A study of online digital e-Learning platforms to support access to remote learning during the COVID-19 pandemic

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Abstract
"The Covid-19 pandemic has pushed schools and colleges to adopt alternative methods of learning, and they are just getting warmed up to the new normal of Digital Education. Digital education in India is in its transformational phase and a lot more can be done by all the stakeholders in the education system, government, educational institutions, EdTech providers, etc. to ensure that digital technologies are accessible to every student in the country. The education system has primarily followed a teacher-centric (mostly one-way) approach to education in traditional system. This is the time for all of us to move from teacher-centric physical classroom to student-centric digital glass-rooms. The journey of digital education in India is bound to take a huge leap in the coming time as many have realized the need for digital as an enabler for better education. Though there could be a few roadblocks - resistance to changing age-old teaching and learning practices, mindset change, we believe things will change quickly as academicians, technologists, EdTech providers and industries work together to create a strong digital online system for education".

Keywords: e-Learning, online teaching platforms, learning resources, smart classrooms, transformation of education system

Introduction

The world today is facing the biggest public pandemic health risk which is leading to one of the largest and the quickest reorganization of the world order. The speed of the spread of the epidemic, the closure of educational institutions and the transition to online teaching was so swift that it hardly gave any time to plan and to reflect on the potential risks or the potential opportunities.

COVID-19 is impacting almost every sector of the economy. And, the education sector is no exception. Schools, colleges, and other educational institutes are close even, and students are at home with the least contact with friends. The interference in the education system due to the continuous COVID-19 is a reminder that there is a need for transformation. For years, we've been talking about digital transformation but we've not taken right steps for digital transformation.

With schools and colleges being locked down due to COVID-19, educators across the country are moving to virtual classes on online teaching platforms to ensure learning never stops. Online teaching resources not only enables teachers and students to connect over just to like face to face video-enabled remote classrooms but also provides a host of interactive and collaborative tools on a single platform. In this study, are also examples of Indian education institutions that are using online teaching platforms for remote learning.

"People in general succeed on social interaction, which was not in traditional e-learning platforms. You can never really replace a teacher because the teacher provides that human interaction, but I think online teaching platforms enable a teacher to be able to reach out to their classroom remotely and continue to interact.

Online learning, in the form of MOOCs (massive open online courses), has been around for years, but it lacks real-time feedback and collaboration. Online remote learning is often viewed as an inferior experience as compared to traditional in-person classrooms.

Reaching a listing point

So, what happens when this pandemic is behind us, and we get our classrooms back? While this might have started as a contingency plan for schools and colleges to manage disruption, online, collaborative learning is likely to be the new standard, even when schools and colleges resume their regular operations.

Teacher student interactions beyond regular teaching hours

"Teachers have installed online teaching software/platforms on their phone as well, so my students can reach out to them whenever they see them online. This was not possible prior," which was missing in traditional e-learning system. "For us, it is pedagogy that drives technology in our school and colleges, not the other way around. This development has shown the value of interface and engagement that technology can enable; it has really been made abundantly clear.

Now, many schools and universities globally are moving classes online. However, teaching and learning from home is a big change for most students and Educators. With online classroom is big issue is to check that students are engaged and progressing? How do Educators and faculty stay connected?

Moving to a virtual classroom

As schools-colleges move to a remote learning environment, online teaching platforms can provide an online classroom that brings together virtual, face-to-face connections, assignments, files and conversations in a single platform

accessible through laptop, PC, or mobile device.

To help make this process as simple as possible, we have created a best practice guide for teachers, students and IT to get up and running quickly with online teaching platforms so their students and staff to begin communicating remotely. Once online teaching platforms is set up, Educators and staff have the ability to create their own class in online teaching platforms, add selected students, share lessons, create assignments and do grading and provide feedback all in one virtual platform.

Here are some features of online teaching platforms to help you get started:

- Have interactive discussions with students to present your lesson and encourage students to ask questions using the online chat feature.
- During online teaching, you can moderate the class discussion by muting students or if needed, removing them from the meeting, making them host/presenters, Record the lecture, so class students can review it on their own time.
- We can use audio/video or can share documentary/movie for teaching purpose in a meeting.
- For assessments, you can easily create and grade quizzes in online teaching platforms.
- Record any class session and access the same in case some students can't join during the live session.
- Encourage Students to use addon services of online teaching platforms to help them read messages and understand assignment prompts, enabling them to follow along and contribute.

Getting support and training for Teachers

The online teaching technique support educators, instructors with practical guides, professional development, and how-to information that will help their students, to stay motivated and engaged. There are many online facilities available with these online teaching platforms can be accessed in real time viz; Webinars, Learning Resources etc.

Help Students stay engaged

With online teaching platforms, continuing to drive student engagement and focused learning can be a challenge, especially for those moving to remote learning for the first time. Educators and parents need support to help make this work. To help parents and guardians support their children, Educators can also help mix up the day and give students ways to communicate and demonstrate learning in new ways.

