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Indian Initiatives on Education during COVID-19 in Comparison to Global Strategies – A Critical Analysis

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Global education is an essential key to prepare students for individual development having a fundamental role in an increasingly global society. As the world is increasingly connected to the internet, an acceleration of online education has captured the interest of students and educational institutions. Education has emerged as the most important single input in promoting human resource development. Today, knowledge and ideas have developed to implement social functions and social needs of every individual like public recognition, self-development along self-esteem. This is giving a new pattern of work that requires new and varied skills changing the meaning of knowledge. Twenty-first-century teaching demands a new set of competencies, which include not only Information and Communication Technology (ICT) skills, but also such soft skills as creativity, critical thinking, problem-solving, analytical skills, group learning, working in a team-based environment, and effective communication to prepare students for real life. It is an era of acute modernization where the integration of ICT like computers, audio-visual devices, and communication media has found their application in universities and institutions where teaching and learning are gaining popularity around the globe giving access to the digital revolution. In this era, knowledge is thought of as a form of energy connected to different forms and networks, valued for what it can do, rather than being stored in the minds of experts and students.

Education as a human right has been guaranteed and protected at all times for all people during emergencies. It can provide a stable, safe, and supervised routine that is attentive to the academic and psychosocial needs of students creating conditions for long-term solutions and at the same time protect them from both immediate and long-term risks. However, in emergency states often encounter difficulties in guaranteeing and protecting people's human rights particularly the rights of members of already marginalized groups.

In this paper, education of the student population is being taken within the context of the COVID-19 pandemic outbreak and offers insights into their struggle to survive with the challenges of the circumstances brought up in close touch with their education. The paper attempts to evaluate the infrastructural accessibilities in rural and remote areas for resolving the difficulties of learners. There is a need to address those learners from a penurious population with little or no access to educational opportunities. In the present century, it becomes significant to address user needs in places where electricity and internet connections are problematic. In this context, the present paper studies and examines the use of technology for learners during an emergency in developing countries regarding India.

Keywords: Education, Technology, Information Technology, COVID-19, Disadvantaged Section, Internet.

Introduction

Pandemics are for the most part disease outbreaks that become widespread as a result of the spread of human-to-human infection. “There have been many significant disease outbreaks and pandemics recorded in history, including Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, Zika.”¹ The internationally accepted definition of a pandemic as it appears in the Dictionary of Epidemiology is well-known: “An epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.”² The pandemic-related crises have been associated with enormous negative impacts on the health, economy, society, education, and security of national and global communities causing significant political and social disruption. Infectious disease outbreaks can easily cross borders to threaten economic and regional stability, as has been demonstrated by the COVID-19 pandemic.

