Impact of COVID-19 on Higher Education in India

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Abstract

The world is battling COVID-19 and economies across the globe have declared a lockdown. Work from home (WFH) has become the norm, especially for service organizations. Following government instructions, even the academic institutions had to shut down temporarily, affecting academic delivery. Thus, they had to find new alternatives to academic delivery, and virtual classes were the way forward. As colleges and universities have shuttered their physical campuses in the face of the spread of COVID-19, they have moved their courses to remote and online formats in rapid fashion. And that's prompted many to wonder what the ultimate impact this period of time may have on online learning in higher education. Based on the present situation, where individuals come to stand on online learning will depend on where they sit currently. That is, there will be both positive and negative impacts on the state of online learning in higher education.

In the present paper, we attempted to study the impact of Covid 19 on the teaching – learning process in higher education. It is found that the gradual shift towards e-learning brings afloat few challenges such as technology up gradation needs investments, Network connectivity, lack of training to handle e-learning issues and mindset of entire stakeholders should align towards a common goal.

Keywords

COVID-19, teaching – Learning Process, Impact on higher education

Introduction

Novel Coronavirus (COVID-19) pandemic has significantly disrupted every aspect of human life. As the COVID-19 spread across the globe, alarm bells are sounding in the education sector. The Covid-19 pandemic has forced schools and colleges to shut down temporarily and is causing havoc in the education system. According to UNESCO report more than 157 crore students across 191 countries severely impacted by closure of educational institutions due to coronavirus. The issue of the COVID-19 and its impact on higher education is an emergent focus of debate worldwide. Closing universities and cancelling classes have become a COVID-19 reality in many countries of the world, leading to enormous anxiety and uncertainty.

The current pandemic is not only seen affecting the health of the citizens in the country but is also seen hindering various industries and shaking them to their roots. The national lockdown and the ascending health crisis were striking the education of the students as well, with their universities being shut and their syllabi stranded, until the industry decided to initiate a revolution instead. Reinventing their radicles and making a conscious choice to grow even in the time of crisis, the universities decided to digitalise the sector. The educational reform in India in the COVID-19 era seems to be a live example of how need truly is the mother of invention or reinvention, in this scenario. Allowing educational institutions to adopt online learning and infuse a virtual study culture, the pandemic is already steering the sector forward with technological innovation and advancements.

The switch to online education has been ensuring that students suffer no loss of studies and their progress is being tracked simultaneously with timely evaluation. It is probably a first for India to experiment with the education system and make a paradigm shift to the virtual world, blending classrooms with online learning. Alchemising education with technology and forming a collaborative strategy to tread ahead while providing online lectures will also enable the students to learn creatively. Boosting retention of the syllabus by using innovative technology, the universities are also engaging students to learn by choice and not just by their physical presence in a classroom. Furthermore, providing AI-enabled learning by universities as they offer diverse courses in association with other collaborations is only making the country envision a new tomorrow based on educational reforms.

The purpose of this research is to investigate the impact of COVID-19 on higher education. Efforts should be made identify and investigate the challenges that presently our higher education system is facing due to COVID-19 disruption. The opportunities will be explore for the future of higher education in the post-COVID-19 world.

Review of Literature

UNESCO has estimated that around 1.26 billion children or 70 percent of children around the world have had their education interrupted because of the pandemic and a large number of these children are from what UNESCO calls the "low tech or no tech" phase, with India contributing 300 million of the 1.26 billion children.

Given this backdrop, Professor Sahana Murthy explained the context behind the surge of online education in India as the idea of "Emergency Remote Teaching". She asserted, however, that there is a difference between emergency remote teaching and effective online learning. She explained that for online teaching, along with the requirement of tools such as online platforms, one needs access as well as trained teachers. She concluded her opening statement by emphasizing on the importance of changing the mindsets of th teachers as well as students since online teaching only limits to a through a face-to-face lens. One way in which this could be implemented is through the LCM Model, which focusses on a "learner-centric approach towards the designing and conducting of online courses."

