# Redesigning Education through Online Classes during COVID-19 Pandemic

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**Abstract:** *The COVID-19 pandemic which is also known as the corona virus disease has been spread across the world through acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The outbreak of COVID-19 was identified in Wuhan, China, in December 2019. The horrifying and petrifying impact of the outbreak of COVID-19 has shaken the world globally. The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January, and a pandemic (an epidemic that's spread over multiple countries) on 11 March, 2020. Due to this crisis, a phased lockdown by maintaining the norms for social distancing has been followed by many countries in order to save lives of their citizens. To fight COVID-19, different countries are making their best efforts to slow the spread of the virus by testing and treating patients, carrying out contact tracing, limiting travel, quarantining citizens, and cancelling large gatherings such as sporting events, concerts, and schools. India also emerged as a great fighter in slowing down the outbreak of COVID-19 by implementing social distancing, lock down, improved health care facilities and awareness programmes. The Coronavirus disease 2019 (COVID-19) pandemic is creating unprecedented challenges in India among different sectors at every level of organization. Education sector is also affected to a great extent by COVID-19 Pandemic. Therefore, sensing the possible threat of COVID-19 pandemic and to slow down its outbreak, the Union Government declared a countrywide lock-down of schools and colleges On 16 March, 2020.  As a result, the schools and colleges in India on the directions of higher authorities made many changes in their teaching, assessment and evaluation system. The implementation of lockdown by closing all the academic organizations in India affected all learners ranging from primary level to higher level. As a result a strong need of moving from face to face learning to online learning has emerged. This paradigm shift in teaching and learning process may be termed as mobile ubiquitous learning. Presently, teaching-learning process is moving online, but on an untested and unprecedented scale. All the academic events, assessments and other related chores are also moving online, with a lot of trial and error and uncertainty for everyone. Noticeably, such interruptions and obtrusions are not a matter of short time, rather will have lasting effect for the affected cohorts. This article is an effort to highlight the challenges, pros and cons of online classes by redesigning the educational pursuit.*

**Keywords:** COVID-19, Pandemic, Education, Online Learning, Social Distancing

## 1. Introduction

"It's time to step up to the plate and get passionate about your work commit to making eLearning courses that don't bore people to tears, but instead inspire and motivate them to learn a new skill, change a certain behavior, or improve their performance."

*Cammy Bean* [1]

The world is facing a global health crisis that is affecting every aspect of human life. The coronavirus disease (COVID-19), which has been characterized as a pandemic by the World Health Organization (WHO), is attacking societies at their core not only in terms of medical crisis, but in terms of economic, social, physical and political crises also.In today's world, human existence is insecure, fearful and is in an uncharted territory.The present scenario of the world has experienced change from a health crisisto economic and social crisisdue to outbreak of pandemic, Corona virus.

The COVID-19 pandemic also known as the corona virus disease is spread through acute respiratory syndrome corona virus 2 (SARS-CoV-2). The Corona virus is named as Corona on account of its structure having crown like spikes,which spreads through droplets when we sneeze, cough or speak and can enter directly through our eyes, nose or mouth. The virus can survive for long hours on many surfaces.The corona virus disease (COVID-19) is invading communities at their core and has been identified as a pandemic by the World Health Organization (WHO).The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January, and a pandemic (an epidemic that's spread over multiple countries) on 11 March, 2020. The outbreak of COVID-19 was identified in Wuhan, China, in December 2019. The horrifying and petrifying impact of the outbreak of COVID-19 has shaken the world globally. According to The UN Department of Economic and Social Affairs (UN DESA 2020) [2], "The COVID-19 outbreak affects all segments of the population and is particularly detrimental to members of those social groups in the most vulnerable situations, continues to affect populations, including people living in poverty situations, older persons, persons with disabilities, youth, and indigenous peoples." According to Dun & Bradstreet, (2020) [3], "Besides the impact on human lives and global supply chain, the pandemic is a severe demand shock which has offset the green shoots of recovery of the Indian economy that were visible towards the end of 2019 and early 2020.However, the extent of actual impact would depend on the severity and duration of the outbreak, which is still unknown."

According to The UN Department of Economic and Social Affairs (UN DESA 2020), "If not properly addressed through policy, the social crisis created by the COVID-19 pandemic may also increase inequality, exclusion, discrimination and global unemployment in the medium and long term. Comprehensive, universal social protection

systems, when in place, play a much durable role in protecting workers and in reducing the prevalence of poverty, since they act as automatic stabilizers. That is, they provide basic income security at all times, thereby enhancing people's capacity to manage and overcome shocks."

