Impact of Covid-19 Pandemic on Indian Education System

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Abstract
COVID-19 has affected a large number of students across world, nation and states. The decision of shutting down the schools as a lockdown measure has shifted the tradition education system to digital platforms. It is making a large number of students to out of education system during this phase. The digital learning system is very important to ensure successful delivery, effective use, and positive impacts on students. In order to engage them while at home as well as to utilize their time and complete syllabi, the process of teaching learning and assessment need to be streamlined. However, while doing so, the institution should keep in mind various skills related as well as infrastructure related constraints on the part of school, teacher, student and parents. But, in reality, majority of the institutions are conducting online classes in urgency regardless of skill and experiences of concerned teachers and students. It is even more challenging when teachers and academicians alike are not well trained at technological tools for virtual/online classes. Students at large are also not acquainted with technologies and much help can’t be expected from their parents in this regard. The aim of this paper is to investigate students' opinions for virtual classes focusing on their learning and behavior during COVID-19.

Keywords
COVID-19, Education System, India, E-learning, Online Class, Virtual Classes

Introduction
Around the globe, on-line training has met with some success. On account of India, we even have far to go earlier than digital studying is seen as mainstream training, as a result of college students residing in metropolitan space have the amenities to resolve on digital training, nevertheless, rustic space college students do not have the required infrastructure nor are monetarily strong to profit the sources required for digital training. The construction of the digital education infrastructure by the Government of India presently seems to be troublesome as a consequence of absence of price range. Additional, even when the digital infrastructure is fabricated, making ready have to be given to the lecturers to make use of the digital system to offer genuine and correct, uninterrupted and seamless training to the scholars. Remote learning more and more depends on the dependable energy flexibly and common Web connectivity which can be a fantastical factor for Tier 2 and Tier 3 cities in India.

As we all know the world is struggling in dealing with the novel Corona virus called Covid-19 outbreak, which forced most Governments to close the educational institutions by enforcing lockdown and social-distancing measures, temporarily. According to UNESCO [1], this shutdown has impacted around 72% students of the world’s student population. Although it is a relatively short-term disruption, many families around the world are worried about children’s social life and learning as there are continuous extensions of lockdowns, with no sign of vaccine in sight. Physical presence of students in school, colleges and other institutions, that is, the face-to-face mode is one of the traditional and successful methods to impart skills and knowledge among students. In such place’s students can have fun, can improve their social skills, ability and awareness. The students can acquire them in a relatively short time [2, 3], and in a joyful manner while interacting with their peers and teachers. Missing these places of activities for a significantly longer period can have consequences for overall cognitive growth of learners. People are expecting that this severity will be for short time [4]. But the reality is that we cannot very precisely estimate how long it may take to get rid of this COVID-19 pandemic and return to normalcy.

Lockdown not only affects the teaching-learning for educators and students, it also interrupts another key component that is continuous formative and summative assessments, thus posing exam postponement or cancellation. Internal assessment is one of the key factors to check the performance of students and also provide the information about the child’s progress for families and teachers, on a regular basis. Delaying or missing this information may delay in the recognition of potential learners [5], and necessary personalized intervention could not be provided to overcome learning gaps. At the same time, other national level entrance examinations in India (e.g., JEE, NEET, GATE, NET, JAM conducted by Indian Educational Bodies) required to be cleared to get admission into higher education institutions, have been postponed or cancelled for entire student population [6]. In order to mitigate the impact of this immediate closure, several institutions from different countries have implemented the online or virtual class paradigm, and providing e-learning resources and other means of additional learning remotely. This paradigm shifting is on an
Online education is gradually expanding with the advancement in the technology and affordability of computing devices and Internet to access the online resources using devices such as PCs, laptops, tablets and smart phones. Also it is observed that the traditional system of education and collaboration is restricted to limited students and mostly confined within the same classroom [7]. Today, information technology has made available learning resources in many formats such as text, images, audio, videos interactive, simulations and various multimedia formats, primarily through the Internet. It has removed barriers of geographical boundaries by providing online teaching-learning, to anyone, at any time and that too as per the convenience of the user. Additionally, it is creating more opportunities for educators, researchers and policy makers to collaborate and communicate with experts from other geographical institutions and students through wikis, forums, chat and peer-to-peer activities. Numerous studies [8, 9, 10] have been done from time to time to find out the effectiveness of digital mediums in education as well as learners’ perception about those mediums. The Report Card of online education shows that more than 70% academic leaders believe online instruction as the same or superior to face-to-face instruction [11]. Earlier, online education was viewed as a revolutionary solution to diverse educational problems and to address the issue of inequality [12]. It was argued long back that the primary aim of online education should be to make authentic accessibility of contents and to provide opportunities to the disadvantaged groups, rather than creating social divide by providing additional opportunities for those who already have access to quality education [13]. In recent years there have been a sudden rise in availability of video conferencing tools which are easy to use and have many interactive features. The case study based on one such popular tool Zoom shows the benefits a teacher can avail using this tool [14]. Another detailed review shows how these relatively inexpensive video meeting and collaboration tools can create a virtual classroom where teacher can encourage participation of students from the comfort of their home. Impact of video conferencing on students’ achievements [15] showed positive outcome. Another important digital medium is the social networking sites such as Facebook, twitter, LinkedIn, etc., that have got visible presence in higher education [16]. Studies showing statistics about Facebook usage [16, 17], found that 94% of college students were users of Facebook spending an average of 1030 min on the site and having 150200 friends. Effectiveness of different Web 2.0 tools such as Wikis, Blogs, Podcasts, and Social Networks in online education have been extensively covered.