“The virus, which causes the respiratory infection COVID-19, was first detected in the city of Wuhan, China, in late 2019. It then spread quickly across the globe in the first months of 2020.”³ “In January 2020, the World Health Organization declared the outbreak of a novel coronavirus a global health emergency, an acknowledgment of the risk the virus poses to countries beyond its origin in China and of the need for a more coordinated international response to the outbreak.”⁴ “It spread across the globe affecting around 203 countries, areas or territories.”⁵ These incited countries to temporarily close their borders and quarantine people in an attempt to minimize the spread of the infection adapting non-pharmaceutical interventions and preventive measures such as social distancing and self-isolation. This prompted widespread closures of schools and universities affecting educational systems worldwide. “These nationwide closures are impacting over 91 percent of the world’s student population.”⁶ “According to the Organization for Economic Co-operation and Development (OCED),⁷ 421 million children are affected due to the closure of schools in 39 countries. The other 22 countries have announced partial closures.”⁸ Global education is an essential key to prepare students for individual development having a fundamental role in an increasingly global society. Today, knowledge and ideas have developed to implement social functions and social needs of every individual like public recognition, self-development along self-esteem. This is giving a new pattern of work that requires new and varied skills changing the meaning of knowledge. Twenty-first-century teaching demands a new set of competencies, which include not only Information and Communication Technology (ICT) skills, but also such soft skills as creativity, critical thinking, problem-solving, analytical skills, group learning, working in a team-based environment, and effective communication to prepare students for real life. It is an era of acute modernization where the integration of ICT like computers, audio-visual devices, and communication media has found their application in universities and institutions where teaching and learning are gaining popularity around the globe giving access to the digital revolution. In this era, knowledge is thought of as a form of energy connected to different forms and networks, valued for what it can do, rather than being stored in the minds of experts and students. The world has stretched to a phase where an uneducated man loses relevance in every society. Thus, the demand for education is so highly esteemed that it is almost becoming unappeasable. Today we live in a technology and media suffused environment with access to an abundance of information; rapid changes in technology tools and the ability to collaborate and make individual contributions on an unprecedented scale. With the improvement in communication technology, the world community as a whole has condensed to a degree where greater access to information is provided on an international scale. Today’s students need conceptual understanding and analytical ability through the use of diverse media with an ability to work creatively to generate new ideas, new theories, new products, and new knowledge. They need a critical evaluation of the material they read and express themselves verbally as well as in writing along with mathematical thinking and scientific understanding.

¹ Rewar, S., Mirdha, D., & Rewar, P. (2015). Treatment and Prevention of Pandemic H1N1 Influenza. *Annals of Global Health*, 81(5), 645-653. doi: <http://dx.doi.org/10.1016/j.aogh.2015.08.014>

WHO. (2011b). Comparative Analysis of National Pandemic Influenza Preparedness Plans.pdf.

² Harris, S. S. (2000). *A Dictionary of Epidemiology*, Fourth Edition.pdf.

³ <https://www.bbc.com/news/world-51235105>

⁴ <https://www.statnews.com/2020/01/30/who-declares-coronavirus-outbreak-a-global-health-emergency/>

⁵ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

⁶ <https://en.unesco.org/covid19/educationresponse>

⁷ An intergovernmental economic organization with 36-member countries founded in 1961 to stimulate economic progress and world trade.

⁸ <https://www.aa.com.tr/en/education/coronavirus-pandemic-reshaping-global-education-system/1771350>

The recent closure of schools, colleges, and universities for months together followed by lockdown disturbed educational setup besides damaging peace of mind of students and academics and everything came to a standstill. UNESCO⁹ plays an active role in promoting lifelong quality education for all children, youth, and adults as a part of emergency response and for long-term recovery. UNESCO places a particular focus on sustainable development and peace, aiming “to develop education systems that are more resilient and responsive in the face of conflict, social unrest, and natural hazards - and to ensure that education is maintained during emergency, conflict and post-conflict situations”¹⁰ anchored in the Education 2030 Agenda. During this period of a critical emergency, education remains at the top of the priority list for students to build resilience and social cohesion across communities and is fundamental to sustained recovery. In crisis-affected countries, school and university students have been affected as the educational institutions were closed during the lockdown period worldwide. “According to UNESCO monitoring, over 200 countries have implemented nationwide closures, impacting about 98 percent of the world’s student population.”¹¹ This has led millions of students into temporary home-schooling situations in countries like China, South Korea, Italy, Spain, France, Iran, etc. “In response to school closures, UNESCO recommended the use of distance learning programs and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of education.”¹² However, during this period of lockdown, Open and Distance Learning (ODL) has been made applicable to formal educational institutions. ODL is a “system of teaching and learning characterized by separation of teacher and learner in time and/or place; uses multiple media for delivery of instruction; involves two-way communication and occasional face-to-face meeting for tutorials and learner-learner interaction.”¹³ Consequently, ICT has been providing the medium for modern learning technologies like audio/video conferences, multi-site learning systems, digital reading materials, e-learning technologies¹⁴, online learning¹⁵, mobile learning, virtual learning¹⁶, podcasts¹⁷, and threaded discussion forums¹⁸, that has contributed to the rapid growth in learning. This has changed the scenario of distance education at present.

