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Winter 12-14-2021

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Kumari, Anita, "Opportunities for ICT initiatives: the biggest challenge for Education during COVID 19 pandemic" (2021). *Library Philosophy and Practice (e-journal)*. 6742.  
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# **Opportunities for ICT initiatives: the biggest challenge for Education during COVID 19 pandemic**

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## **ABSTRACT**

At present, not only India but the whole world is struggling with the COVID-19 pandemic. The entire educational system from the primary level to a higher level has deteriorated during the global crisis of COVID-19 lockdown. Schools, colleges, universities, and other educational institutions around the world were closed due to COVID-19. Due to the closure of all educational institutions during the lockdown, there has been a change in the form of education. During the pandemic, many types of ICT initiatives can be seen in the field of education. During the lockdown, the e-learning platform was promoted so that everyone can get an education at home. There has been a significant increase in the use of information communication technology tools or online learning software during COVID-19. Information and Communication Technology (ICT) has to provide new ways of online learning platforms. This paper discusses the opportunities for information communication technology (ICT) tools in filling the gaps in education amid the COVID-19 pandemic and ensuring educational continuity during the lockdown. The purpose of this paper is to highlight the challenges arising in the education sector amid the COVID-19 pandemic and highlight the effectiveness of ICT in the education sector during this pandemic. This paper focuses on a variety of existing online learning platforms in this educational landscape.

## **KEYWORD**

ICT initiatives, COVID-19, E-learning, Internet

## **INTRODUCTION**

The COVID-19 pandemic or coronavirus pandemic is an ongoing worldwide pandemic caused by SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). This virus outbreak was first detected in the city of Wuhan, China on December 31, 2019. COVID-19 was a pandemic declared by World Health Organisation (WHO) on March 11, 2020. The first case of the COVID-19 virus was found in the Kerala state of India on 30 January 2020. In India, the first death was noticed on 12 March 2020 due to COVID-19. To control the coronavirus spread, the government of India under Prime Minister Narendra Modi announced the lockdown in India from midnight of 24 March.

The country is grappling with unprecedented severe crises and epidemics. Most of the country has imposed a full or partial lockdown to reduce the spread of the coronavirus outbreak. The COVID-19 virus has greatly damaged life, it has affected Healthcare and frontline workers, the socio-economic sector as well as education sector worldwide. It has created many challenges to continue the learning process in the education sector around the world. In countries like India, where the number of students is so high, this situation is very fragile. Its impact on education can be seen in almost every part. When the lockdown was implemented in the entire country for the prevention of covid-19 on 24 March 2020, the governments of the states started the provision of online learning. The Government of India and the governments of all the states have made many important efforts in the field of education. E-content is being made available to students through various online mediums so that there is continuity in education. Together they used all available mediums of communication to impart education. TV, DTH channels, radio broadcasts, WhatsApp, online education apps, video conferencing apps, and print media were also supported in this. UGC and other regional boards are giving course-related notes and other reading materials to the students on the apps and website. Along with school education, the field of higher education was also ready

to deal with this new challenge. The online medium of education has increased during the lockdown. In many countries, education online has been used for many decades, so that the course can be made available online. In contrast to this, the availability of this online education in higher educational institutions in India is very less. If the Covid-19 epidemic continues to increase in the country, then schools and higher education institutions will have to start regular online studies. Universities and educational institutions have allowed students to attend online classes at home to ensure social distance. Online education is one of the most important changes in modern history. Internet availability has increased considerably in the last decade.

### **Objective**

1. To shed light on various ICT platforms taken by the government of India during the COVID-19 pandemic.
2. To elucidate the biggest challenge for education during the lockdown.
3. To highlight the opportunities for the ICT sector in education during the pandemic.

### **Methodology**

To accomplish the objectives of the study, In this research paper information are collected from the various authentic website, Wikipedia, books, research papers, and journals.