According to Vygotsky (1978) [4], "learning is a social process. Students learn not only from their teachers but also from their peers." Social learning theory advocates that learning is a cognitive process and social behavior and new behaviors can be acquired by observing and imitating others. So, learning needs social environment for instruction, imitation and interaction and students develop their higher order learning skills by socialization and interaction. O'Sullivan, Krewer and Frankl, (2017) [5] conceived "socialization as fundamental to cognition". Man is a social animal but corona virus has brought countless changes in the way of working, playing and learning: as schools and gyms are closed, entertainment spots such as movie halls, malls, shopping complexes are shut down, cancellations and postponements of several national and international big events like IPL, UEFA and NBA etc., and employees have been instructed to work from home by maintaining social distancing. More than 150 countries were steadily went into lockdown, and businesses across the globe were either temporarily closed or operating in fear of an impending collapse of global financial markets, at the same time education system also witnessed major changes like the way of delivering the content to students, examination patterns etc. This situation, clubbed with sluggish economic growth is leading to extremely volatile and financial growth. To overcome this situation, social distancing has become the major tool and the necessary norm of survival of an individual. Social distancing means minimizing contact with people. Mandavilli A. (2020) [6] recommends, "Avoid public transportation whenever possible, limit non-essential travel, work from home and skip social gatherings — and definitely do not go to crowded bars and sporting arenas."Chowell G. (2020) [7], Chair of population health sciences at Georgia State University said to The New York Times that "Every single reduction in the number of contacts you have per day with relatives, with friends, co-workers, in school will have a significant impact on the ability of the virus to spread in the population." Thus, to maintain social distancing due to outbreak of this virus, educational institutions all over the world have been closed and students and teachers both have faced a situation of social isolation. Due to this condition of social isolation students have turned themselves into self-regulated learners. On the other hand, to hold the students' focus and concentration, combination of formal and informal types of learning and online mechanism of teaching-learning has been adopted worldwide. However, online teaching and learning is not easy as it demands a concerted approach, guided by institutional policies, student services and continued teaching training.

The temporarily closures of educational institutions throughout the world due to the outbreak of COVID-19 have impact not only on learners, teachers or parents, but have far-reaching economical and societal upshots too. Termination of classes due to Covid-19 has touched various social, economic and financial issues including our

academic spheres. The corona virus pandemic has tested the readiness of educational institutions to deal with a crisis that requires online and remote measures. Many were not prepared, but it is important to review the reasons for offering students online classes, which go beyond periods of confinement. It accelerated the development of the online learning environments within those institutions to manage teaching –learning activities. Thus, Education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms.Undoubtedly, technology enabled online learning is becoming popular recently to meet aims of education.To disseminate the information, to update the knowledge of school, college and university students, online classes are the only way and dire need of the hour in this difficult time. Higher education is collaborating with many online education solutions to explore and implement best practices.

## 2. Online Learning

In this period of lockdown, schools and colleges are temporarily shut down, this unprecedented move has caused a big gap in educational system, but despite these all adverse conditions, education has taken a new turn with technology being at the forefront. Technology is penetrating into the educational arena and remote learning, as online classes/ web based learning, and online courses are becoming the demand of the day. E-learning platforms have emerged as one of the best measures to help the students continue their studies during COVID-19 outbreak.

The Government is trying to give platform for e-learning and provision of online classes during this difficult period of corona virus outbreak crisis.Government has launched manye-learningportals to help the students not only get full access to the study material but also allow them to engage in online classes and interact with the teachers like the physical classroom setting. To ensure that there is no hiatus in the education and students get full-access to classes, like before, HRD Minister Ramesh Pokhriyal advises students to carry on with their studies using the digital learning platforms. **SHAGUN Online Junction is one of the** digital initiatives launched by Ministry of HRD for school students **to provide them online learning.It has**3 e-learning platforms comes under its purview **National Repository of Open Educational Resources (NROER),** National Digital Infrastructure for Teachers (DIKSHA) and **e-Pathshala.** SWAYAM, an initiative of Government of India, for the students pursuing education from class $9^{th}$ to $12^{th}$ and also for the aspirants seeking undergraduate and post-graduate level degree, facilitates study material at one destination. Students can access study material in the form of Video lectures, reading material, self-assessment tests, online discussions and doubt sessions. SwayamPrabha, a collection of 32 DTH channels which run 24x7 for the students. Everyday new content of at least 4 hours duration is floated on the website which runs 5 times in a day. Top education bodies of the nation such as NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS provide content to INFLIBNET Centre which runs these channels. Students from class $1^{st}$ to $12^{th}$ and UG and PG level aspirants can get access the interactive learning through this medium. The programme schedule and other details are available at the