Need of the Study

The twenty-first century is an era of acute modernization where the integration of ICT like computers, audio-visual devices, and communication media has found their application in education and started a digital revolution. As the world is increasingly connected to the internet, an acceleration of online education has captured the interest of students and educational institutions. However, emergency states often encounter difficulties in guaranteeing and protecting people’s human rights particularly the rights of members of already marginalized groups. Yet, the value of education to those affected by emergencies should not be underestimated and is consistently highlighted by parents and learners themselves as crucial in bringing stability, emotional and physical protection, and continuity.

In this paper, education of the student population is being taken within the context of the COVID-19 pandemic outbreak and offers insights into their struggle to survive with the challenges of the circumstances brought up in close touch with their education. In this event of a pandemic, however, access to education is extremely limited, particularly in the developing world. Exploring and examining the impact of the pandemic on students and their education across the globe and in India helps us to understand that improvement in ICT would directly enhance their education. Indeed, the current vision for the best way to deal with education during emerging infectious diseases is to prepare educational institutions that could adapt and develop innovative solutions using the most up-to-date means of global communication and collaboration. To predict the fate of future outbreaks, care needs to be taken in designing the curriculum as long as technology-enabled learning is concerned especially for the deprived section of the society.

⁹ United Nations Educational, Scientific and Cultural Organization (UNESCO) is a specialized agency of the United Nations aimed at contributing “to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.” The Headquarters of UNESCO lies in Paris, France.

¹⁰ <https://en.unesco.org/themes/education-emergencies>

¹¹ <https://en.unesco.org/news/covid-19-educational-disruption-and-response>

¹² <https://en.unesco.org/news/290-million-students-out-school-due-covid-19-unesco-releases-first-global-numbers-and-mobilizes>

¹³ <http://oasis.col.org/bitstream/handle/11599/138/ODLIntro.pdf?sequence=1&isAllowed=y>

¹⁴ The students and the teacher interact online in this type of learning.

¹⁵ The main element of online learning is to get learning experience by using an internet connection.

¹⁶ It usually refers to courses taken outside a classroom typically using the Internet.

¹⁷ This is recorded session for electronic listening or viewing at the student’s leisure.

¹⁸ A thread is a conversation within a forum that includes the initial post and all replies to it.

Objectives

This study focuses on technology-enabled learning in the context of the pandemic outbreak (COVID-19) which has dramatically impacted everyday lives. In the current scenario it becomes extremely pertinent to study the status of the student population across the globe and in India to say in an emergency, education has revealed the change in the trend. With this vision in mind, the following objectives become significant for the present study:

1. To study the impact of pandemic (COVID-19) on education across the globe.
2. To study the impact of pandemic (COVID-19) on education in India.
3. To analyze the COVID-19 impact on education in India regarding developed countries.

Methodology

The study is conducted to review the impact of the pandemic on educational set up across the globe and in India respectively. The descriptive method has been used in this study to obtain pertinent and precise information. The secondary data was also collected from various journals, magazines, articles, and media reports, and various official websites of different departments. Keeping in view the set objectives, this research design was adopted to have greater accuracy and in-depth analysis of the research study. In this study, comparative analysis has been made based on sample institutions taken from developed and developing countries. The educational institutions at different levels from India compared with 05 developed countries of the world have been taken as a sample. The self-developed questionnaire and an interview schedule (semi-structured) were used by the investigator to review the educational setup that had an impact on the students across the globe in general and in India in particular.

