

## Offline to Online: A long way to go

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### Abstract

*The whole world has been grappling with the COVID-19 pandemic and its effects on various sectors. With physical distancing norms being advocated in the bid to prevent transmission of the virus, schools and colleges across the globe have faced a major setback. However, the pandemic has been the catalyst to bring online learning to the forefront as the solution to fill this void. With the advent of this emergency remote teaching, educators all over the world have been in a furore to create e-content and shift the teaching-learning process online. While several studies extol the benefits of online education, its success in the Indian education system is uncertain owing to several constraints that are endemic in the country. This paper aims to study the merits and challenges of online learning in higher education in India and suggest some remedies for the same.*

**Keywords:** COVID 19, Online learning, Higher education, Challenges, Remedies, Merits

### Introduction

Historically, India has been a country that is renowned for its education. Ancient Indian Universities like Nalanda, Takshashila, Valabhi and Vikramshila have always occupied the status of premier institutions of higher learning and research. Over the years, India has strived to maintain this status by constantly enhancing the quality of education and research in the country. With the passage of time, the country has embraced various pedagogies and methods of teaching and learning. The year 2020 has witnessed one such foray into a new mode of education across the nation - online learning.

The COVID-19 pandemic has upended the world as we all know it. Caused by the SARS-CoV-2 coronavirus, the disease is believed to have originated in Wuhan, China and was declared as a global pandemic by the World Health Organization on March 11, 2020. With the number of cases constantly fluctuating and the slow rollout of vaccines, the virus seems to be here to stay for the foreseeable future. The Ministry of Health and Family Welfare of the Government of India has imposed the use of social distancing measures to prevent and control the extent of transmission of the virus. This decision has major implications in the education sector and has resulted in a rapid

“migration” from physical classroom learning to virtual classroom learning in the blink of an eye. Educators have been stumbling along trying to adapt themselves to the use of technology, creating easily understandable and engaging e-content and acclimating themselves with the experience of ‘speaking to a screen’. Thus, for all intents and purposes, this transition to online education in India is more of a crisis response than a well-thought out, tried and tested approach. There are various ways and formats in which online learning can take place. Several institutions are offering their courses “asynchronously”, meaning students decide when to access the study material- video recording of a lecture conducted by the teacher, assignments, notes, etc. that is provided, as per their personal schedules. Thus, it is a more flexible and self- paced approach to learning. The more popular format that is being followed in most institutions is the “synchronous” approach wherein the teacher and students are online at the same time and the lecture is being conducted on a specific virtual platform at a predetermined date and time. It can be in the form of video-conferencing or live streaming of lectures. In this mode of learning, the students are actively engaged as they are provided with study material during the class and can interact with their peers and teachers in real-time. Thus, it provides a forum for active engagement and real-time discourse and debate. While online learning has been used extensively over the years for vocational courses and certificate or diploma courses,

the COVID-19 pandemic has been the catalyst that changed the status quo and pushed it into the limelight as the new normal for all kinds of education. Kerala was the first state in the country to launch the new academic year on 1st June 2020 by setting up online learning across all schools and colleges.

Several studies have lauded the use of online learning and its benefits (Chen, 2010; Guadalupe, 1999). Some advantages of online teaching-learning include flexible learning, convenience in terms of saving time and money, accessing and reusing study material stored in an online database, reduction of logical barriers and self-paced learning to list a few. However, the efficacy of an online education will be different in a developed country as compared to a developing country. For instance, the aforementioned findings may not be applicable in the context of the Indian education system owing to constraints such as poor connectivity, limited resources, vast digital divide, etc. Higher education in India has witnessed a major inflow of first-generation learners in recent times. These students do not have access to many resources. If online teaching-learning continues to stay post the COVID-19 crisis, these learners who are already on the darker side of the digital divide may be pushed further away. Without proper support they may never be able to complete their studies. This paper aims to study the merits and challenges of online learning in higher education in India and suggest some possible remedies for the same.