Dr. Shakila Shamsu shed light on the use of technology for education should not be seen as an outcome of the pandemic, but as an idea that has been continuing for several years. She corroborated this point by outlining the efforts of the National Mission on Education Through ICT which was a strong recommendation of the 11th five-year plan. She explained how the Satellite Instructional Television Experiment in the 1970s and educational broadcasting that happened over the radio were ways in which technology was used in the field of education, giving "equitable access" to all those learning through those mediums. The Union HRD Ministry had launched a TV channel for students to take online courses and at present 15 million students are enrolled with it. It also launched a subsidiary direct-to-home channel in 2019, called Swayam Prabha. The number of viewers have been doubled compared to its parent channel. She believed that the reason India is not able to transition swiftly from face-to-face education to remote learning is the lack of institutional preparedness and accessibility by students to the new mode of delivering classes. She also suggested that "higher education institutions should begin to construct an academic plan of action." Therefore, there is a "need to guide institutions, faculty and students to repurpose e-content in a manner that fits into the curricula for achieving the desired learning objectives of that particular course". She concluded her opening statements by saying that to reach a larger audience, it is essential e-content should be made available in regional languages.

Dr. Ashwin Fernandes pointed out that COVID-19 brought a "second wind to higher education in India." He believed this is because of three main reasons. Firstly,the increased use of technology for various ideas, especially for education, has "instilled confidence for users" Secondly, India has tried to follow the footsteps of UK, US and UNESCO models of online education and lastly it depends on how both these factors "level the playing field for Indian universities." Discussing the survey conducted by his organisation which focussed on whether India was ready for a digital transformation, he revealed that more than 80 percent of India's population use their mobile hotspot for accessing the internet. Out of which, 96 percent of students who used mobile hotspots to gain access to educational resources had problems with internet connectivity. This, according to him, could be happening because of the low cost of internet in India, as it led to the overloading of systems. He believed that India is currently in Stage 1 of the transition from face-to-face learning to online education, where classes have begun to be taken online. Stage 2 of this transition is where there is "100 percent course delivery online (assessment, grading)" and Stage 3 is where there is "complete delivery of course credit online (online degrees)." He concluded by suggesting that, for India to make an effective shift to online platforms for education, it needs to address the power supply issues as soon as it can, enable a shift in mindset towards online teaching and learning and conduct robust training for faculty and students on ed-tech tools.

Dr. V. Sridhar explained the "Taxonomy of Online Education", which includes "Learning Management", "Course Delivery", "Assessment and Evaluation" and "Sync Course Conduct." Agreeing with Dr. Fernandes on the overloading of network connections leading to the poor connectivity experienced by students in online education, he suggested a few potential solutions. Firstly, we should record for later reference and providing internet connectivity through DTH or cable networks or give internet connection through landline infrastructure. Another roadblock to online education, is the monitoring of online assessment. In order to improve internet connection in remote areas, connections could be taken from cities or places with a possibility of higher internet connection and access.

According to Antonius Raghubansie, Head of Teaching and Cultural Centres in India, British Council, "During the virtual classes, we are ensuring that students can have an interactive experience with their teachers and classmates, similar to how British Council classroom experiences are. Additionally, there is a pool of exciting and interactive online learning resources to improve English grammar, vocabulary and build knowledge across subjects. From young learners to working professionals, anyone anywhere can access these resources, available free of cost."

According to Market research report by Technavio, the online education market size in India is expected to grow by USD 14.33 billion during 2020-2024. The report also provides the market impact and new opportunities created due to the COVID-19 pandemic. The impact can be expected to be significant in the first quarter but gradually lessen in subsequent quarters – with a limited impact on the full-year economic growth.

High Internet penetration has led to the creation of an extensive customer base for companies operating in the e-learning market. As the traditional education system in India is insufficient in providing services to all the segments of the education and skill development market, learners are looking for alternative education sources, leading to the growth of the online education market in India. The country offers significant opportunities for players offering products or services based on digital platforms. For example, Bangalore-based BYJU'S, an Ed-tech company, launched its mobile app in 2015. This app has been downloaded by more than 6 million users across India. Hence, with the combined incremental penetration of the Internet and smartphones in the Indian economy, the user base for e-learning is expected to increase, thereby driving market growth.

Above Literature reveals that the education sector needs solutions from the access front, pedagogy angle, the teacher-training front and the collaboration angle to effectively tackle the problem of providing education through technology. There is also the need for more tech-savvy educational institutions to "handhold" lesser tech-savvy ones, putting in place a proper plan-of-action for students, teachers and institutions as well as the ensuring teacher-training in the use of technology for education. Also, the institutions should collaborate to improve the quantity and quality of education provided through technology. The government must provide better internet connections to its citizens, while educational institutions must move on from just online classes to 100 percent online delivery and assessment and also complete online delivery of course credits. India should try and use the current opportunity to improve its education base with lower costs.

