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### COVID-19 PANDEMIC REVOLUTIONIZE THE EDUCATION SYSTEM IN INDIA

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#### **Abstract**

This paper will develop insight to deeply analyse the constraints encountered by the education system in India while conferring learning among student in the scenario of COVID-19 lockdown. Further this paper contributes to best amicable practice to combat the current situation. The problems associated with this are predominantly network availability, inactive involvement of students in online classes, authentic evaluation of the student's performance and the efforts put forward by the faculty during the conduct of online classes is also extremely significant. This paper draws attention towards the best possible measure of the problems, developed on the basis of interaction and close observation of the community getting affected by this. The revolutionary remedies that can fix the issues can be Quiz Builder, Fyrexbox, providing free internet solutions to the students, and increase in use of case analysis, computer simulation through conducive online platform of education.

#### **Historical Foundation of the Concept**

Covid-19 posses' excessive problematic excursion upon the whole world specially country like us with little impoverished infrastructure. November 2019 become the black month for the centuries to come as it flare-up the COVID-19 in the Wuhan labs at China. Chinese regime remarkably took some measure to restrain the dissemination of infection by completely locking down the city from 23 Jan2020. Various other initiative were taken up by the Chinese Government in order to control the spread of deadly virus despite of that within few days, other developed countries start claiming the

outbreak of coronavirus in their countries. Hence, WHO declared it as the pandemic. The spread of this virus has engulfed 213 countries and Territories in the world and around 32 million population, killing over 993,802 people as per the result in the month of September (Worldmeters, 2020). The major areas got affected are European countries (specially Italy), Iran, Brazil, USA and the South Korean nations. After the China Wuhan main centre of Corona virus spread, focal point shift to areas are Europe, Iran, India, Brazil, the United States, and South Korea, in the month of March, the WHO announced the latest epicenter of the pandemic for Europe. But now, it has decreased in Europe. Now India, USA, Brazil and Russia are focal point in the world. However, the originator of the pandemic is towards the decline in the rate of cases

Almost every country has put a hold on transportation both internal and between nations to avert the contagion infection spread. The regime has taken commendable measures like avoiding public gatherings, self-seclusion, building better medical aids for combating the pandemic situation, urging management to facilitate work from home. Most of the countries, including developing nations like India, have put the complete lockdown for some of the sectors like Swimming Pools, Multiplex, Malls, Gymnasium to counter the attack of virus. Initial studies confirmed that only adults and aged old people are more susceptible and kids are less susceptible to pandemic virus (Liu et al. 2020). However, this study was later on proved to be insignificant when news came from England claiming that around 44 fresh new cases of young students got infected with corona virus after reopening of the school. Which further compels the schools and colleges to remain closed for another number of months (UNESCO, 2020). Over 150 nations had collectively closed academic institutions and tried to control over the spread of the disease among 80 % student population in the world (UNESCO, 2020).

Many significant researches arise out to support the decision taken by the regime claiming the requirement of complete close down in case of schools and colleges to control over the spread of the cases across the countries (Beech & Anseel, 2020; Chahrour et al., 2020). This pandemic has not only affected the different industrial sectors but the academic institutions also (Roy, Pahurkar, & Kolte, 2020). Many educational institutions have to completely shut down the physical presence of students in the school and colleges and in some cases most of the administrative activities were also blocked completely. However, academic institutions have quickly adapted themselves with the changing paradigm and switched to online systems of imparting education across the country.

Online mode of education seems to be the most practical solution in the current situation for the academic institutions till the emergence of proper

medical solution to the novel corona virus disease. Thereby, reduce the probability of educational loss among the students till the reopening of schools and colleges in the country. Scope of online mode of teaching is comparatively high, not only in India but also in various countries across the globe. Online education will foster integral pedagogy of teaching and learning at all the levels and help in developing holistic model of learning (Gewin V, 2020). Online mode of teaching brings some comfort and ease of learning along with challenges like attention of student in class is quite dubious ensuring the students mental presence in online classes calls for another maneuver. Further, online learning is enclashed by urban people and semi urban people to some extent; rural India, where more than 70% population reside is deprived of such learning. However, online teaching methodology has encouraged the cost effective and convenient pace.

Moreover the regress training is required at the end of faculty fraternity for grasping the technical knowhow, and extending best quality learning experience to the students (Toquero, 2020). Keeping the network infrastructure in India in to mind the availability of best resources for online mode of teaching seems improbable currently, though government is taking required measure for its upliftment. Most of the students have dropped the year, some opted for distance education because of dispassionate style of learning; parents are arguing with academic authorities that the school management is looting money in the online teaching, no actual learning is taking place. For students availability of network means the mode of indulging in social media and playing online games, digesting the very of idea studying through online is quite arduous. Moreover, every next infrastructure of school cannot opt for online mode of teaching.