## Challenges in Online Learning

### 1. Access to gadgets

In a country like India a digital divide is clearly visible (Beniwal, 2020). India's digital penetration is not as much as many other developed nations. There are students who do not have access to smartphones or computers. Additionally, having a smartphone with a 4G connection is preferred for attending online classes that are conducted live, which may not be available to many students particularly those who have a low-income background. When online learning commenced in different parts of the country in 2020 after the imposition of lockdowns, numerous cases of suicides by students were reported. They allegedly resorted to such an extreme measure because they didn't own any suitable gadgets to attend the lectures. The lack of access to devices, which deprives them of their education, affects students' well-being (Bisht et.al, 2020). This reveals the pressures that the system puts on the students and points fingers at the need to bring in parity. Even among middle-class families there may be just one computer per household. In the event that there are multiple children who have online lectures, coupled with their parents who may have to 'work from home', the question of who gets to use the device and who has to forgo it, becomes a very serious question which has no right answers. If these basic issues are not resolved, education will become inaccessible to many in the nation.

### 2. Internet connectivity issues

The number of internet users in India has increased dramatically in recent years. But the low penetration of the internet restricts access only to the privileged groups (Illavarasan, 2013). According to experts, existing telecommunication infrastructure suffers from various challenges such as spectrum issues, lower broadband penetration and low level of wired connectivity. The present telecom infrastructure in India is not capable of handling the increased demand owing to the conduct of online lectures coupled with the 'work from home' strategy adopted by the corporate sector due to the imposition of lockdowns. The current technical design of the telecom industry is not equipped to cater to the needs of online teaching-learning thereby leading to network congestion and bandwidth issues. A report of Telecom Regulatory Authority of India shows that the internet has made deeper penetration into the society after 2017. But the rural-urban gap in internet access is a huge worry (TRAI report 2019). Affordability is yet another cause of concern. Affordable internet is a distant dream in India. Also, in this time of financial crisis, it is a big question that how many will be able to pay for internet, which is often considered a luxury in many parts of the country. There have been several instances wherein people have ventured out of their homes, sitting in their cars or even on trees in order to get better network coverage. Most households in the rural areas do not have a Wi-Fi connection. They rely on

cellular internet connectivity which can be erratic and hinders both streaming and downloading of online lectures. Additionally, students facing these issues often find themselves left behind in terms of class participation, doubt-solving and other class activities that happen in real-time.

### 3. Technophobia

Technophobia refers to the fear of technology. In the sphere of online learning technophobia is something that can affect both teachers and students alike. Users are more likely to experience frustration and anxiety at least sometime during the usage of technology (Oluwalola, 2015). Recurrent episodes of frustration and anxiety can create some fear and aversion in the minds of users prompting them to distance from technology. When students experience the problem, it may even affect their interest in the learning process. For several teachers embracing technology clearly means stepping out of their comfort zones. Studies have reported a negative relationship between technophobia and the well-being of teachers (Singh, 2017) and a positive relationship between technophobia and distress (Henderson et.al, 1995). Almost overnight, educators have been forced to transition from teaching using the blackboard and a piece of chalk and gauging students' understanding or lack thereof by analyzing their facial cues to teaching while staring at the computer screen with no way of knowing how much the learner has understood or whether they are even attending the class or have simply logged in for

attendance purposes while going about their day. As most of the teachers have spent much of their career teaching in the offline setting, adopting online teaching has posed several challenges for them. Lack of student participation and involvement in classes coupled with technological difficulties faced by the teachers, many of them have not been experiencing the same level of job satisfaction as they used to before their forced foray into online teaching (Nambiar, 2020). In many cases, the teachers can be considered to be "digital immigrants" while the students are "digital natives" (Prensky, 2001). While most colleges and universities have campus support personnel and technical staff who are available to help faculty members by instructing and guiding them to learn the technicalities of the online platform to be used for conducting classes, it would not be possible for the technical team to provide the same level of guidance and instruction online as they could do by demonstrating it in a physical setting. Moreover, it is not feasible for the support staff to address issues of each faculty member as they are bound to be unique and extremely difficult to solve without face-to-face interaction. Thus, a fear could set in the minds of the teachers which could be due to many reasons such as lack of knowledge to use the platform, fear of embarrassment and fear of failure to deliver lectures effectively in online settings. Several cases have been reported in the newspapers and social media channels wherein teachers have been shamed and abused by the students for their inability to effectively conduct lectures in an online environment.

