

How to Cite:

Krishnan, H. P. K. (2022). COVID-19 and online learning in India: Overcoming disruptions on higher education. *International Journal of Health Sciences*, 6(S3), 7983–7991.
<https://doi.org/10.53730/ijhs.v6nS3.7892>

COVID-19 and online learning in India: Overcoming disruptions on higher education

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Abstract---In the past two years, global higher education sector has been deeply impacted by COVID -19 and it has been no different in India. The impacts of Covid-19 pandemic are not limited with health problems but it also has severe effects on the economy, employment, education and agriculture sectors. Since its first outbreak in India in January 2020, COVID-19 pandemic has disrupted Indian teaching - learning system and adversely affected the vulnerable learners in the hardest way. The indefinite closure of educational institutions from schools to higher educational institutions has necessitated the need for harness online/digital learning in teaching - learning. Online learning has become a new normal during COVID -19 time. When locked down was declared to contain the pandemic, online learning was the only solution to ensure incessant learning in universities, colleges and schools. The lock down and resultant closure of institutions have necessitated online learning as a powerful tool to ensure uninterrupted teaching - learning. This paper is an attempt to analyze the disruptions caused by COVID - 19 in the teaching - learning process in India and how online teaching - learning evolved as an alternative learning delivery system and its advantages and negative impacts.

Keywords---inclusive learning, learn from home, synchronous & asynchronous learning, digital divide, participative learning, learning outcome.

Introduction

COVID – 19 was first reported on 31 December 2019 in Wuhan in Hubei province of China by their Municipal Health Commission to China's World Health Organization (WHO) Country Office when they conveyed a cluster of pneumonia cases of unknown cause. This regional outbreak was declared as a Public Health Emergency of International Concern on 30 January 2020. The unnamed epidemic

was named COVID-19 by World Health Organization on 11 February 2020. WHO declared this as a pandemic on 11 March 2020 (WHO,2020). Pandemic is an epidemic outbreak that spreads across countries or continents causing high rates of morbidity and mortality. Following this several countries all over the globe had resorted to lockdown to “flatten the curve” of the pandemic. The lockdown was meant to break the chain of corona virus. Lockdown confined millions of citizens and students in their homes and resulted in closing down of businesses, aviation, transportation. Almost every economic activity came to a standstill and this also led to closure of educational institutions worldwide.

Impact of COVID on teaching – learning

In India the first COVID -19 was reported in the state of Kerala on 30 January 2020. The outbreak of any pandemic necessitates the closure of educational institutions and cancellation of seminars, conferences, workshops and meetings. During pandemic outbreak the doors of educational institutions will be the first to close and last to open. Government of India announced countrywide shutdown of classrooms as a major measure to contain the outbreak since 16 March 2020. Nationwide lockdown was announced w.e.f. March 24, 2020 which was later extended till May 31, 2020 in various phases. Minimal relaxations on lock down conditions were introduced from May 2020. The second wave of the pandemic due to the Delta and later the third wave due to Omicron variants required the closure of educational institutes off and on across the country. As on 09 February 2022 in India, the total number of COVID 19 cases reported was 4,24,10,976 with 5,05,279 deaths [MoHFW, 2022].

Higher educational institutions are the buzzing educational/cultural hubs for students from different cities, states and even also from various nations to gather together for the pursuit of learning and exchange academic thoughts. This unique ecosystem has been severely impacted by the rapid spread of the COVID-19 outbreak, creating uncertainty regarding the resuming of classes. The suspension of classes, postponement of university examinations and new admissions due to COVID 19, though temporary in nature, resulted in long-term disruptions of higher education sector which is a critical determinant of a country's economic future. The economic recession necessitated by COVID -19 had impacted the higher education institutions in numerous ways like reduction in the employment opportunities for university graduates who were expected to enter the job market soon after their course completion, delays or inability of students to pay their tuition fees, meet other educational expenses and government's incapability to fulfill their financial commitments to public-funded institutions.