**Previous Studies**

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**Strategies to Manage the Crisis**

A multi-pronged strategy is necessary to manage the crisis and build a resilient Indian education system in the long term.

One, immediate measures are essential to ensure continuity of learning in government schools and universities. Open-source digital learning solutions and Learning Management Software should be adopted so teachers can conduct teaching online.

Two, inclusive learning solutions, especially for the most vulnerable and marginalized, need to be developed. With a rapid increase of mobile internet users in India, which is expected to reach 85% households by 2024, technology is enabling ubiquitous access and personalization of education even in the remotest parts of the country. This can change the schooling system and increase the effectiveness of learning and teaching, giving students and teachers multiple options to choose from. Many aspirational districts have initiated innovative, mobile-based learning models for effective delivery of education, which can be adopted by others.

Three, strategies are required to prepare the higher education sector for the evolving demand–supply trends across the globe—particularly those related to the global mobility of students and faculty and improving the quality of and demand for higher studies in India. Further, immediate measures are required to mitigate the effects of the pandemic on job offers, internship programs, and research projects.

Four, it is also important to reconsider the current delivery and pedagogical methods in school and higher education by seamlessly integrating classroom learning with e-learning modes to build a unified learning system. The major
challenge in EDTech reforms at the national level is the seamless integration of technology in the present Indian education system, which is the most diverse and largest in the world with more than 15 lakh schools and 50,000 higher education institutions. Further, it is also important to establish quality assurance mechanisms and quality benchmark for online learning developed and offered by India HEIs as well as e-learning platforms (growing rapidly). Many e-learning players offer multiple courses on the same subjects with different levels of certifications, methodology and assessment parameters. So, the quality of courses may differ across different e-learning platforms.

Five, Indian traditional knowledge is well known across the globe for its scientific innovations, values, and benefits to develop sustainable technologies and medicines. The courses on Indian traditional knowledge systems in the fields of yoga, Indian medicines, architecture, hydraulics, ethnobotany, metallurgy and agriculture should be integrated with a present-day mainstream university education to serve the larger cause of humanity. In this time of crisis, a well-rounded and effective educational practice is what is needed for the capacity-building of young minds. It will develop skills that will drive their employability, productivity, health, and well-being in the decades to come, and ensure the overall progress of India. [18]

Utilizing available resources during lockdown
Lockdown situation is demanding that learners and educators needs to attend online classes at short notice to continue the education. In such situations, it is very important immediately arrange and manage the online tools, learning resources and keep in touch with all faculties and students. Both faculty and students should go through the different available online classroom tools to decide best one and train them to use online and digital platforms. It is also important for faculty while delivering the lecture, goal of learning should meet with the learning modules at all times. Online tutorial is also changing the way of teaching and learning around world. These changes in education were very slow and transformational before the Covid-19 outbreak. Most of the institutions worldwide are now adapting these changes rapidly to continue education delivery model although educators, administrators and policymakers has created interest among students towards available resources. For example, students are being asked to opt one Massive Open Online Courses (MOOCs) courses in graduate courses. Apart from these approaches, educators can utilize email or WhatsApp platforms to inform students about the time and topic of the online class. Also, tutorial links or assignments can be shared on these digital media by creating group chats and group mails. For these options, email addresses and contact information can be obtained from system admin of the college. Both faculty and students should remember and follow the guidelines provided by the institutions and digital platform providers. For example, faculty should prepare the lecture well and must be ready with necessities like laptop, earphones, camera etc. before the class. For smooth functioning of tools streaming, students should mute their mics and hide their camera.

In addition to this, families also play a central role to have major inputs into a child’s learning as detailed in [19]. It is likely to be positive and effective approach to extend in home schooling, which is always considered as complement to the input from school. For example, parents' attention on learning of child's mathematics knowledge by practicing exercises tuned with daily life problems or illuminate history lesson by making online virtual tours of important monuments or museums. With this approach of learning, student community can continue their learning at home. However, the situation is not same for every student as sketched here.

Suggestions
World is facing the lockdown situation due to Covid-19 outbreak, which has much affected our education system. It has posed the serious issues of continuing education for the students in short notice. Now the educators and learners are moving to online classes without having any previous experience. In this situation, institutions are providing commercial and non-commercial online classroom software tools.

1. Educators and learners should be trained to utilise online teaching learning process using technology. Policy should be adopted by Government/educational institutions to provide free internet and free digital gadgets to all learners in order to encourage online learning as a result of which people would get engaged and remain safe during pandemic (Pravat, 2020c).

2. If the pandemic Covid-19 continues, new approaches for academic assessment should be adopted by educational institutions. Academic assessment of the students may be done through online mode or through quizzes and small projects.

3. Government should support educators to strengthen their resources to run virtual educational activities. Students also need to be supported with better access to internet and technology as most students are unable to afford the facilities.

4. WHO has recently pointed out that the Covid-19 may never be eradicated and people will have to live with it. “It is important to put this on the table: this virus may become just another endemic virus in our communities, and this virus may never go away.
5. Across the globe, Indian traditional knowledge is well known for its scientific innovations, values and benefits to develop sustainable technologies and medicines and this knowledge systems in different fields should be integrated with a present-day mainstream higher education system. [20]

Conclusion
This paper presents a brief study of student’s behavior towards using online classroom software tools and difficulties faced by the students. Moreover, authors highlighted the points how to utilize the available resources and improve the education delivery model for the students. Currently, the virtual education system is the most preferred mode of education at this time of crisis due to the outbreak of Covid-19. This paper has not covered any statistical analysis on impact of Covid-19 on the education however further in-depth study with statistical research may also be undertaken.

References