#### 4. Misuse/ online abuse

Online abuse is another challenge associated with online learning. There were complaints from Delhi University about miscreants (not students) logging into the virtual classrooms and harassing teachers and disturbing the class by posting abuses and indecent material. Some universities in the UK have logged complaints of students posting highly obscene materials during online lectures. It causes embarrassment for all who are a part of the lecture. This incident points to two possibilities—either the outsiders must have hacked the account or some student must have shared the username and password with them. Female teachers in particular have found themselves to be victims of such online bullying. They are body-shamed, trolled and abused. Teachers have experienced online stalking and harassment from parents of their students during online lectures. The videos of teachers from the state of Kerala taking online lectures for smaller classes were widely trolled and were subjected to discourteous comments across various online platforms such as Facebook. Some even went to the extent of creating objectionable videos of the teachers and uploaded them on various platforms. All of these incidents point fingers at yet another Pandora's Box of problems. In addition to this, there can be the issue of digital privacy as well.

#### 5. Distraction of students

Students are more likely to get distracted when the physical presence of the teacher is not around. 'Transactional distance' is more in online classrooms

(Oluwalola, 2015). If the teaching style is not very interactive the perception of transactional distance will be stronger for a student. Students generally use smart gadgets for accessing the online classes. It would be difficult for them to keep their attention engaged when social media notifications keep popping up. Multitasking (doing two or more activities at the same time) is high when students are attending online lectures (Lepp, 2019). Several past studies support this finding that during the online part of learning, students engage in multitasking (Moreno et al., 2012; Manwaring et al., 2017). Past literature on psychology suggests that it is not possible to concentrate on two tasks with equal attention. So, when a student engages in multitasking during online lectures automatically his efficiency comes down thereby bringing down the task performance (Carrier et al., 2015). The success of online learning to a large extent is dependent on the student's motivation and self-discipline. There have been several complaints by teachers that some students merely login to the lectures at the appropriate times but do not actually "attend" class. In a study conducted among school students in Delhi, lack of interaction and distractions in the home environment were identified as major deterrents of online learning (Khan et al, 2021). A study conducted on the efficacy of Massive Open Online Courses (MOOCs) documented that the students' inherent and visceral capacity for being organized, disciplined and having self-control was crucial for having a successful online learning outcome (Banerjee & Duflo, 2014). Thus, the success of online learning largely depends on students'

perseverance and dedication. Moreover, it is very difficult to track and penalize those who are flouting the rules and avoiding classroom interactions and assignments.

## 6. Physical and Psychological issues

Many households in India do not have a conducive environment for online learning. A student often has to share his study space with others in the family. Many of these students depend on the college library or reading hall as it gives them a quiet place to focus on their studies. Sadly, in many households a demarcated space for studying doesn't even exist. In such conditions longer hours of learning will become difficult. With online lectures mostly being conducted in the morning, many students are forced to attend classes in the midst of household chores and other activities due to which they are unable to pay complete attention to the lectures. Additionally, most of the reference books which students are prescribed for in-depth analysis and studies are very expensive, particularly those written by foreign authors. Hence, most students prefer to borrow such reference books from the library rather than purchasing it. Due to the closure of educational institutions, students no longer have this source of knowledge available to them and would have to rely on the internet (for those students who have access to it at their homes) and on the books that they have at hand. Over and above, studies are required to probe the effects of continuous gadget usage on the psychological well-being of the students. Emotional experiences of the learners can play a crucial role