Impact of Pandemic on Education across the Globe

Education as a human right has been guaranteed and protected at all times for all people during emergencies. It can provide a stable, safe, and supervised routine that is attentive to the academic and psychosocial needs of students creating conditions for long-term solutions and at the same time protect them from both immediate and long-term risks. This emergency affected the traditional educational system within a short period that needs to adopt a new reality emphasizing the need for investment in technology, resources, training so that every child can access education. School closures have been reported from past during different pandemic outbreaks from time to time that helped in reducing the spread of infection reducing mortality rate as in case of Spanish flu, Asian flu, or H1N1 Flu.

The pandemic has given technology massive insights exposing human development and learning to a potential shift from content dissemination to augmenting relationships with teachers, personalization, and independence. The modification of the formal educational system across the globe has given a new direction towards an online mode of learning. The infrastructure of various developed countries is technologically so advanced and had minimum negative impacts on online learning during the period of lockdown. In Italy, teachers have been teaching every day via video conferencing and kids have been seen participating in the learning process using gadgets like Padlet¹⁹ and flip grid.²⁰ They have been doing individual work, group work and consulted teachers when required. Teachers have been using Microsoft Teams²¹ instead of email. This is going to reshape the idea of education forcing educators, parents, and students to use such soft skills of the twenty-first century as creativity, critical thinking, problem-solving, analytical skills, group learning, working in a team-based

¹⁹ Padlet is a free online tool that is best described as an online notice board. Padlet can be used by students and teachers to post notes on a common page. The notes posted by teachers and students can contain links, videos, images and document files. It is a virtual post-it note system that lets students share ideas.

²⁰ It is a website that allows teachers to create "grids" to facilitate video discussions. Each grid is like a message board where teachers can pose questions, called "topics," and their students can post video responses that appear in a tiled grid display. It lets teachers and students create short videos to share.

²¹ Microsoft Team is a unified communication and collaboration platform that combines persistent workplace chat, video meetings and application integration. Within a team, members can set up channels. Channels are topics of conversation that allow team members to communicate without the use of email or group SMS (texting). Users can reply to posts with text as well as images, GIFs and custom-made memes. Direct messages allow users to send private messages to a specific user rather than a group of people. It allows teachers to distribute, provide feedback, and grade student assignments and Quizzes can also be assigned to students through this medium.

environment, and effective communication to prepare students for real life. The Hong Kong administration introduced interactive apps for students to learn at home in February 2019. In Hong Kong, a consortium involving 60 educational organizations, publishers, media and entertainment industry professionals have come together to provide 900 educational assets - including videos, book chapters, assessment tools, and counseling services for free to students staying at home. The Geneva-based World Economic Forum (WEF) believes that some 120 million Chinese students were given access to learning material through live television broadcasts. The Education Ministry in China (the country most affected by the pandemic) developed a new cloud-based, online learning and broadcasting platform to enable students to log in from anywhere. "The pandemic has led the Zhejiang University (ZJU) in China to start the world's largest remote learning experiment. To minimize the impact of the outbreak, ZJU officially started online teaching on 24 February in line with the original term calendar. The course hub "Learning at ZJU" attracted 570,000 visits and "Ding Talk ZJU", a live streaming app co-developed by Alibaba, recorded a total audience of 300,000. As part of the quality assurance process, ZJU organized a series of training sessions in mid-February for 3,670 faculty members. An instructor was invited to impart skills to conduct massive open online courses. Seeking to bridge the digital divide, the university has negotiated deals with several network providers to subsidize the data plans of its faculty and students. But it was the coronavirus outbreak in recent weeks, the university put up a total of 200 smart classrooms for teachers to shoot video courses or live stream their classes."²²