Higher education in India

Economic organizations forecast India to be the third largest economy with a GDP size of \$15 trillion by 2030 and is one among the youngest nations in the world with median age 32. It is estimated that India will be the largest contributor to the global workforce and one in every four graduates in the world will from Indian higher education system. Educational policy makers envisage Indian higher education not only to be the best in the world, but the best for the world too (World Economic league table, 2020). As per the All India Survey on Higher

education (2019-20), India has 1043 universities with 54,122 higher educational institutions of which 42,343 are colleges with 15.03 lakh faculty members and approximately 3.8 crore students. The following table depicts the status of higher education in India:

Table 1
Status of higher education in India (2019-20)

Institutions	Teachers	Students	Universities	Colleges	Stand alone
54,122	15.03 lakhs	3.85 crores	1043	42343	11779

Source: All India Survey on Higher education (2019-20)

Literature Review

Noesgaard, S. S., & Ørngreen, R. (2015) have analyzed the effectiveness of online/digital learning within higher education system and have discovered 19 different and distinct ways for effectiveness of online learning based on their study. Alkalifah (2008) points out that Internet-based-learning is an extension and development of computer-based-learning wherein learning content is made available on intranet and internet links provided to references which learners could use at any time, any place, in the presence or absence of instructors. Khan (1997) defines online instruction as an innovative approach for delivering instruction to a remote audience, using the Web as the medium. Blurton, C. (1999) opined that ICT as a assorted bunch of technological tools and resources which are used to communicate and for creation, dissemination, storage and information management. According to Jonassen, D. H. (1996) Information Communication Technology provides opportunities for teachers and students to operate, store, manipulate, and retrieve information, encourage independent and active learning and distance learning, motivate teachers and students to continue learning outside school hours. It also enables to plan and prepare lessons and design content and facilitate sharing of resources, expertise and advice any time anywhere to any one irrespective of physical presence in class rooms.

Online/digital learning

Prior to the advent of online learning, an average Indian student has been a 'passive player' with a little choice of what he learnt and how he learnt it. Very often the learning was marked by curriculum which was predesigned, outdated, zero skill orientated, seldom industry relevant. The dominant mode of delivery was information-loaded, aimed at memory testing & recall and focused one-way lectures from the facilitators to students. Online learning necessitates student as an active participant in the teaching – learning process and the role of a teacher is that of a facilitator from a provider of knowledge. The paradigm of online learning is primarily designed to engage students in learning. This is aimed not only enable them to learn content but also to foster greater passion for learning – enabling them to '*learn to learn*' rather "*learn to earn alone*" and to inspire them to be lifelong learners.

Teaching – learning in times of COVID 19

The COVID - 19's second and third outbreak necessitated the need to live with COVID - 19. The advent of online and digital learning during COVID -19 has transformed the centuries-old concept of teaching “chalk & talk” teaching model to a “technology driven” one. The disruptions in the delivery of learning forced policymakers to figure out ways to ensure inclusive learning solutions to tackle the digital divide. Connecting students and teachers through digital platforms by internet is the best way to overcome the learning impasse created by COVID - 19. But large proportion of India's higher educational infrastructure not adequately prepared for this transition to engage educational technologies.

Impacts of COVID 19 on teaching – learning

COVID-19 confronted most of the higher education institutions with an unexpected and impromptu shift towards online teaching and learning. The key aspects which affected this transition are availability of technical infrastructure, capacity building of faculties online learning competencies of students and their access to devices and internet for students. Other factors which had the adverse impact on the teaching – learning during pandemic are

Economic difficulties for students

The COVID -19 required closing / scaling down of business across the country resulted in loss of employment/income for millions of families across the country. Production, infrastructure and service sectors significantly trimmed down their production and services which have adversely affected the livelihood of millions. This loss of livelihood resulted had an adverse impact on the learners and thousands of students had to discontinue their studies for carrying out income earning activities to feed their family. This has resulted in the reduction of students attending educational institutions when they reopened, reduced the movement of students from their place of residence to institutions in cities, metros and also affected their overseas study prospects. This also created heavy pressure on the local higher educational institutions which witnessed long queues for securing admissions as students were scared to travel outside for learning.

Infrastructure inadequacies and COVID - 19 protocols

The prevailing COVID -19 situation warrants social distancing norms to contain the epidemic. This necessitated at least two shifts in colleges, alternate learning days for various batches, extended class timings. Libraries, dining halls and hostels in higher education institutes had to reorient to adhere to these social distancing protocols.