in online learning (Juutinen et.al, 2010). There is sufficient empirical proof for online learning systems putting learners in a frustrated and confused state and an eventual dislike for learning (Hara and Kling, 2000). If the learners suffer from technophobia the intensity of emotional problems could be greater (Brosnan, 1998). To top it all off, the lockdown imposed by the Government, the fear of contracting COVID, either by themselves or their loved ones and loss or reduction of family income have resulted in an upsurge of mental health problems across the globe. Several studies have shown that people are increasingly facing issues of depression, stress, mood swings, moderate to severe anxiety and other mental health issues. Such problems can negatively impact students' academic performance (Deb et al., 2016; Kulshrestha & Bahuguna, 2020). There has been an increase in the rate of suicide among students since the imposition of online mode of learning (Balachandran et.al, 2020).

## 7. Access to Electricity

Many towns and villages in India do not have uninterrupted access to electricity. Unexpected power cuts with no certainty of when it will be restored, is a common occurrence in many parts of the country. Such intermittent electricity connection deters many students from attending online classes which are either streamed live or are recorded. As per data from the Saubhagya Scheme of the Government of India which was formulated with the aim of providing free electricity connections in rural areas and among the urban poor, with the exception of Chhattisgarh, all other

states boast a 100 percent electrification status (Ministry of Power, Annual report 20-21). However, the reliability and stability of the connection is debatable.

## 8. Dropouts

The rural poor often tend to assign an “economic value” to children and view them as a source of labour and income (Corbridge & Watson, 1985). The lockdown which was initiated due to the COVID-19 pandemic resulted in scores of migrants losing their jobs and returning back to their villages. This loss of income exacerbated by their return to the villages with no permanent source of livelihood in sight could result in many children dropping out of schools and colleges. Additionally, students may be forced to stop their studies in order to leverage their earning capacity and contribute to the household functioning due to the increased opportunity cost of continuing their studies (Bharadwaj et al., 2020). Research shows that school dropout rates in India have always been a source of worry and these students have been pushed out of the system owing to a variety of reasons such as poverty, cost of education, poor quality of education and child labour. Temporary interruption in schooling, among the poor, has frequently culminated in permanently dropping out of the education system (Reddy & Sinha, 2010). Amidst the lockdown-induced closure of educational institutions and the transition to online learning, several children have dropped out of schools due to financial constraints resulting from the parents losing their jobs or experiencing a pay cut. This would ultimately result in these children not

even entering the sphere of higher education which would be a detrimental loss to their earning capacity and standard of living.

## 9. Practical Learning

With the advent of online learning, several courses which involve application-based pedagogies have experienced a setback. Courses such as Master of Business Administration (MBA), Masters in Management Studies (MMS), Hotel Management and Entrepreneurship involve several simulations, real-world immersion and experiential approaches. While online simulations exist for this purpose, it is not an adequate replacement for the authentic experience. Years of pedagogy development, curriculum enhancement with respect to simulations and experimentation is needed in order to effectively transition quality online education in these fields (Liguori, & Winkler, 2020). Additionally, such courses involve internships as part of their curriculum in order to enhance the students’ competencies in the real-world, which cannot be effectively experienced online. A critical aspect of higher education includes moulding students to work as a group, enhance leadership capabilities and improve their participation in collaborative experiments and projects. With the advent of online learning this aspect of their education has vastly suffered. However, it must be acknowledged that online education has its fair share of merits as well.

## **Merits of Online Learning**

### 1. Infrastructure

With the advent of online classes, educators are delivering lectures from the comfort of their homes. This provides them with various facilities that help in making the classroom atmosphere more interesting and engaging such as showing videos, sharing live data and use of other digital interactive tools which often proves to be a challenge in regular college classes owing to constraints such as lack of Wi-Fi connections on campus and portable speakers. In such cases, teachers would often share the link of such content with the students and would ask them to view these at home. However, this often created a disconnect between what was taught in class and what they understood from the aforementioned content. With online lectures, however, teachers can merely share their screens and stream YouTube videos, show data and graphs on Government and other institutional websites and make use of interactive digital technologies to further their learning. This enables students to connect with the topics being taught in real-time.