Research Methodology

Present study is based on Descriptive Research. Present research work is set to study following objectives.

1. To study the impact of COVID 19 in higher education in India.
2. To understand Challenges and Opportunities in higher education in India
3. To understand the teaching and learning process after COVID 19 from different stakeholders

Required data is collected from variour reports of Government Agencies, Different Educational Apex body reports and websites. This study is restricted to Indian Higher Education Sector only

Impact of Covid-19 on Higher Education

Any change that is so disruptive is also likely to bring with it some new opportunities that will transform the higher education system worldwide and especially in a country like India which is planning to bring about a planned reform in this sector.

1. Digital Transformation of Education System

Due to the accelerated adoption of digital technology triggered by the lockdown, educational institutes, business houses, data management methods and online education solutions have been forced to work in tandem. Many educational institutes are considering this as an ideal time to experiment and deploy new technology to make education delivery possible and meaningful. In a move to not let the crisis hamper the curriculum, digital transformation has become a new norm with educational institutes across the country.

Many are leveraging it as a chance to be more productive and efficient while developing innovative and improved professional skills through online learning and assessment.

2. Change in teaching and learning approach

Due to Covid 19, the adoption of technology in education has led to an unprecedented transformation from teacher-centric education towards student-centric education. Virtual classrooms and various online tools are helping to continue and enhance the engagement between the teacher and students as close to the classroom type experience. Going forward, smart classrooms are making everything possible from teachers and parent meetings to staff/management meetings, providing the necessary interactivity.

Virtual classrooms and various online tools today allow us to make the engagement between the teacher and students as close to a real, in-classroom like experience, as possible. Technology-based education makes the education system more transparent and equal. Digital education needs a balanced coordination between course content, educationists, technology and course-takers and it can only be successfully implemented with the availability of basic amenities like internet connectivity, availability and affordability of online systems, PCs, laptops, software, etc. Nonetheless, we can't deny the fact that here in such extreme situations, COVID-19 has only accelerated the adoption of technology to make quality education accessible to everyone."

3. Use of e-learning platforms

Apart from government sponsored resources, there are other e-learning platforms such as ZOOM, Google Meet, Webex which are interactive and can be accessed from home. These platforms allows educators to create online classes whereby they can store the course materials online; manage assignments, quizzes and exams; monitor due dates; grade results and provide students with feedback all in one place.

Similarly, Faculty members and students may do video/audio conferencing through Skype, WhatsApp, Google Hangouts and other similar e-resources for discussion related to their course. There are numerous screen recording videos like Screen Hunter, Camtasia screen recorder, windows screen recorder, etc. Using these tools, teacher can make tutorial videos.

Moodle, is another option, which is an Online platform with number of features for conducting online examinations. It can create and store a question bank on the Moodle platform. The test time slot and time span can be set for the particular test with which we can test students. In these Platforms, the teaching faculty has to first add their students to the list and then upload their lectures, course material, audio instructions etc.

Most of the students who are on the rolls of higher education institutions have smart phones and other devices irrespective of economic health in urban areas, so e-learning methods can hold ground till the virus is contained.

4. A change in the purpose of learning

The course of learning and the way curriculums are taught may change. Aspects that were once considered fundamental to education may be revised to largely accommodate life skills of the future.

Not just careers, but residents of the future as well will require skills like resilience, adaptability, collaboration, communication, empathy, creativity and emotional intelligence. Learning in schools will have a new purpose, and it will be a major deviation from the information-focused education of today

Opportunities in Covid 19

1. Rise in Blended Learning

Universities and colleges will shift to a model of blended learning where both face to face delivery along with an online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required.

New ways of delivery and assessments of learning outcomes will have to be adopted which opens immense opportunities for a major transformation in the area of curriculum development and pedagogy.

2. Learning management systems to be the new norm

A great opportunity will open up for those companies that have been developing and strengthening learning management systems for use by universities and colleges.

This has the potential to grow at a very fast pace but will have to be priced appropriately for use by all institutions.