In addition, here are some techniques from Educators who have helped create healthy and effective learning environments that allow students to thrive in a virtual setting:

- **Connect with students one to one:** It can be difficult to gauge how students are doing without seeing them in person, so connecting individually is very important. We can support students one to one in a discussion, creating an environment for students to ask their questions and help them.
- **Encourage your class:** To inspire throughout the week by creating a 'Fun Activities'. For example, hold an interesting contest and have students share their creations in these platforms and inspiring more students to participate.
- **Stay focused:** Find a quiet place where they can focus

on lessons with minimal distractions.

- **Stay connected:** Schools and colleges are important from a social perspective. Without meeting friends face-to-face can be tough for students. Motivate the students to adjust by encouraging them to schedule a virtual lunch session or game session for classmates to stay connected.
- **Stay fit and energetic:** Online learning from home can be a new challenge for students. Take breaks between lessons to stretch or just unplug.
- **Bring lessons to life:** Make a lesson interactive during a live lesson. Have students come up to the solving tools and solve a math problem or demonstrate their art skills, just like they would in a physical classroom.

How India is using ed-tech to support access to remote learning during the COVID-19 pandemic

As per the information published by World Bank, to utilize educational technologies to provide remote learning opportunities for students while schools are closed due to COVID-19 pandemic. In this, World Bank published many reports of different countries regarding their efforts to utilize educational technologies to provide remote learning opportunities for students.

In the report of India regarding online digital e-Learning platforms used by students capitalize on to continue their learning during COVID-19 based school closures is as under

In a press release on March 21, 2020, shared various free digital e-Learning platforms by the Ministry of HRD of India that students can access and capitalize these learning during COVID-19.

The central government, state governments and private players have come up with various initiatives to support and benefit the students of colleges and schools. Since the lockdown started, the government has taken many steps to ensure that the impact of the crisis on education is the least.

To help students continue their learning during the pandemic, various e-learning portals and apps have been launched by the government and education bodies such as e-Pathshala, Swayam, DIKSHA portal, etc.

- The DIKSHA portal contains e-Learning content for students and teachers, aligned to the curriculum, including video lessons, textbooks, assessments and worksheets. The content has been created by many teachers who teach in multiple languages as per the guidelines of CBSE and NCERT.
- e-Pathshala is an e-Learning app created by NCERT for classes 1 to 12 in multiple languages. This app includes books, audio, videos etc. aimed at students, educators and parents in multiple languages viz; Hindi, English, Urdu and regional languages.
- NROER (The National Repository of Open Educational Resources) portal provides a host of resources for students and teachers in multiple languages including books, interactive modules and videos.
- Swayam hosts 1900 complete courses, including teaching videos, assignments, exams and credit transfers, aimed both at school level (from class 9 to 12) and higher education at undergraduate and postgraduate levels. For all the courses, topics and subjects are aligned to the curriculum and include humanities, social sciences, law, engineering, robotics and management courses.

Swayam Prabha is a group of 32 Direct To Home (DTH) channels for the television broadcast educational programs to across the country, round the clock and accessible on the website also. These channels courses for school education (from class 9 to 12), higher education for undergraduate, postgraduate as well as for vocational education and teacher training. For the courses /subjects include arts, science, commerce, social sciences, humanities, engineering, technology, law, medicine, performing arts and agriculture science etc.

Another report published by the Global Education Monitoring (GEM) on 7th May 2020 by *Michaela Martin and Uliana Furiv,* Flexible learning during Covid-19. According to this report, the Covid-19 outbreak closed universities and other tertiary education institutions in more than 175 countries and communities, affecting over 220 million post-secondary students. While some institutions moved their classes to online and distance education platforms. In many countries, this lack of readiness resulted in delays in moving the courses online and few other governments have halted higher education for an indefinite period of time.

India offered distance education programme as a main alternative mode of learning long before the arrival of pandemic Covid-19. The country has many UGC recognized open universities and Dual Mode Universities, which provide education through distance modes. For the period of Covid-19 outbreak, the government has also allowed large numbers of top India's HEIs to provide fully online degrees.

In India also uses to deliver distance learning with the *Study Webs of Active Learning for Young Aspiring Minds* (SWAYAM) platform which aims to provide access to Massive Open Online Courses (MOOCs) and other e-learning content. Massive Open Online Courses (MOOCs) hosted on the SWAYAM platform is recognition by higher education institutions.

In many areas around the world, are unable to access online content, and television broadcasting is often more effective. The government of Indian created the SWAYAM *Prabha* programme, which broadcasts the audio-visual content developed as part of the SWAYAM through 32 educational TV channels. In the present scenario, such platforms can be accessed immediately by learners so that learning continues.

A report published in Financial Express on 5.5.2020, according to Bulbul Dhawan, the adoption of smart classroom systems by schools is transforming the traditional education system. Though the crisis is overwhelming, it is making our schools and even colleges, technologically advanced. Moreover, many of them are not well equipped with technology tools to avail of remote learning.