Various companies like ZOOM app , GOOGLE meet, Blackboard, MS Team have actually build a very robust platform for facilitating online learning, which explore numerous occasions for extending best online learning experience. These different apps are not only facilitating the teaching but also provide essential tools for the holistic evaluation of the students (Chatti & Jarke, 2007). Hence, it's the finest mechanism of teaching and evaluation with upmost transparency at all the different stages. From joining of class to passing out the exam; everything would be recorded and any one can have the access to it like number of lectures attended, assignment completed and their marks, recording of lecture for recalling lecture and making personal notes out of it.

### **COVID-19 and Education**

Education and learning is an unending process at all the stages of life, in current scenario of Covid-19 education is exasperating to be accustomed with the deadly virus. Education at all the levels, from pre primary to college requires the all round development of the student we cannot ignore the importance of learning at pre primary level by visualizing insignificant interim contribution of them as compare to college going students. However, the pressure of responsibility upon the undergraduates is undoubtedly more than school level children. Thereby, pressure upon the faculty is more in case of college students as they don't just have to qualify the exams of the university or college but also have to prove the metal at the corporate threshold. Gaining employability require the sound development of personality which come from reasonably logical ability of looking at situations and combating with most probable solution. This style of grooming of students requires the constant exposure to case analysis, data analysis, personality grooming session and internships.

New paradigm of teaching endeavour to establish and sparing no efforts to make online teaching as comfortable as it was from institutions. This procreates novel arrangement for faculty and students to accommodate with changing epitome. However, different modes of online interactions were already available but were not meaningfully used by academicians, the way academic institutions now making use of it. Before Covid-19 none of online apps like Zoom, Blackboard have ever thought of becoming widespread within a span of few months. Earlier Zoom and Blackboard was pushing themselves hard in the market to get the acceptance but none of the teaching education system was ready to accept the online mode of teaching it was because of pandemic, developed product is available to find its customer. Acceptance of this mode of teaching has brought many magnificent changes in the pedagogy of teaching in India. Both the drivers (faculty and students) of online teaching has to undergo major transformation for making it successfully possible with low to minimal infrastructure. Corona virus has created lot of apprehension among the faculty and students. Making it unfeasible, to come out from their homes (Meg Jay, 2020). Both faculty and student are worried about their future. Faculty are considered as maximum possibilities are for losing the job, if admission in schools are less and student opt for year drop, other gamut of this situation is some parents are unwillingly accepting online mode teaching for their kids as they are unconvinced about the effectiveness of online mode of teaching. They question the academic institution, that how school authorities would able to ensure the comprehensive development of children where physical presence of students are must for the right execution of personality grooming sessions, science practical's, project work , internship etc. Students also have their own concerns like missing of college life, canteen,

movies and mall freak outs, long drive in college bus, extracurricular activities etc. Lockdown in the country has completely changed the education system and has put physical classroom at pause. Applications like Zoom, Google meet, Blackboard, MS Team has brought many significant many comfortable execution of teaching at the ease of main driver of education. Assessment of the students performance has also been questioned many a times by the parents as online mode of assessment is not taking place under proper stewardship. Because of the lockdown students parent job and business have also been largely affected by the Corona Virus as the result parents are looking for the relaxation in the school fees, this is considerably reducing the working capital of academic institutions. Further quality of teaching will suffer badly as institutions will not hire good academicians as they cannot afford to have best faculty due to shortage of funds.

Almost all of the significant national level entrance test have been postponed by the Government in India keeping health issue in to consideration, this has further aggravate the situation for the academic institutions as students are waiting for the national level exam to happen to take the decision of admission at college or universities. Consequently, institutions working capital suffered significantly, compelling the management to reduce salary of faculty and staff. However, school management is pushing hard to get the desired number of admissions, through extensive promotional techniques. Though applicants are not looking for any grant and financial support to go for higher studies in abroad and if this happens then it would affect the long term business prospects of educational institutions in India, those are getting funds from the Government. Even job opportunities have also goen down significantly affecting the employability ratio of the country, as declared by Centre for Monitoring Indian Economy (CMIE) that unemployment will rise from 8.4% to 23% in early April 2020. Unemployment in metropolitan centres is 30.9% (Mahesh Vyas, 2020). Such circumstances cannot be overlooked, hence the technological system should be strengthen to make online education a ease of delivering and imparting quality education among students across the globe.