"Over 95 percent of students use a computer for their work in Denmark, Norway, Poland, Lithuania, Iceland, Austria, Switzerland, and the Netherlands. Only 34 percent in Indonesia did. In the US, virtually every 15-year-old from a privileged background said they had a computer to work, but nearly a quarter of those from disadvantaged backgrounds did not."²³ "To aid in slowing the transmission of COVID-19, hundreds of libraries have temporarily closed. In the United States, numerous major cities announced public library closures, including Los Angeles, San Francisco, Seattle, and New York City, affecting 221 libraries."²⁴ Even though rapid technology has connected students and teachers of schools, colleges, and universities in their homes, the way it rolled out overnight, with no training and often not sufficient bandwidth has left many countries especially developing countries discontented about the whole exercise. This association of e-learning with lockdown created interruption among the students having a more significant impact on developing children and teenagers. In this situation, it was a challenge for the students to self-direct their learning with intrinsic motivation and interact with these technologies in healthful ways by monitoring their time. The brains of children are still developing and may be more sensitive to the effects of technology and its overuse than adult brains. The overuse of technology more likely to experience issues among the children as low creativity, delays in language development, physical inactivity and obesity, poor sleep quality, aggressive behaviours, etc. Electronic devices at times cause psychological and physical issues, such as digital eye strain and difficulty focusing on important tasks.

If we look at the present educational scenario, time has added new dimensions to the teaching-learning process requiring specified competencies along with proper electronic devices with internet connections. Technology has not yet solved the most basic of things whether a student is engaged in the learning process and proper understanding. The objective of mass-scale online education was to deliver instructions to the student population across the globe through ICT ensuring opportunities to access information and data to learners at all levels of education. There is a major gap between developed and developing countries in terms of their access to ICT. The majority of people (especially deprived section of the society) in the developing world are least likely to have access to basic information and communication networks. A digital divide exists within developing countries between economically more and less developed regions; urban and rural areas; educated and illiterate; men and women; and between young and old. The digital divide intensifies social and economic divides in a way that the gap between penury and opulence increases day in, day out in developed and developing countries. These students missed out on months of curriculum as teaching in schools could not occur remotely during the lockdown. This results from the underdeveloped socio-economic structure of deprived countries and among various socio-economic groups within countries. Under these circumstances, it becomes significant to address user needs in places where the online education system has exposed deep

²² <https://www.aa.com.tr/en/education/coronavirus-pandemic-reshaping-global-education-system/1771350>

<https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of-online-learning-for-universities/>

²³ <https://qz.com/1826369/how-coronavirus-is-changing-education/>

²⁴ <https://www.usatoday.com/story/news/health/2020/03/13/coronavirus-updates-us-testing-death-toll-stocks-school-closures/5032550002/>

inequalities among students of the deprived section in developed and developing countries. Technology is the requirement for teaching in an emergency but some countries are still not using technology in learning. Also, there are children from deprived sections of the developing countries relying on schools for food and a safe environment where technology-enabled learning is a dream for them as they do not have facilities such as electronic devices and internet connections, thus expanding the digital divide. The impact is more severe for disadvantaged children and their families causing interrupted learning, compromised nutrition, and consequent economic cost to families who could not work. During the pandemic outbreak of 2019, these divides have distressed the most marginalized section in every society where students are deprived of education. Apart from the digital divide, not every parent has the level of digital literacy necessary to help their children shift to online learning.

Impact of Pandemic on Education in India

There is a severe impact of school closures on students, teachers as well as on parents. The issues of digital learning, the internet, food insecurity, early childhood, and health are of great concern to the parents and the impact is more severe on disadvantaged sections and for the families who could not work due to lockdown. The sudden shift to online learning without any planning - especially in countries like India has created the risk of most of our students becoming passive learners and they seem to be losing interest due to low levels of attention span. India is not technologically so advanced in comparison to developed countries, even though national policies from time to time gave importance to a radical reconstruction of the education system with special attention to science and technology for effective communication to prepare students for real life. India recognized the importance of ICT in education as early as 1984-85 when the Computer Literacy and Studies in Schools (CLASS) was initially introduced as a Pilot Project with the introduction of BBC micro-computers. The Indian National Educational Policy of 1986, which was subsequently modified in 1992, stressed the need for using Educational Technology (ET) to improve access, quality, and governance of education. Various schemes emerged at a national level and this led to another policy called ICT in schools in 2004. National Curriculum Framework (2005) and Sarva Siksha Abhiyan (SSA) recommended creating an environment for optimal utilization of ICT in education. In continuation to this, many schemes and programs have been introduced to effectively implement ICT in teaching and learning to increase access at all levels of education. There are many platforms created to enable online education in India. These are supported by the Ministry of Human Resource Development (MHRD), the National Council of Educational Research and Training (NCERT), and the department of technical education. There also are initiatives like e-PG Pathshala (e-content), SWAYAM (online courses for teachers), and NEAT (enhancing employability). Other online platforms aim to increase connectivity with institutions and access to content. These are utilized for course materials and classes, and the running of online modules. They include the National Project on Technology Enhanced Learning (NPTEL), National Knowledge Network (NKN), and National Academic Depository (NAD), among others.