## 2. Time-Saving

In many cities, particularly in metros like Mumbai, Delhi and Bangalore students and teachers spend most of their time travelling. With the commencement of online lectures this time that was spent on travelling can now be utilized on more productive activities. There has been a significant fall in travelling expenditure as well. Moreover, in an offline setting, there is some amount of time that is spent in taking attendance, controlling the class and setting up projectors. With online classes, however, all of these

tasks are accomplished by the mere click of a button thereby leading to complete utilization of the lecture time.

## 3. Platform for students to express themselves

The virtual world provides some sense of anonymity to people. Students who may find it difficult to interact in the offline classroom may find the comfort provided by online classes helpful for participation. The fact that students attend the class in the comfort of their homes puts them at ease and helps them to communicate better. Student interaction, especially those who are at the lower end of social outwardness, may increase during online lectures (Harrington & Loffredo, 2010).

## 4. Any time learning

Most of the online lectures are recorded which gives students a chance to go through the lecture multiple times. Students can access the recorded lectures from the repository and learn at their pace and comfort. This makes the learning process easier and gives a chance to relearn and understand concepts better. Flexibility is a significant advantage of online learning (Dhawan, 2020).

## Possible Remedies to Tackle the Challenges in Online Learning

Online learning or e-learning is here to stay. Necessary measures should be taken to tackle the challenges discussed above to ensure smooth learning.

### 1. Access to gadgets

The Government and NGOs can actively



intervene to reduce the digital divide. Subsidies could be provided for buying gadgets and internet connection rates could be slashed down. The 'TV challenge', 'Mobile challenge' and 'Laptop challenge' are some challenges active in social media where people who can afford, sponsor new or old televisions/mobile phones/laptops to needy students so that they can access lectures broadcasted on TV or attend lectures online. Through the collaboration of various government agencies, NGOs and citizens of the country this digital divide could be reduced if not eliminated.

## 2. Internet connectivity issues

Unstable network connection has been a stumbling block in online education. To mitigate this problem teachers often ask students to switch off their videos and mikes during live online classes. This solution to provide some stability to the internet connection comes with a price as often the teacher tends to feel a disconnect from the teaching experience as ultimately, they are talking to a screen (Mishra et al., 2020). The best solution to handle internet connectivity issues is having wired connectivity using optical fibres. However, although wired connectivity provides reliable and continuous internet service that is sufficient for the smooth conduct of online lectures, it remains unaffordable for those who are below upper middle class. Therefore, the Government needs to take steps to mitigate this issue and improve internet connectivity across the nation. Additionally, telecom giants can take the issue up as part of their CSR initiatives and provide internet

connections at affordable rates for educational purposes.

## 3. Technophobia

Adequate training and constant technical support should be provided to teachers and students to get them familiarized with the tools and technology of online teaching-learning. This step helps to reduce the anxiety and confusion for both teachers as well as students. At times the training for the use of online tools and platforms are conducted by the service providers who may not be aware of the extent of technical knowledge of all the teachers. Therefore, teachers can be divided into groups of both tech-savvy teachers and those with less technical knowledge. The teachers who are adept at technology and can learn the new processes quickly can act as mentors to the others. This would ensure that all the teachers are gaining an equal foothold with the new technology and would aid in a smooth transition from offline to online teaching. A more recent study which was conducted ten months after the initial lockdown couldn't find any significant negative relationship between well-being and computer anxiety of teachers (Satra, 2021). The result can be attributed to the training that teachers acquired during this period. This clearly shows that with constant training and support teachers can overcome the anxiety and distress associated with online teaching.