### **Conventional mode of teaching to digital mode to teaching**

Academics institutions have realised the importance of technological infrastructure for combating the current pandemic situation, most of the school and universities have already adapt themselves with changed

paradigm. Teachers have started learning the best mechanism of imparting quality education through online mode of teaching. However, those faculty fraternities who are not complacent with the technology are finding this situation as blood sucking; and management has posed quite tough yardstick for the measurement of the performance of the faculty which has double the concern of the faculty in terms of their survival (Fathema, Shannon, & Ross, 2015). Moreover, flawless teaching through online spectrum require robust technological infrastructure, which many of the institutions are lagging in it. Even most of the students do not have an access to sound network system for attending the classes, some are having laptop and some are not, taking classes for hour and hour on mobile also adversely affecting the physical and mental well being of the students apart from their interest in online classes, has to be addressed on utmost priority. As it's not just the matter of salary and fees justification by academic institutions it something beyond, that is the health of the youth in India.

### **Health Concerns**

With the eruption of Covid-19 many business have adversely affected and people health is also majorly at stake. The constant growth in the positive cases of Covid-19 has created a sense of instability in the mind of people across the globe. Which has not only affected the corporate worker but also the education institution workers have also been largely affected as they were not earlier expose to advance technology for delivering lecture now they are constantly pushing themselves against the wall to make lecture more interesting, interactive, self evaluating, make video and whatsapp group and what not. From minimal exposure to the screen of laptop to extensive use of the laptop throughout the day has badly affected the health of faculty and equally the students who are taking online classes. Results in to extensive unbearable pressure upon teachers and students (Sahu, 2020).

### **Replicating the offline class pedagogy of teaching on digital mode**

Biggest challenge among academician is to replicate the same environment of offline classes while conducting online classes. In academic institutions from school to college students have to solve certain real problem in hand like science practical, arts, music instrumental classes, case analysis, such related things where physical presence of both instructor and students are required. Moreover, for the all round development of students interpersonal skill enhancement is equally important which students learns from their peer group consciously and unconsciously by merely the presence of same age group people under the roof, extracurricular activities have been stopped because of the Corona Virus which develop the team spirit and team management techniques among the children.

### **Online Appraisal Instrument**

Education at different stages, school to college require unique set of assessment mechanism. Which all together have been affected by the raising cases of corona virus in India. Therefore, institutions have to rely on different online compromised available tools for evaluation of the students performances in online classes. However, this will atleast develop a sense of pressure among the students to brush up the concept for facing online exams. Some of the evaluation may not be possible online as it require the practical exposure of the students as in case of science, field work etc. Available technology is supporting the evaluation process to large extent but still having some doors of improvement. Moreover, system should extend the possible solution to those students who do not have sound network connections, so their grading won't be affected.

### **Retaliation from different education institutions in India**

Education system has moved from theoretical discussion to more of practical exposure of students at all the levels over last few decades. People were developing curriculum in the manner which calls for analytical ability and reasoning skill among students from the very beginning; execution of such curriculum require regress classes on developing skill which got affected by the corona virus. Eventually academic institution have to develop the mode of coping with the current situation by making faculty to impart education by being at home through online platform like Zoom , Google Meet, MS Team , Blackboard etc. Faculty are encountering various problems in coping with this digital world; computer literacy is one thing whereas digital is literacy is another, which is more crucial and must for the survival in the system. Faculty addressing note have been changed from very good morning dear students to ' Am I Audible', 'are you all listening to me' and ' Am I Visible'. As they are not sure about the network connectivity they are using is responding correctly or not. In India network infrastructure is too at developing stage. However, 4G network is available but the result even worse than 3G , companies have to provide 4G network at low price that is why the efficiency of the services are compromised (Danish Khan, 2019). Major portion of the students are coming from less developed areas, where the situation of network connectivity is punishing. As of covid-19 these students from rural area have to go back to their native place. They are finding very difficult to cope with situation and at same time managing with all the requirement of the institution to which they belongs, like timing of lectures to log in the class as in most cases, students have issue of network because that they are not able to log in the class on time thereby loose attendance of the concerned lecture and above this learning of the session. Further students are not ready to bear the cost of

internet as institution have already charged the money in the form infrastructural building and lab facilities they are suppose to provide but because of lockdown if they are unable to provide, so ideally academic institutions should borne the network cost of the students and faculty. Moreover, every next student is not having the laptops or tablets, so they have to rely on smart phone which has its own limitations.