Presently, India is witnessing e-learning in the formal educational sector but still millions of schools and colleges mostly from rural areas do not have access to education during the lockdown period. Regarding the initiatives mentioned in different national policies from time to time, it becomes evident that the government has not been able to implement these policies effectively. India has not yet managed to overcome technical challenges as far as power supply, infrastructure and connectivity are concerned. As the government has initiated various online platforms but most of the teachers are just conducting lectures on video platforms such as Zoom which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. The objective of mass-scale distance education in countries like India is not the cultivation of academic elites, but the cost-effective delivery of education to deprived populations. The accessibility of ICT is all about ensuring opportunities to access information and data to learners at all levels of education. It refers to the principles of equality of conditions and accessibility that should inspire the educational, training, and social policies of information communications technologies. The poor and illiterate population in rural and remote areas are least likely to have access to ICT. "Lack of access to technology or good internet connectivity is an obstacle to continued learning, especially for students from disadvantaged families."²⁵ The underprivileged learners have fewer educational opportunities beyond school as they lack internet facilities and electronic gadgets at home increasing the difficulty of keeping up with distance learning. "Around 1.26 billion children (72 percent of the world's student population) worldwide have been affected by

²⁵ <https://en.unesco.org/covid19/educationresponse/consequences>

school closures due to pandemic and India comprises over 320 million of these learners.”²⁶ “The Indian Internet infrastructure is not ready for the paradigm shift to online learning mandated by the situation arising due to COVID-19, according to a report by Quacquarelli Symonds (QS), which comes out with coveted global ranking for educational institutions. The report pointed out connectivity and signal issues as the most prevailing problems faced by students while attending online classes. The survey pointed out that the infrastructure in terms of technology in India has not achieved a state of quality to ensure sound delivery of online classes to students across the country.”²⁷ “It has been estimated that less than 15 percent of rural Indian households have Internet (as opposed to 42 percent urban Indian households). The poorest households cannot afford a smartphone or a computer.”²⁸ “Rural and urban households with computer facilities are 4.4 percent and 23.4 percent whereas rural and urban households with internet facilities are 14.9 percent and 42 percent respectively.”²⁹ School as a miniature society not only provides learning space and environment to students but accelerates socialization, personal and emotional development, care, and coaching of the community. Experience develops personality similarities within groups and differences between groups; the unique experience of each person shapes his or her individuality. Personality development cannot take place in a vacuum and it is one’s total behaviour tendency. School closures have deprived opportunities for growth and development of children as well as youth and it becomes problematic to initiate distance education for children below the age of three referring to preschools, nursery schools, and kindergartens. Higher education is rarely about exams, classes, or grades but is about an experience that prepares students to become functioning members of the workforce, with the requisite knowledge, skills, and life experiences. Online teaching takes time and practice and evaluation of students in a fair manner are difficult. Also, the absence of face-to-face contact with students fails to incorporate mentoring, interpersonal relationships, and brainstorming. Lack of free-flowing conversations, debates, and discussions affects the teacher-student and student-student communications. It is very tiring and stressful to be online every hour for every class and hence this online model cannot replace the physical classroom. There are various distractions while studying at home and both the students and faculty are not comfortable with technology as all teachers and students are not good at it or at least not all of them were ready for this sudden transition from face-to-face learning to online learning.