## 4. Misuse/ online abuse

To combat the issue of misuse and disturbances created during online lectures by people from outside, each

student who has enrolled for a course can be provided with a unique login ID and password that they must use to access the platform on which online lectures are being conducted. Students must be strictly warned not to share these credentials with anyone else. With most online teaching-learning platforms constantly upgrading their services, there are now facilities wherein teachers can lock the virtual classroom after a certain amount of time (similar to not allowing students to enter the classroom after the bell has rung), manage the settings so only the host or organizer can share the screen, enable the waiting room feature to prevent those who are not authorized from entering the class and can remove participants who are disturbing the lecture. Emotional maturity of students plays a pivotal role in their adjustment and responses in an online learning environment (Matulesy et.al, 2021)

#### 5. Distraction of students

Online teaching should follow a flexible pedagogy. The teaching process should be more learner centric (Zayapragassarazan, 2020). Teachers may act as mentors rather than merely delivering lectures. Some extra effort may be taken by teachers to keep students at ease and make them comfortable for online learning. Simple things like turning on the camera during lectures and smiling at students will give a feel of physical proximity to them. Social presence and a sense of community are acknowledged as factors positively contributing to quality of learning and the motivation to learn (Haythornthwaite & Andrews,

2011). Interactions play a major role in developing an online learning community (Salmi, 2013). Teachers must try to engage students through meaningful activities to keep them enthralled (Muthuprasad et. al, 2021). Classes can be made very interactive by making use of online aids and resources. There are several digital tools available online that provide interactive online quizzes, polls and games that would help in capturing and maintaining students' interests and attention. Activity based interaction can promote active learning (Hirumi, 2002). These steps will help to reduce the transactional distance generally experienced in online learning. As there is physical isolation in online education, teachers lack the physical cues to understand whether learners are at the same pace with them. Researchers are working on developing systems that can detect the concentration of learners during the class with high levels of accuracy (Daniel, 2017). In the future such systems will be of great use to teachers.

#### 6. Physical and Psychological issues

In this time of uncertainty amidst the pandemic and the lockdowns imposed by the Government, people are facing tremendous anxiety and stress. To maintain the mental health and well-being of both students and teachers, efforts should be made by the educational institutions to provide free counselling services for them (Sahu, 2020). Institutions can also conduct sessions on Yoga, meditation and activities like Zumba to keep students physically and mentally active

(Varalakshmi and Arunachalam, 2020).

### 7. Access to electricity

Government initiatives are required to ensure uninterrupted access to electricity in both urban and rural areas. The faster implementation of schemes like Saubhagya and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) will help to achieve this goal.

### 8. Dropouts

In the span of a year there have been several reports of students dropping out of educational institutions as they cannot afford to continue their studies. Efforts can be made to secure funding from alumni of the institutions, the management or NGOs to create a fund that would help in sponsoring these children so they can continue with their education. Moreover, some State Governments have announced a fee waiver for those students who have lost their parents due to COVID-19. Thus, a joint effort between the Government, private entities and civil society is the need of the hour to soften the economic impact of the financial backlash faced by families due to the lockdowns and to ensure that it doesn't hamper students' education (Alvi & Gupta, 2020)

### 9. Practical Learning

Practical work including lab assignments and experiments were considered as impossible in digital mode. Technology advancements have provided an answer to this problem by enabling students to complete their assignments successfully

at home (Venable, 2020). Digital simulations, home lab kits and virtual labs help the students to successfully complete the practical assignments. Home lab kits can be customized according to the curriculum of the institution. Safety and affordability are two major concerns when labs come home. Simulations and virtual labs can address the issue of safety but fail to provide hands-on experience.

## Conclusion

This paper examines some of the major challenges of online learning and ways to tackle them. Additional empirical research is the need of the hour in order to study the impact of various factors on online learning. Several researchers suggest that self-discipline and higher levels of emotional maturity of students are basic requirements for online learning (Hiltz and Wellman, 1997). When students exhibit these qualities, the online environment becomes safer and more suitable for learning.

Online learning comes with its own set of pros and cons. Extensive research is required to determine whether the pros outweigh the cons or vice versa. However, one thing that is certain is that online learning is here to stay. Even when the pandemic is overcome, online learning can be used to complement offline education, particularly in case of conduct of webinars and workshops wherein expert speakers can interact with the participants from anywhere in the world.

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