portal. SAKSHAT (https://sakshat.ac.in/) is one Stop Education Portal for addressing all the education and learning related needs of students, scholars, teachers and lifelong learners. The portal provides the latest news, press releases, achievements etc. related to Ministry of HRD, Government of India.

Apart from government initiatives in digitalization of education, most of the schools and colleges are conducting online classes to help students to continue their academic activities while staying home in this unprecedented period of move. Online classes are the means to bridge the education gap during this pandemic situation. Basically,online classes are electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials. Byju's, DuolingoGoogle Classes, Kahoot, Khan Academy, Google Meet, Microsoft Teams, Unacademy, Zoom, Telegram, Edx, Moodle and Vedantu, Webex etc. are few applications for conducting online educational programs.Online learning or web based learning is a powerful medium to connect with students of any age. A full-fledged online course, just like a full-fledged traditional course, can pave the way for new approaches of learning.So, to maintain social distancing which is the dire need of the hour, online education is the best way to disseminate the information, updating the students' knowledge as well as the only mean to complete the syllabi in scheduled time period. The teachers and students, all have entered in to a new world of virtual learning, worksheets and digital assignments and the four wall of schools have converted in to a digital classroom, where thousands of students of schools as well as of colleges are stick to their computer screens or mobile phones for gaining knowledge. Undoubtedly, the distance education mode is in practice for a long time, but technology and digitalization has made it extremely accessible. Due to the onset of Covid-19, the traditional education system is not possible and virtual learning is going on with the help of web based learning or online classes.

## 3. Challenges of Online Education

In present COVID-19 crisis, online education has emerged as one of the best measures to help the students to continue their teaching-learning activities. But, to provide online education is not an easy task as we all are relying on the internet for anything and everything; so there are lots of challenges to face in online education system. The teachers and students both need adaption, direction, motivation and intensive training to be familiar with online learning. In addition, lack of access to Wi-Fi and internet, low income group students, unknown fear of web based learning, lack of sufficient number of laptops or computers, insecurity of housing and food are the major challenges in the path of online learning. The major challenges which are faced by educational institutions in imparting online education are:

- **Connectivity:** The students feel connected to their educational institutes, when they attend video conferencing or online presentations of teachers, can interact with their teachers as well as classmates virtually. These facilities provide mental strength that they are not lacking even in this dreadful period of epidemic. But for holding online classes the teacher as well as participating students need high speed internet connectivity at their homes.

- **Virtual Mobility:** When the student does not have to move to another place and moreover the study material becomes mobile, this is known as Virtual mobility. In this the content or subject matter becomes mobile. In the virtual offers, interesting interactions takes place, and then give rise to face-to-face encounters. For example, local study groups, called meetups, are sometimes created where the participants who are networked via the online portals meet in person; however, this is something that works better in larger towns and cities.

- **Accessibility:** Devices like laptops/ desktops, smart phones or tablets are required by the teachers as well as by the students in order to access online classes. Access to devices, especially for children is dependent on the economic status of their families.

- **Competence**: Necessary training is required by the teachers for conducting on-line classes as it goes beyond replicating classroom teaching in a virtual medium. As there is direct interaction between teachers and students in the classroom, therefore the teacher can see all the students and can observe their body language to assess their level understanding, which enables course correction during lesson delivery itself. But in online classes, there is absence of visibility and it is possible that only some active students will benefit from participating as compared to thoseinactive and passive students.

**Pros of Online Education:**
In the changing times, online learning is apt to meet the expectations of students, parents and the society on account of its proven advantages.

- **Flexibility:** One of the main advantages of online education is flexibility. Students who are not able to attend traditional classes due to a fixed schedule or some reasons can often take online classes. Students can schedule reading, writing and test time in the evenings or on weekends according to their own convenience. Moreover, students can attend both online and traditional classes to keep pace with their requirements.