Data-Base and Inferences

With the pandemic outbreak of 2019, the scenario of formal education around the globe reshaped the idea of education and has maintained continuity in education in all the formal educational institutions through the internet. The world has been able to manage an education system that has helped learners to focus on their education.

²⁶<https://www.thehindu.com/sci-tech/technology/why-elearning-is-not-a-sustainable-solution-to-the-covid19-education-crisis-in-india/article31560007.ece>

²⁷<https://economictimes.indiatimes.com/tech/internet/covid-19-indian-internet-infra-not-prepared-for-shift-to-online-teaching-learning-says-qs-report/articleshow/75269679.cms?from=mdr>

²⁸ Key Indicators of Household Social Consumption on Education in India Report, based on the 2017-18 National Sample Survey. <https://www.thehindu.com/sci-tech/technology/why-elearning-is-not-a-sustainable-solution-to-the-covid19-education-crisis-in-india/article31560007.ece>

²⁹<https://www.thehindu.com/sci-tech/technology/why-elearning-is-not-a-sustainable-solution-to-the-covid19-education-crisis-in-india/article31560007.ece>

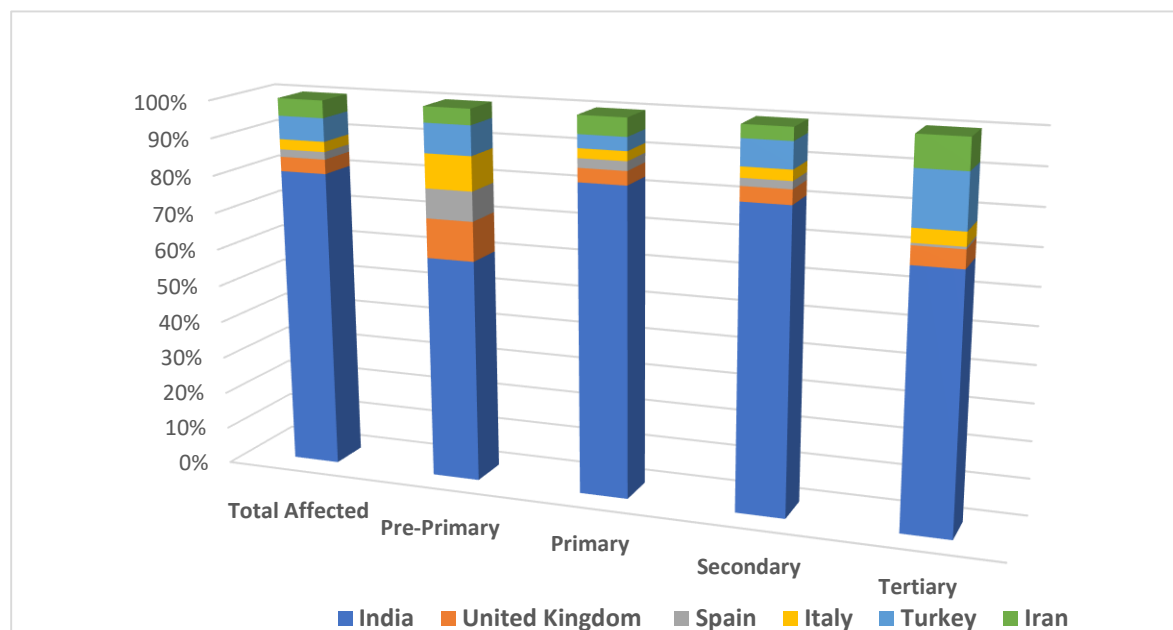


Figure 1: Global School Closures caused by COVID-19

Source: UNESCO

Data for the United Kingdom also includes Northern Ireland

There are various countries where the education system has been affected by Pandemic COVID-19. “According to UNESCO monitoring, over 160 countries have implemented nationwide closures, impacting over 87 percent of world’s student population. Several other countries have implemented localized school closures and should these closures become nationwide, millions of additional learners will experience education disruption”.³⁰ The status of global school closures has been categorized as country-wide and localized closures. The number of 1,210,295,995 affected learners from 156 countries with 69.1 percent of total enrolled learners has the status of country-wide closure. This study has analyzed the pattern of education during Pandemic COVID-19 based on the data provided in figure 1. It portrays country-wide school closures of affected learners of six countries i.e. India, the United Kingdom along with Northern Ireland, Spain, Italy, Turkey, and Iran. Further, the data of affected learners has been divided into different educational levels i.e. Pre-Primary³¹, Primary³², Secondary³³ and Tertiary³⁴ levels. According to UNESCO, total affected learners in India is 320,713,810 whereas it is 15,401,612 in UK, 7,996,895 in Spain, 10,876,792 in Italy, 24,901,925 in Turkey and 18,635,825 in Iran. The affected learners at Pre-Primary level in India is 10,004,418 whereas it is 1,763,125 in UK, 1,321,027 in Spain, 1,535,493 in Italy, 1,326,123 in Turkey and 706,093 in Iran. The affected learners at Primary level in India is 75,796,975 whereas it is 3,371,427 in UK, 2,238,727 in Spain, 2,314,815 in Italy, 3,244,094 in Turkey and 4,431,283 in Iran. The affected learners at Secondary level in India is 133,144,371 whereas it is 6,386,317 in UK, 3,332,678 in Spain, 4,601,869 in Italy, 11,404,385 in Turkey and 5,684,238 in Iran. The affected learners at the Tertiary Level in India are 34,337,594 whereas it is 2,431,887 in the UK, 300,794 in Spain, 1,837,051 in Italy, 7,198,987 in Turkey, and 4,073,827 in Iran.