High investment cost for online education infrastructure

Online learning requires electronic gadgets, seamless power and internet connectivity which require a huge investment for the higher education institutions. Many of the institutions, especially institutions in rural areas and public funded ones found it difficult to source necessary funds required for this.

Role and benefits of online learning

Traditional institutions which once viewed online education as a threat started treating them as their lifeline during the pandemic. Online learning, once a threat and disruptor has turned as their rescue (Kandri,2020). Online/digital education was the only viable alternate solution which could bridge this gap. Ministry of Human Resource Development (MHRD), University Grants Commission (UGC) and All India Council for technical education (AICTE), the apex bodies of higher education in India promoted and inspired higher educational institutes to make use of virtual platforms for the teaching-learning process and conduct of online examinations during pandemic. The various benefits of online learning is enlisted below.

Anywhere, any time learning

As COVID -19 shut down the centers of learning across the country, online learning was the only way to connect and teach multitude of students across geographical distances. Online learning facilitated anywhere, any time learning where students could learn from their place of residence. Flexibility is an important advantage of online learning. It suits with the learning convenience of the students and moreover they can record the learning sessions and learn at any time based on their convenience and can have repeated sessions also, if need be.

Enhanced Teacher - Student Interaction

Major limitation of the traditional classroom learning process is that students may not get the desired level of individual attention to clarify their doubts. When the number of learners in the class is high and the number of teacher - student engagement sessions are limited, due to low teacher/ student ratio, one to one clarification of the doubts of the learners is difficult. Online teaching can provide more discussion sessions to clarify their doubts beyond class hours.

Access to global academic excellence

Online classes facilitate knowledge sharing of experienced faculty from various centres of excellence, within the country and abroad. This provides the students the exposure to the best academics across the globe otherwise they could not even dream off due to their geographic and income divides.

Documentation

Online learning facilitates the documentation of the required learning content and information in an online database safely which is easily retrievable. This enables the learner easy access to any amount of information that they require and saves time, cost of stationery and storage space.

Disadvantages of online learning

Learning is a process intended to bring out the change in the learning behavior and role of teacher is to organize the environment and settings to enable learning

to take place. The learning pyramid has a multitude of process which facilitates enrichments of knowledge and information in a structured and casual way. Group learning activities among students, one-to-one exchanges with the teacher and peer group and also with other stake holders are among them. Peer group interactions and group learning activities, available in class room learning, are an important factor which inculcate learning in learners. These frequent face to face interactions not only foster learning but develops life communication and interpersonal skills. In a traditional classroom teacher facilitates and guides learner in all these learning situations and provide support which fulfill the diverse requirements of individual learner which is practically impossible in online education.

The teacher can monitor the body language of students through which they can assess learners level of concentration and understanding which facilitates correction during the delivery of lesson in the class room Face-to-face interaction is usually perceived as the best form of communication as compared to the rather impersonalized nature of remote learning. Online teaching – learning process involves long hours of internet with good bandwidth, peaceful ambience and a device/ phone dedicated to each student in a family which might not be affordable for all. In India the entire spectrum of students does not belong to the similar socio-economic background. Moreover, the students have to take care of domestic chores, have to manage with limited space in the home with financial constraints and with poor internet connectivity and disrupted power which acts as hurdles to pursue online learning. Other major deterrents of online learning are highlighted below.

Digital divide

In online learning, technology facilitates access to learning activities and is the bridge which connects students with teachers and peers. Digital divide is the gap which exists between those who have access to the modern information and communication technology (ICT) and those who lacks this access. Digital divide makes technology as exclusionary and not inclusive.

Rural / Urban Divide

Nearly 66 percentage of our population lives in rural areas and learners from these regions constitute a significant percentage of our learning community. Majority of them do not have access to power and internet which are lifeline for online learning. Even where there is power and internet connectivity, availability of uninterrupted power and quality bandwidth are major concerns. As of 2020, only 45 percent of Indian population has access to internet. The number of internet users in India is 622 million out of 1380 million population with 323 million urban and 299 million rural users (ICUBE 2020).