3. Improvement in learning material

There is a great opportunity for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process.

Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that the use of learning management systems will bring about more openness and transparency in academics.

4. Rise in collaborative work

The teaching community to a large extent has been very insulated and more so in a country like India. There is a new opportunity where collaborative teaching and learning can take on new forms and can even be monetized.

Faculty members/ teachers can deliver online courses to even students from competing institutions. Collaborations can also happen among faculty/teachers across the nation to benefit from each other.

A large number of academic meetings, seminars and conferences will move online and there is a possibility that some new form of an online conferencing platform will emerge as a business model.

After all this, there is one certainty that we can envisage and that is going to change how higher education will operate globally and in India. India is not just going through a reform in the higher education sector, but now it will go through a major transformation in general.

Challenges in Higher Education

The COVID-19 pandemic scourging across the globe since late January is turning out to be an unprecedented challenge. The lockdown has not spared delivery of education either domestically or internationally. While institutions have moved to the virtual world, the related benefits provided by in-

classroom teaching beg to tag along. Following is a look at associated challenges within the higher education domain:

1. **The midnight transition:**

The lockdown has forced educational institutions to evolve their teaching methodologies from in-person lectures to e-Learning platforms almost overnight. Every stakeholder within the education domain has their task cut out for them. For students, homes have turned into schools while for parents they have turned into office cubicles.

Institutions must train students to be more adaptable in their learning approach. Thus, institutions must emphasise on the importance of teaching their students life skills like creativity, collaboration, emotional intelligence and continuous learning. At the same time, daily assignments and interactive coursework must stave off the lethargy associated with staying indoors. Educators must rise up to the challenge.

2. **Changing Role of Educators:**

While in classrooms, a teacher can judge the involvement of students through their behaviour and accordingly adjust the delivery of a lecture. On a virtual platform though, such benefits are non-existent. Educators have to adapt against such shortcomings developing into their Achilles Heel. As Seth Godin once rightly claimed, 'When things go digital, everything that can be measured, will get measured!' The role of educators as effective knowledge dispensers is under scrutiny today more than ever before.

Educators must undergo regular training to ensure adequate optimisation of their efforts to benefit students. Gaining regular insights on their lecture delivery, frequent assessments to gauge the effectiveness of student learning and their ability to interact with students through technology-based media are key metrics every educator must focus upon. Thanks to the virtual platforms, today's educators can be accessible globally.

3. **eLearning platforms:**

Institutions have to quickly shortlist the eLearning platforms that fulfill their needs. The EdTech space, ZOOM have witnessed phenomenal personalisation and growth in recent months. Learning Management Systems have been a part of the student learning process since the early 2000s. This has allowed the smooth transition of our students into the eLearning phase. Additionally, recent months have seen a rise in the number of students taking up online certifications in order to bolster their profiles.

4. **Passive learning by students**

The sudden shift to online learning without any planning -- especially in countries like India where the backbone for online learning was not ready and the curriculum was not designed for such a format. It has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span.

Added to this is that we may be leaving a large proportion of the student population untouched due to the digital divide that is part of many developing nations including India.

5. **Administrative concerns:**

The biggest losers (if I may call them so) in the current pandemic are students in the final year of their studies. By December 2019, most had earned a well-deserved internship/job offer. Unfortunately, this pandemic has cast a shadow on their post studies situation. It is disheartening to read the related posts from

such students on LinkedIn. Companies have gone into a huddle. Some of them have frozen the recruitment process.

6. Access of Internet at remote places

Even though the country has been adapting to the new-age learning, but there still lies an obstacle in making the endeavours entirely successful. What still remains intact is that only 45 crore people of our total population of the country have access to the internet and thus to e-learning. The people residing in rural areas are still very much deprived of the latest advancements and therefore hampering the cause of online learning. Now, virtual classrooms are not only dependent on e-lectures but also require one to have access to the e-content and online study material, practise sheets etc. as well. And that's where we lag behind as India is not fully equipped to make education reach all corners of the nation via digital platforms or online classrooms.

The students who aren't privileged like the others will be held back due to the current resort and there is no denying that. But universities and the government of India are relentlessly trying to come up with a solution to resolve this problem.

Role of Government

In response to the challenge of colleges and universities being shut, central government, state governments and private players have come up with various initiatives to support and benefit the students. Ever since the lockdown started, the government has taken numerous measures to ensure that the impact of the crisis on education is the least.