### **The biggest challenge for education during lockdown**

Lockdown means lockout. Under this, all the people and students are advised to stay in their homes and the government is also strictly following the lockdown to prevent the spread of coronavirus. Many people have lost their lives due to this coronavirus and it can be avoided only by following social distancing. Therefore, every country started the lockdown to isolate infected people and prevent the virus

from spreading to another person. This virus infection spreads from one person to another very fast, so the government of India has considered lockdown to be necessary to avoid it. It has affected every aspect of life. COVID-19 pandemic has affected education and educational systems around the world. All education sectors like schools, colleges, and universities became closed. Suspended all classes, all entrance exams in various disciplines were postponed and all examinations of schools, colleges, and universities were postponed indefinitely. across the country, 2021 board exams, recruitment exams, and university exams have been postponed due to the ongoing COVID-19 pandemic. Class 10th board exams 2021 have been canceled by most of the states, and CBSE also canceled the class 10th board exams due to the second wave of COVID-19 Pandemic. Keeping in mind the safety and health of the students, the central government also canceled the CBSE 12th board examination. The decision was taken in a high-level meeting chaired by Prime Minister Narendra Modi on 1st June 2021. Even COVID-19 has changed the nature of education from physical classroom teaching method to digital method. We can say that in the Corona pandemic, online education is the demand of the time. Online education is appropriate to maintain social distance during the pandemic. In the current era, it has not been easy to teach children. Of course, teachers are the most important base of the education system, but online education has also made the Internet an important link of education. Information and communication technology (ICT) tools have emerged as an important basis for maintaining continuity in education in lockdown. But in our country, a large population neither has a smartphone, nor computer nor internet facility, in such a situation, parents are under financial pressure so that they can provide these facilities to their children. However, students belonging to poor families or living in remote places with no mobile network were left behind in obtaining an education. The poor family was already backward from these facilities, Corona has widened this gap. The coronavirus has completely changed the traditional form of education. The traditional method of teaching or classroom teaching during lockdown has now changed to online education. Thus, COVID-19 has emerged various challenges for education sectors to continue their educational activities online during the lockdown.

### **COVID-19: Importance and Opportunities for the ICT sector**

Information and Communication Technology (ICT) is a broad term that encompasses all the technologies of information communication. The handling (creation, storage, and use) of information is possible only through ICT and facilitates the transmission of information through various means of communication such as radio, television, cell phones, computers. ICT devices in various fields such as health, management, and education, etc. are being used more and more to get reliable results in less time.

Through Online learning or various ICT devices, we can utilize this toughest lockdown period productively. All people Combat COVID-19 by taking preventive steps, following social distancing.

In the context of the closure of schools, colleges, and all educational institutions during lockdown, online or digital platforms have become necessary for the continued provision of education for all. After the closure of schools, colleges, all educational institutions worldwide, the utility of online education increased and it was possible only through ICT. The teachers delivered lectures to the students through live video conferencing when all the educational institutions were closed at the time of lockdown. Various types of apps were used such as zoom, google meet, Facebook, Skype, Youtube, etc. so that the teacher can communicate with the students and solve their problems. Digital technology was rapidly adopted in education during the lockdown. Teaching is becoming more interesting and easier through online education. Development of digital library and all digital resources was possible only through ICT, where students and teachers could access research material and other study material. Through information and communication technology, teachers can teach their students and teach them from home. The Internet is the highest collection of knowledge. Through ICT, it is possible to control and coordinate the day-to-day administrative activities of the educational institution easily and transparently. Without the use of adequate information and communication technology (ICT) devices, Internet, mobile networks, students cannot participate in distance education to continue their learning process. We can say that ICT is the most important tool or the best solution for solving problems arising in the field of education during the lockdown.

## **ICT PLATFORMS: ONLINE EDUCATION FOR DIFFERENT GROUPS OF STUDENTS**

Every field in the entire country is affected by the outbreak of COVID-19 and one of the most affected areas at present is the education sector. During the COVID-19 outbreak, the ICT platforms for online education have emerged as one of the best measures or solutions to keep the educational system continue.

There are various e-learning or Digital platforms that can be accessed by students, teachers, researchers, and by other learners or educators amid the COVID-19 outbreak.

Some of these important platforms are given below.

### **Online platform for education**

**1. Byju's:** Byju's is an Indian multinational online learning platform, headquartered in Bengaluru. It was developed by Byju Raveendran and Divya Gokulnath in 2011. It has started a learning program for students from 1 to 12 and also provides educational information to the student for examinations like NEET IAS, IIT-JEE, CAT in India.

**2. National Mission on Education through ICT (NMEICT):-** It is a major initiative of the Ministry of Human Resource (MHRD) to improve the learning outcomes and also to improve the access to quality content.