- **Convenience:** In relation to flexibility, the other advantage of online classes is convenience. In order to save both time and money the students sometimes simply prefer completing their education from the comforts of home. Students can learn at their own pace, at their own place far away from any distractions or disturbances.

- **Motivation:** Though there is no substitute to direct human interaction, the virtual classes are indeed a smooth transition from the conventional classes; but the impact of online classes appeal for a better amount of motivation and self-discipline than a classroom-based course.

- **Reduced Costs:** Online education is the only panacea to meet educational objectives in this COVID-19 pandemic due to its low cost. Students need not commute unnecessarily. They can access the content and send their queries to the teacher online.

- **Networking Opportunities:** Online education provides a digital platform to students to interact with peers and teachers on a large scale. It increases networking opportunities in order to explore knowledge.

- **Accessibility of Documents:** All the required information can be safely stored in an online database. This includes things like live discussion documents, training materials and emails. This means that if there's ever anything that needs to be clarified, the student will be able to access these documents fast, saving valuable time. This is especially useful for individuals that need to carry out research for a project and submit their findings to a panel.

## Cons of Online Education

Although online classes have provided a solution to realize educational objectives, yet it has some disadvantages such as shortage of necessary gadgets, internet connectivity to conduct the classes effectively. Besides technical barriers, there are some other disadvantages also in online learning.

- **Limited Social Interaction:** Limited social interaction is one of the main disadvantages of online education. There is no doubt that online students often engage peers in online discussions and interact with teachers via e-mail, even then nothing can replace the traditional classroom and the direct interaction between teachers and students and among students also. A sense of community and belonging is instilled after the informal social interactions with peers before and after classes in face to face mode of teaching-learning. To develop teamwork skills and constructive learning, virtual classroom is less effective than real classroom environment.

- **Lack of Organization:** It is true that the flexibility and convenience of online classes is very much beneficial for self-disciplined students, but the lack of formal structure can be a major drawback or disadvantage for undisciplined students. There is no direct interaction of students with teachers and peers. Moreover students don't have a standard meeting time. Undisciplined students suffers a lot because of lack of initiative in engaging instructors via e-mail or phone as a result they can fall behind on assignments and fail to study adequately by test deadlines.

- **Testing and Evaluation:** Testing and Evaluation is one of the shortcomings of online classes. It is difficult is to find out which kind of assignments be given to the students to evaluate their understanding of the concepts. Further, when we let the students take the test from a distance, it is very difficult to supervise them. The gestures used by teachers in face to face mode and body language of the students in heterogeneous group play an important role in teaching-learning of educational concepts. In face to face classroom, organic space between teacher and students is enough and sometimes teachers even judge the students by their regular classroom behavior and performance also which is lacking in the online learning.

## 4. Conclusion

There is no doubt that in this COVID-19 Pandemic; a new turn has been taken by education with technology being at the forefront. Technology has entered in every sphere of education system and remote learning. Online classes and online courses are becoming the important necessities of the day. It is true that the pandemic is giving tech massive insights at scale as to what human development and learning looks like, allowing it to potentially shift from just content dissemination to augmenting relationships withteachers, personalization, and independence. More than one billion youth are now no longer physically in school after the closure of schools and universities across many jurisdictions. The disruption in education and learning could have medium and long-term consequences on the quality of education, though the efforts made by teachers, school administrations, local and national governments to cope with the unprecedented circumstances to the best of their ability should be recognized.Learning has transformed in to mobile ubiquitous learning or u-Learning, a new learning approach that incorporates mobile technology enabling learning to be carried out without limits, boundaries and seamless, anywhere, anytime, and in any way, depending on the milieu of learning, based on the attributes, requirements and interests of learners.

In spite of the fact that there is no substitution to replace human interaction, the virtual classes are undeniably a smooth switch from the traditional classes, during this difficult phase of dreadful epidemic COVID-19.National organizations and associations of each country are trying to resolve these issues and working day and night to ensure that students, faculty and community can meet the educational objectives.Basically, online classes offer for a superior measure of inspiration and self-discipline than a classroom-based course. In a nutshell, it can be said that the epidemics and pandemics are periodic phenomenon causing several challenges, affecting adversely the scenario of education. In this scenario,online learning has helped a lot in continuing the uninterrupted flow of education among students during COVID-19 crisis.

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