According to Teja Gudluru (CEO of UDO-now.com.), "Use of technology in education is one of those methods that will help improve the quality of education in India. With the current pandemic, the opportunities to improve infrastructure across the country in schools and higher education sectors has risen. Private schools had already gotten onto the bandwagon of e-learning, smart classrooms and some even making tabs mandatory right from pre-primary education. Now, lot of EdTech companies will see and perhaps seize the opportunity to fill the gap that may exist in bringing more schools on to the digital platform. As

it may be possible, the next five years in India may make virtual education the new space /norm".

According to Kiran Dham, CEO of Globus Infocom Ltd., "A key aspect of coping with Covid-19 is to ensure that the learning remains a continuous process virtually. Connecting students and teachers through online e-learning platforms through the use of laptop or phones is the latest transition in education and eradicate the need of teachers or classrooms. This is a perfect time to accept technology to make education delivery to students more efficient and make it more productive through online learning".

Digital Transformation of Education System in India

Many educational institutes are considering adoption online education solutions as an ideal time to experiment and deploy new technology to make education delivery possible and meaningful. Due to the faster adoption of digital e-learning technology triggered by the lockdown due to Covid-19, educational institutes, business houses and online education solutions have been forced to work in tandem. Digital transformation has become a new norm with educational institutes for e-learning across the country. Many are taking it as a chance to be more productive and efficient while developing innovative and improved professional skills through online learning.

The adoption of digital technology in education has led to an extraordinary transformation from teacher-centric education towards student-centric education. Smart classrooms are making everything possible from teachers to providing the necessary interactivity. Virtual classrooms are enhancing the engagement between the teacher and students.

Further Kiran Dham added, "Virtual classrooms and various online tools today allow us to make the engagement between the teacher and students as close to a real, in-classroom like experience, as possible. Digital technology is revolving education from teacher-centric education to both teacher and student-centric education. Digital online technology-based education makes the education system more transparent and equal. Digital education needs a balanced coordination between course content, technology and teacher and students. It can be implemented with the availability of basic amenities like internet connectivity, PCs, laptops, software, etc. Nevertheless, the fact that here in such extreme situations, COVID-19 has accelerated the adoption of new technology for learning to make quality education accessible to everyone."

The online Ed-Tech Companies are continuously striving to improve their products and quality.

The use of technology in teaching in crisis will lead to a new era in the education sector wherein the best of teacher with online tools will be available from across the globe to students. The crisis has accelerated the adoption of online technologies to deliver quality education and will help strengthen the country's digital online learning infrastructure in the long run.

According to Diwakar Chittora, CEO IntelliPaat, "The impact of COVID-19 will remain for years, if not longer. The great thing is that India is well prepared to teach lakhs of students at home. In virtually every part of the country, there is 4G connectivity. The country has one of the world's most extensive 4G networks on the planet. Even more notable is the fact that data is very affordable. Over such robust networks, classes can be streamed with ease. The

vastly transformative power of virtual classrooms is ability to bring number of courses to students' doorsteps. Students will find that their learning experience through virtual classrooms is as good as or maybe even better than that of students who sit in classes in traditional mode. Definitely, over the next few years, the number of students who get an education online will grow considerably,"

Quality assurance of online learning is a challenge
There is no doubt that there are many challenges to implement and assure quality of online education. In addition to issues of access and Internet connectivity and IT infrastructure, not all programmes can be compatible or supported by online technology. Governments need to be aware of the inequalities that online learning can create as students from lower socio-economic sections find it more difficult to access to IT infrastructure and internet connectivity. There should be a coordinated approach between governments, quality assurance agencies and higher education institutions that addresses these major issues of resources. Offering more flexible higher education in terms of quality standards for it will be essential as well.

Conclusion
Due to the Covid-19 pandemic, excellence and equity, cornerstones of good education systems, are being challenged in every part of the world. The greatest concern is that differences in student's involvement and access to technology exacerbate inequality. At the same time, as in every major challenge, this is an opportunity to improve.
Digital education has emerged fastest during this pandemic around the world. In different universities and institutes in India, are also trying to teach students by various online modes. Several schools and even private coaching centres and institutions have entered into the business of online teaching.
However, there is a serious apprehension from different corners that such online teaching might create a digital divide among students as many have limited or no internet access, and many students may not be able to afford a laptop or desktop computer in their homes. The lockdown has hit poor students hard in India, and they are unable to explore online learning according to reports. This might thus enhance the rich/poor and urban/rural divide.
Will COVID-19 lead to a revolution in the dynamics of teaching? The future career of millions of students is at stake as it's already predicted that hundreds of millions of people might lose jobs due to the pandemic. Many Indians might return home after losing jobs overseas. Many students who have already got jobs through campus interviews or otherwise may not be able to join those jobs finally. And, in effect, it might affect a generation, and society as a whole—not only in India, but in other countries as well.

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