The following initiatives have been taken up under the NMEICT program like

**(A) SWAYAM-** SWAYAM stands for "Study webs of Active-learning for Young Aspiring Minds" is an Indian MOOCs platform. It is launched by the Ministry of education Government of India under Digital India. This platform has been designed to give quality education to school students, undergraduate and also post-graduate students in India.

**(B) DIKSHA-** This platform is an initiative taken by the Ministry of Education to impart advanced digital learning for teachers from 1 to 12 classes. DIKSHA

platform is mainly designed for teacher education but is also available for students who want to connect to the teacher's community.

**3. E-pathshala:-** E-Pathshala is a joint initiative by the Ministry of Education and the National Council of Educational Research and Training (NCERT). It has been developed for students, teachers, parents, researchers, and educators to disseminating textbooks, audio, video, periodicals, print, and non-print materials.

**4. National Repository of Open Educational Resources:-** NROER is an Initiative of the Department of School Education and Literacy, Ministry of Human Resource Development, Government of India, and developed by the Central Institute of Educational Technology, National Council of Educational Research and Training. NROER hosts a wide range of educational materials covering many subjects. Educational materials are available in various formats such as audio, video, documents, image, etc.

**5. Swayam Prabha:-** SWAYAM PRABHA is an initiative of the Ministry of Human Resource Development (MHRD) through 32 DTH channels available 24x7 for the students. Through this medium class 1 to 12, UG and PG level students can participate in interactive learning.

**6. National Digital Library of India:-** The National Digital library of India (NDLI) is a national project which is an initiative of the Ministry of human resource development, The Government of India, and developed by the Indian Institute of Technology, Kharagpur. it is metadata from several national and international digital libraries and provide educational material including books, articles, videos, audiobooks, lectures, and all other reading material to all types of users like students, teachers, researchers, librarian, professionals, etc.

**7. Virtual Labs:-** this project covers various disciplines of science and engineering at all levels, students, from undergraduate to Ph.D. to provide remote access to Laboratories. Virtual Labs is an initiative of the Ministry of Human Resource Development, Government of India, under the National Mission on Education through Information and Communication Technology (ICT).

Apps for Online Meeting: Nowadays, many apps are used to maintain online education, online meeting, and also to maintain communication between teachers and students during lockdown such as Google Meet, Zoom, Microsoft Team, Cisco WebEx, Skype, etc. Various online meeting apps are designed for educational purposes. Some of these important apps are given below.

- **Google Meet-** Google Meet is an Audio - Video communication service developed by Google. Google Meet is a two-way and multi-way Audio- Video real-time meeting. We can connect, collaborate and celebrate from anywhere and join high-quality video meetings with Google Meet.

- **Zoom app-** A zoom is an essential tool for audio-video conferencing. With the Zoom app, teachers can virtually interact with their students- either by video or audio-only, or both. We can live chat during the video conference and can also record those sessions for later viewing.

- **Microsoft Team-** Microsoft Team is a communication platform designed by Microsoft. It helps the teachers in audio conferencing and video conferencing. . we can employ Microsoft teams for online learning using your desktop, laptop, tablet, and mobile devices. Through Microsoft Teams, the teachers can virtually interact with their students, conduct classes, and share study material.

- **Cisco WebEx-** Cisco WebEx is an important virtual learning platform. Schools and higher education faculty and students can communicate with each other through Cisco WebEx. Through WebEx, teachers can conduct a live online class. Students can join WebEx Meetings from any device such as mobile, tablet, desktop, and laptop.

## **Conclusion**

Like other areas, the education sector was also affected due to COVID- 19 because all schools, colleges, universities, and other educational institutions were closed due to the lockdown. In such a difficult time, information and communication technology has become a basic necessity not only in education but also in every field. ICT is an important tool for development in education and to enhance its quality. When the world collapsed with the corona epidemic, the world of ICT opened new doors of opportunity in the field of education, so that we are

successful in getting education sitting at home. With the help of ICT, we connect through computers and other devices. In such difficult times, education was possible only through technological innovations. These ICT devices made sure the platforms to access various educational resources to continue their learning virtually. The availability of various digital learning platforms and e-resources during the pandemic provided many opportunities to solve the problem arising in the field of education.

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