Income Divide

For successful online learning smart phones or laptops are prerequisite in the learning process along with internet access. Affordability of Internet, Smart phones and / laptops are critical factor for enabling online learning among those

who are economically weak and income displaced. It is estimated that COVID 19 has nearly made 12.7 crore people unemployed (CMIE, 2020). This will have very serious repercussion in the income level and livelihood of families who couldn't afford these tools of online learning. Feeding the families will be the priority than the possession of online learning modes to them.

High dropout rate

Online learning is likely to witness a high dropout rate due to the fact that students might tend to get distracted by gaming consoles, social media engagements at home and might not feel a sense of class room teaching.

Privacy & Data security of students & facilitators

Privacy and data security is the contemporary buzz word in online learning. Data is regarded as the new age oil and policy makers must be vigilant in selecting online teaching platforms which safeguard facilitators and learners privacy and data which is of paramount importance.

One-size-fits-all doesn't work

Students are not alike. Their learning pace and mode of learning are unique. Large number of learners and subjects require different approaches. Online learning may overlook this individual factor.

Home as space for learning

Home has become nodal area of learning in the context of "Learn from Home (LFH)" scenario. In a country where nearly 66 % of population live in rural setting, having home with a space for learning is a luxury for many. Only a miniscule share of learners have spacious, quiet, learning friendly homes. Even for facilitators would find it very difficult to convince children or elders at home to maintain silence for the duration of their lectures to carry out online facilitation from home. Recent spurt in domestic violence cases during COVID 19 lock down testify that homes can also be places of oppression and abuse compared to the classrooms which to allow facilitators and learners to free their minds temporarily any learn in an enabling ambience. [12]

Time for transition

As the adage says "Extra ordinary situations warrants extraordinary solutions", learning during COVID times is no exception to this. Online teaching – learning is the only imperative to tide over the impasse created by closure of educational institutions. This necessitates creation, dissemination and assessment of the content which requires expertise and training. To facilitate an e – learning environment there is a need to develop a purposeful and well-defined online content which support the facilitator and learner.

Blend of Synchronous & Asynchronous learning

The concept of Synchronous approach of learning facilitates communication occurring in real time allowing instant feedback and clarification during online sessions through live learning tools, whereas an Asynchronous approach is a learning setting is without live communication but through the media of emails, blogs, pre-recorded flipped lessons, etc. An ideal situation is the synergy of Synchronous (live learning in which students learn with the teacher simultaneously) and asynchronous (students learning independently at different times) approaches. Higher Education Institutes make use of Moodle, MS Teams, Google meet and Blackboard, for online teaching, many institutes also use open-source online platforms – WhatsApp, YouTube, Skype, Google Hangout, Zoom etc.

Technology – Teacher-Teaching

In any learning environment, technology is only regarded as a learning medium. It can act as a bridge but never evolve as a destination by itself. Technology may *facilitate* the learners to learn but it cannot *make the learners learn*. It is the teacher and not the technology, the key to the future. Role of technology is limited to bringing *learning to learners* instead of bringing *learners to learning*. Though it is fact that a teacher cannot be replaced by technology but a teacher who fails to make use of the modern technology will be substituted by a teacher who is adept in making use of Information technology. Online learning cannot be a substitute for the class room learning. But new normal warrants online learning. For this facilitator should be conversant with the adaptation of online instructional methods/tools such as technology driven course designing, online instruction, computer-mediated communication, participatory learning facilitation, hosting the audio/video content. Online learning facilitation without adequate tools and professional competence may compromise quality and defeat the very purpose.

Conclusion

The existing challenges faced by Indian higher education system namely – access, equity and quality will significantly aggravate unless we transform our higher education to technology driven platform to ensure the above. In future online education is likely to be integrated into mainstream education and will foster inclusive education by facilitating learning across diverse divides (income, digital, demographical and digital) in India. It is also imperative for the educational administrators to be aware about the reality of the Digital Divide—the gap between students who have access to and control of technology and students who do not—while harnessing the introduction and integration of online learning at various levels and in different types of education. Failure to bridge this would mean a further broadening of the knowledge gap and the deepening of inequalities that exists.

Declaration

The author declares that there is no conflict of interest

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