Faculty are confronting many constraints while delivery and managing class online. The ever first and the most common problem which almost every next faculty is encountering is student's interaction level is very low; they just log in to the class and don't listen to the lecture. This can be because of varied reason from the perspective of students, like they may be indecisive and not confident to respond in lecture, as they are sitting alone for the first time in their education or school life. Students are not turning on their video, as the result their facial expression can also not be judged by the faculty. However, in some the online classes faculty themselves asked students to turnoff their video and audio to combat with poor network availability. Nevertheless, classroom is mainly having the number of students from 50-60, which is next to impossible for faculty to watch the expression of the students through video. Such issue were actually not the point of concern in physical classroom as faculty can easily judge the learning ability and grasping power of the student by looking at them and watching their response in the class. Moreover, in online teaching student's response in 'Yes' or 'No' cannot be validated. As lot of student merely for the sake of showing their presence in the class may be responding that everything is clear, actually they are sure that they would be getting the classroom videos after the lecture which can be gone through if any evaluation will take place in near future. Hence, involving students in such scenario is quite a difficult task for the faculty. Where the student's have their own valid reason of not able to respond in lectures (Danish Khan, 2019).

Most of them will just log in to mark attendance in the online class. To increase the participation of students in the virtual class, brainstorming session of all faculty's were held to get inputs on engaging students. Faculty came with a number of suggestions to engage students virtually. The recommendations include a snap quiz, case study discussion, poster presentation, etc. Also, there was a suggestion to reduce the weight age of marks to assignments and increase marks weight age for online assessments like snap quiz, classroom participation, etc. These suggestions were accepted, and the online quiz, classroom participation, classroom assignments were given more weight age than offline tasks. In internal assessments, major portion of the total weight age was given for online classroom participation and online assessments like snap quizzes, case



study discussions, etc. This method helped to increase classroom participation. Snap quiz has been practical to engage students as it gave immediate results, and students were happy and motivated to participate in the snap quiz. Case study discussion was not so useful because they were complaining of network problems, audio problems, etc. Students used to do poster preparation as a group activity in a physical class. In an online class, it was a challenge to do this activity. Students were given the freedom to ask questions during the class, so make it more interactive. Students used to type the questions in the chat box. Immediate answers by the faculty increased student participation. During normal times, the physical attendance of students is a challenge, as they prefer to go to the canteen, movies, malls, etc. But now, during the corona pandemic, the problem has shifted from physical attendance to mental attendance. As students have no option but to attend classes as there is hardly any scope of enjoyment, as parents are at home. So they have no other choice.

After showing a video case study, students were keen to give their perspective on the video content. Teaching finance subjects was also a big challenge for the finance faculty because of numerical problems. In this case, we provided NPTEL courses on various domains. Personality development assessments like group discussions were effectively conducted through online platforms as number of students are very less in group discussions. So it is possible to evaluate each student in group discussion. Personal interviews were also conducted through online platform.

Also, WhatsApp group have been created, Broadcast groups are also formed by the teacher for sending the details of lecture videos and home assignments. The WhatsApp group helps in daily practice of rehearsal questions and also permits as a platform for discussion of important issues. This WhatsApp group has been useful to interact with students for the faculty. We had a very focused approach as every faculty were allotted only ten students for counselling. The faculty will daily give one hour to this group to understand their problems and provide solutions. Thanks to our background in utilising these devices, we have adjusted rapidly to the current constraints. We have continued the use of our social network group to discuss daily questions with continuing the use of flipped classroom methods. Initially, we were undertaking all our sessions on Zoom, but after news of some security issues in Zoom erupted, we shifted to Microsoft Teams. The MS teams have been a very useful tool for planning, scheduling lectures, creating groups, taking assessments etc. Also, the feature of downloading the attendance list was very useful. MS teams also helped to take instant snap quizzes, group discussions, interviews, and other assessment tools smoothly.

### **Novel Solution to the Problem**

We have also established new approaches for using technology to extend these existing educational techniques in this era. We provide a flipped-classroom approach for different subjects such as consumer behaviour, strategic management, and so on. The students are provided instructional material as a pre-recorded video lecture that they can view during some free time before the session in this well-studied lecture process. The purpose of the session will be to synthesise, apply, and discuss case studies. Therefore, students enjoy this approach. This approach often allows trainees to view a library of video lectures online at any time. This will reduce the number of participants in the classroom online and allow more contact at the correct level between participants. MS teams helped to record each session. So students who could not attend had a chance to watch this video lectures on One drive of Microsoft. Students were given access to One drive of the institute.