They initiated and directed to use numerous online platforms effectively by engaging students with online learning through Information and Communication technology techniques. The Government of India through its Human Resource Development Ministry and diverse departments working under it are bringing out numerous initiatives. The University Grants Commission and its Inter University Centres (IUC)- Informational and Library Network(INFLIBNET) and Consortium for educational Communication (CEC) are part of this network. These platforms can be accessed by teacher, students and researchers.

The UGC recommended that universities develop virtual classroom and videoconference facilities, give staff training in the systems and upload materials to websites, with the aim of shifting about 25 per cent of syllabi online. The UGC also urged flexibility in modes of conducting exams, which could be done in-person or online. Assessments could be based half on various evaluations and half on the previous semester's performance.

The Government is not leaving any stone unturned for arranging/ scheduling study material via various platforms. To help students continue their learning during the pandemic, various e-learning portals and apps have been launched by the government and education bodies such SWAYAM, MOOC (Massive Open Online Courses), E-Pathsala, SWAMPRABHA, e-SHODH SINDHU etc.

Teaching and Learning After COVID-19

For Institutes/ Universities

1. Fundamental structural changes should be made in the curriculum/syllabi and programmes should be popularized to attract students across the countries. Skill development should be part of the curriculum in Engineering and science degree programmes. This will create future entrepreneurs. This is one way to beat unemployment and increase business skills amongst the youth.

2. Online examinations, Online open book examination, viva-voce through video conferencing, online meetings, once were a myth for class education but now it has in discussion for a mass education as well.

3. Future educational model would be a blend of classroom teaching + hands on experience + online learning. Similarly online platforms will help for concurrent evaluation of students and hopefully university evaluation as well.

4. Every university will have its e-learning platforms like Swayam.

5. B-Schools are supposed to be residential schools. Now without spending in physical infrastructure, it is possible by investing in technology. Let every student have at least a tab with her.

For Teachers

1. Students and faculty got introduced with different online platforms which hopefully remain in use in future also. The format of time table would change to 24 x 7 teaching learning.

2. 24 x 7 may help to strengthen bonding between faculty and students. This will help better understanding of students.

3. Flexi-time for faculty as well as for students is possible which may help in maintaining work life balance.

4. The faculty should establish themselves as "competent" individuals who can deliver what the students expect. To establish faulty should be active in research and research publications and gain experience /skills in online teaching.

For Students

1. Choice based credit system is now within reach. Students don't need to travel but join online classes.

2. Sharing expert faculty lectures to the students at university, national and international level is possible.

3. Students can attend lectures from guests, professional from any corner of the world through video conferencing is within reach.

4. A student living in the interior of the country can master a course on AI or big data without paying a considerable fee. Indeed, over the next few years, the number of students who get an education online will grow considerably,"

5.

This pandemic busted comfort zone of faculty and Institues. And a new quest of survival begins in e-education era.

Conclusion

Post Covid-19 is an opportunity to transform the higher education system. Institutes/ universities should utilize this opportunity to transform itself. Curriculum design, collaborations, skill development and faculty involvement — all should focus on internationalizing higher education.

Also, this is the right time to strengthen online education to be prepared for any future pandemic situations. The entire education system has to undergo changes with the active involvement of faculty. The tremendous use of technology in teaching amidst crisis will lead to a new era in the education sector wherein the best of faculty will be available from across the globe to students. Quality of faculty, quality of IT infrastructure and familiarisation of the faculty with digital teaching technologies are important parameters foreseen in the future. There is no doubt that the crisis has accelerated the adoption of technologies to deliver education and will help strengthen the country's digital learning infrastructure in the long run.

"The impact of COVID-19 will remain for years, if not longer. The new normal will be that significantly larger numbers of students will attend classes from home. While this trend was already on the uptick, it will receive a massive impetus because of COVID-19.

Students who learn in virtual classrooms will find that their learning experience is as good as or maybe even better than that of students who sit in classes. The hugely transformative power of virtual classrooms is their ability to bring an endless number of courses to students' doorsteps.

COVID-19 has struck our education system like a lightning bolt and shaken it to its core. Just as the First Industrial Revolution forged today's system of education, we can expect a different kind of educational model to emerge from COVID-19.

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