

institutions in providing quality education, mode of delivery, accessibility, the importance of lifelong learning, and educator's perceptions about the type of learners. This may provide insight to the educators and policymakers for the overall improvement of the education systems around the world.

Relying on and adapting to eLearning during a pandemic may cause a shift in adopting more online elements in the teaching by the educators. This, however, has many practical problems and limitations, in terms of availability of digital technologies for education. There is a vast "digital inequality" that exists in society. One cannot assume that all students, as well as educators, would have access to internet connectivity and associated powerful devices outside of their university, to be able to communicate.

Affordability is another factor to limit the access to eLearning with students from economically weaker sections facing a greater burden. The impact of accessibility and affordability can have serious implications on students in higher education system unless student-friendly government policies are in place which can ensure affordability and accessibility of the internet to students.

The students face major hurdles with remote learning as face-to-face communication is more conducive to the learning process, presenting a better opportunity to sharing knowledge and asking for help, "easier" and more interactive (Miliszewska, 2007). The camaraderie and sense of belonging are limited in a virtual class. The students who have less ability to self-regulate or study autonomously struggle with no teacher providing in-person support. The online videos, digital content, and discussion forums may not provide a holistic teaching-learning outcome.

Many civil liberties groups and activists have increasingly raised apprehensions over the privacy and surveillance implications of hundreds of millions of students being forced onto commercial software that has not been properly tested and vetted for educational uses.

The sudden shift to adapt and implement online learning has led to over-work, stress among the teaching faculty. The educators need to re-imagine modes of curriculum planning, development of e-content, assessment, and reporting which may have been developed without proper planning and forethought. To achieve more focussed learning outcomes and develop effective eLearning methods, educators should be provided with professional autonomy and trusted with their

judgment; and ensure clear and compassionate communication with all the stakeholders of the higher education.

One might argue that remote learning may offer an advantage for individuals who are unable to attend a traditional full-time face-to-face university due to personal or financial circumstances. Also, the flexibility of asynchronous remote learning may provide wider access. And even within traditional higher education institutions, hybrid or blended forms may help improve the quality of face-to-face teaching by moving content delivery online and focusing in-person sessions on active learning (Bowen, 2012; Riffée, 2003). These diverse reactions highlight that there are always wider connotations and unintended consequences of any adoption of technology in education. So, COVID-19 post-pandemic, all universities and higher education institutions need to introspect about the implications of their choices and decisions on the lifelong learning of students, which will ultimately shape the future of this generation.

### Post-Pandemic Focus on Specific Research Areas and Their Implications

The COVID-19 pandemic forced higher education institutions and universities to adapt to the rapidly changing situation in a way that was unimaginable a few months ago. Research institutions are facing huge challenges in managing research operations. The mandatory social distancing requirements are difficult to meet in a research setting particularly in the areas requiring bench work and human subjects, as well as fieldwork, are causing significant losses to research studies. Most of this has affected scientists, faculty, research scholars, and graduate students. The career plans of many research students and postdoctoral researchers are at risk due to this sudden interruption in their research plan by the pandemic. The universities and funding bodies will be under financial strain in the coming months and the non-COVID projects may lose importance and focus from these agencies. The recruitment of international staff and the exchange of skilled researchers is a huge challenge which may continue to exist for the coming months due to travel restrictions.

The research institutions and universities need to carefully design and implement the research management guidelines that adhere to social distancing protocols and ensure low student density on campuses while steering the research activity towards normalcy. The research areas that require physical laboratories may need to re-think their working models and carefully plan and prioritise their experiments. The universities will have to invest more in health and safety measures and infrastructure on their campuses to ensure the safety of students and staff which may add to the financial strain on the university. The government may support and partly fund the safety initiatives of the educational institutions to prevent the compromise of the educational and research needs of the students.

As the COVID-19 pandemic is progressing rapidly, particularly now in the developing economies, the research laboratories and corporate houses around the world are racing against each other to find a treatment modality for the virus. This has led researchers to focus on certain key issues associated with the COVID-19 virus infection that could help in the understanding of the disease and assessing the psychological implications of this pandemic. Some of the major areas of research which may see a surge in funding post-pandemic include vaccine development, antiviral therapies, development of health care equipment, mHealth devices, remote learning tools, Artificial intelligence (AI) based technologies, use of AR, VR, and Holography for training, and capacity building and public health policy (Haleem et al., 2020). Also, research areas that do not require

the physical presence of the researcher may see more growth as students may prefer these programs to enhance their skills for post-study job placements.

### CONCLUSION

There are no best practices for universities and higher educational institutions to mimic and no known models to follow. Post-pandemic educational institutions may need to identify the issues that they may face and prepare to take tough decisions in the coming months. The university communities will need to reflect on their educational vision and mission to ensure student learning outcomes and standards of educational quality are not compromised. The universities will have to engage and consult all their stakeholders in the nuanced balancing of financial costs and public health that are intertwined with missions of education, knowledge creation, and service to society. The higher educational institutions must be ready for a tough road ahead post-pandemic where their decisions will shape and steer the future of their students.

### REFERENCES

1. Bowen, J. A. (2012). *Teaching naked: How moving technology out of your college classroom will improve student learning*. Jossey-Bass. John Wiley & Sons. ISBN 1118238087, 9781118238080.
2. Haleem, A., Javaid, M., Vaishya, M. R., & Deshmukh, S.G. (2020). Areas of academic research with the impact of COVID-19. *American Journal of Emergency Medicine*, 38, 1524–1526. <https://doi.org/10.1016/j.ajem.2020.04.022>.
3. Milliszewska, I. (2007). Is it fully 'on' or partly 'off'? The case of fully-online provision of transnational education. *Journal of Information Technology Education*, 6, 499–514.
4. Murphy, M. P.A. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*. doi: 10.1080/13523260.2020.1761749
5. Riffée, W. R. (2003). Putting a face on distance education programs. *Syllabus*, 16(7), 10–13.
6. Weeden, K. A., & Benjamin, C. (2020). The small-world network of college classes: implications for epidemic spread on a university campus. *Sociological Science*, 7, 222–241.
7. WHO. (2020, March 11). WHO Director-General's opening remarks at the media briefing on COVID-19-11 March 2020. World Health Organization, March 11, 2020. <https://www.who.int/dg/speeches/detail/whodirector-general-s-opening-remarks-at-the-mediabriefing-on-covid-19--11-march2020>.
8. Xiang, Y. T., Li, W., Zhang, Q., Jin, Y., Rao, W. W., Zeng, L. N., et al. (2020). Timely research papers about COVID-19 in China. *The Lancet*. doi: 10.1016/S0140-6736(20)30375-5.