

Abstract

The impact of COVID-19 underscores the importance of developing a detailed crisis management plan and ensuring equity while promoting digital education in Indian higher education. The flow of Indian students to institutions outside the country is likely to drop if the existing situation does not improve within a few months.

India's Higher Education and COVID-19: Responses and Challenges

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India reported its first confirmed case of COVID-19 on January 30, 2020, after a student returned home from China to the state of Kerala in the south, and tested positive for the virus. The impact of the pandemic and the country-wide, total lockdown imposed from March 25th are challenging higher education institutions in new and different ways.

The impact is reflected by tremendous uncertainty from institutional to individual levels. Across the country, classes have been suspended; institutions have closed; university examinations scheduled for the months of March and April have been postponed; and entrance examinations for admission for the next academic year have been rescheduled. Most institutions allowed international students staying in their hostels to remain there and enjoy basic mess facilities. The ongoing crisis is affecting many students who had secured job offers through campus placements. It is also impacting those students who received admission offers from various foreign universities for the next academic year.

The outbreak has raised awareness within the government and among institutions about the importance not only of risk management, but also of crisis response strategies. Many scientific institutions have been responding to the crisis with great determination. While some provided cheaper COVID-19 testing facilities, others are involved in frugal innovation processes to fight the pandemic.

State and Institutional Responses

Either directly or through bodies such as the University Grants Commission (UGC), the government has taken proactive measures to address issues arising throughout the higher education sector as a result of the pandemic, and to keep students and the academic community safe. The UGC is the apex organization responsible for the maintenance of standards in higher education. It issued advisories to institutions to reschedule examinations, establish mental health helplines in support of students with psychosocial concerns, and in general to ensure the safety of students. It also formed a committee of experts to look at the prospects of preparing an alternate academic calendar.

Many higher education institutions have risen to the challenge and are working closely with the government. The central government has reportedly allocated the equivalent

of around US\$27 million to scientific institutions, industries, and start-ups to develop innovative solutions to prevent the spread of the pandemic. One of the biggest challenges facing the Indian health sector is the lack of ventilators. It is in this context that a few Indian institutions proposed a design for portable ventilators to save COVID-19 patients, which cost as low as US\$100 to 300 per unit.

While the Indian Institute of Technology (IIT) Kanpur's incubator company Nocca Robotics developed a ventilator prototype, researchers at IIT Guwahati are working on a project to develop a vaccine. IIT Bombay researchers, along with alumni, have built a platform, CORONTINE, to track potential/suspected (asymptomatic) carriers of coronavirus. IIT Delhi has decided to share its resources and has invited proposals to use its supercomputer resource PADUM for COVID-19 research. The Rajiv Gandhi Centre for Biotechnology in Kerala, a research institution under the central government, is in the process of developing low-cost rapid test diagnostic kits.

The pandemic is also creating opportunities for international partnerships. For instance, a faculty member at the Shiv Nadar University, Samit Bhattacharyya, is collaborating with scientists from different countries on a survey on COVID-19. Similarly, Bennett University organized a one-day online conference involving Indian and global experts in the fields of medicine, public policy, and technology.

The Challenges of Digital Transformation

Indian universities and colleges have now recognized the importance of e-learning and online programs and the crisis presents a range of opportunities for fast-forwarding their digital transition. Many institutions are utilizing the government's integrated learning platform SWAYAM and Direct to Home education channels SWAYAM PRABHA. Many institutions offer classes through Google Meet and Zoom.

This development also exposes inequities in the system. A recent circular to faculty issued by Suranjan Das, the vice-chancellor of Kolkata's Jadavpur University, echoes this reality. *The Telegraph* reported that Das requested faculty members to be cautious about conducting online classes or sharing digital content. The vice-chancellor wanted faculty members to consider the socioeconomic background of the students in the teaching-learning process, as many students cannot afford a computer at home. This underscores the importance of ensuring equity in the process of promoting online learning: while the internet density in India's urban areas is 97.94 percent, it is only 25.36 percent in rural areas.

The learning and communication strategies that some institutions adopted to stay competitive are worth mentioning. The Tata Institute of Fundamental Research, the Indian Institute of Science (IISc), and the Tata Memorial Centre recently launched a joint science communication portal to bring together resources in response to the COVID-19 outbreak. The Symbiosis Institute of Business Management in Pune launched an online synchronous lecture series titled "Learn from Home" to engage with students. And KREA University kept everyone—from staff to students and the general public—updated with information through its official website.

Possible Future Directions

The COVID-19 crisis is underscoring the importance of global and national interdependence in higher education and research to address societal challenges. As a result, scientific research through partnerships is expected to receive more attention in the future as a strategic priority. At the national level, programs such as Impacting Research, Innovation and Technology (IMPRINT), aimed at bridging the gap between scientific research outcomes and their translation into engineering and technological innovations, are likely to receive more attention.

It may be too early to assess the actual impact of the COVID-19 pandemic on the mobility of Indian students. The flow of Indian students to institutions outside the country will certainly drop if the situation does not improve within a few months. There is a strong possibility for a shift in student and parental choices in favor of institutions in the country instead of abroad, due to the general feeling in India about the permissive attitude of governments in Western Europe and United States toward public health during the pandemic. Prominent public and private universities in the country could tap

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into this opportunity. A recent article by C. Raj Kumar, the vice-chancellor of OP Jindal Global University, underlines the importance of this possible trend of “transforming India from a ‘sending market’ of students into a ‘retaining market,’ and eventually even a ‘receiving market’ for foreign students.”

The economic impact of the COVID-19 pandemic could influence the growth rate of public funding for higher education in the future. The present crisis could also lead to finding new strategies to attract private investments in priority areas of scientific research and in creating new research and innovation ecosystems. ▲