A variety of constraints on this platform are there, such as faculty struggling with modern technology skills, students with low connectivity and requirement of high bandwidth for such platforms. But the university staff with experience with these methods can solve these obstacles by investing time and resources. Virtual learning is a effective method for education during class time, but the problem of practical sessions is always there. So in such situations, case studies using simulations is beneficial. We have been using simulation case studies for our students for a long time now. It was very useful in online teaching. If simulation case studies are not available, viewing of high-quality videos of NPTEL (Swayam, 2020) platforms is recommended to support in case of significant loss of learning in online mode. We provided specific links of subjects and topics to the students on NPTEL platforms.

We conducted assessments using Microsoft teams (Microsoft, 2020). We developed a combination of descriptive as well as objective questions based evaluation pattern. Before pandemic, mode of assessment was through descriptive questions. More space was given to answer descriptive type questions so that students write a comprehensive answer to these questions on the MS teams platform. We had 50% multiple choice type questions and 50% descriptive type questions. It was well-received by students. But there were also problems for some students like connectivity, not able to complete the test, connecting with other students while attempting the exam, etc. So we had to arrange re-exams for such students. Though we have been successful to follow above practices, it is also necessary to understand the expectation-performance gap (Bui & Porter, 2010) towards

online education among the students. This will help to make essential changes in the online delivery of education to the students.

### **What after pandemic**

Before countries may decide whether the trade-off between economic growth and public safety would require them to relax the constraints on daily life, uncertainty over the scope and length of the COVID-19 period should remain in each jurisdiction. Adjusting to normality won't be an easy one-time adjustment to existence like it used to be. Jurisdictions will determine threats accordingly, and both must take precautionary action against COVID-19 outbreaks on the second and third waves. Open schools – like National Institute of Open Schooling in India, most of which continue to operate through the COVID-19 pandemic – and open universities –UK Open University; Athabasca University, Canada etc. will offer a range of classes, and flexible learning place and time to support scholars to catch up with the syllabus. While institutes that usually teach in a physical classroom, in school or campuses, will possibly return with some relief to that form of education, the particular arrangements made at the time of corona virus pandemic will have a lasting impact. The structures that all organisations have put in place to carry out their educational and training tasks in a time of crisis will benefit in the long run. The learning's we had from this crisis, in terms of online education should be embraced for the future of education. Corona virus is nothing but the excess exploitation by human beings against nature. Nature will soon allow us to return to our regular life. Researcher is optimistic enough where students are back on campuses and learn most effectively. But blended learning is the future as students will look to gain knowledge from both physical and online education (López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011). Further, new economy is emerging out in India as well, gig economy, organisation will hire cost effective Gigs instead of full time worker to overcome the economic loss due to pandemic (Manisha Goswami, 2020).

### **Conclusion and its Implication**

The covid-19 pandemic has completely changed the education system not only in India but the whole has altered the style of teachings and learning platforms. This conceptual paper has deeply analysed the pros and cons of the online mode of teachings from the perspective of India, where the constraints of technological infrastructure is major issue to be addressed to effectively execute the online mode teaching and learning's. This paper also highlights the probable solutions that can be applied by different institutions to counter the pandemic situation, not at the cost of student's carrier and development. The most common problem observed through interactions with academicians and students are poor network availability, less

interactive session, weak assessment model to name few. However, academic institutions are taking required measures, but as per AIU and NCERT many of the institutions are fumbling in adjusting with the current pandemic situation because impoverished network infrastructure, in some context some solutions can be helpful for students and faculty community like renew IP address, uninstall wireless network adapter driver, reset TCP/IP manually with help of lab technician. Keep the laptop and mobile phone fully charged and can also try uninstalling heavy applications, which eventually help in improving the level of network, and quite often students compliant the issue of no service it's probably connected to disabled cellular radio signal that can be sorted out by lodging complaint at network service provider call centre. Moreover academic institution can thought of providing some free network services to their stakeholders. Altogether, this pandemic situation has made us learn many things like finding best possible solution out of the worst cases, staying united in all circumstances, trusting people associated with, giving space to worker and allowing flexi hours of work which was not at all the case before pandemic, all faculty and student have to follow the tough regime of 9-5; 8 hours of work and classes. Now, it's going to be the new era of learning where most of the classes may even be taken through online platform despite of overcoming the threat of corona virus.

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