The data analyzed above shows a huge section of affected learners in India at all educational levels as compared to the other five countries. These figures represent technological and infrastructural impediments in the Indian educational system even in the present 21st century which is an era of acute modernization where the integration of ICT like computers, audio-visual devices, and communication media (along with the internet) has started a digital revolution. This gives a reflection of the gigantic digital divide between India (a developing country)

³⁰ <https://en.unesco.org/themes/education-emergencies/coronavirus-school-closures>

³¹ Pre-schools are diverse all around the world, with a variety of different institutions that have been developed for children ranging from the ages of two to seven, depending on the country concerned. The preschool tutelage in India is divided into two stages - junior kindergarten and senior kindergarten.

³² Primary or elementary education typically consists of the first four to seven years of formal education.

³³ Secondary education consists of class XI, X, XI and XII.

³⁴ Tertiary education, also known as higher education, refers to the non-compulsory educational levels that follow completion of secondary school. Tertiary education is normally taken to include undergraduate and post-graduate education, as well as vocational education and training.

and other developed countries. In the light of these observations, enrollment figures and population ratio may have a slight impact on technology-enabled learning but India has not yet managed to overcome technical challenges as far as power supply, infrastructure and connectivity are concerned in comparison to other developed countries.

Conclusion

Education has emerged as the most important single input in promoting human resource development. The paper has analyzed the impact of the pandemic on education across the globe in general and in India in particular. Poor and illiterate populations in rural and remote areas are least likely to have access to ICT. Also, internet facility has not yet reached to the areas where most vulnerable and deprived people are living. E-learning was not possible for many educational institutions as they were unprepared to move online overnight. The imperative need for technological education is realized to equalize educational opportunity and democratize education to reach out to the unreached and meet the demands of learners. In the light of the above observations, it is concluded that India has still a long way to go in the development and growth of technological approach towards education in comparison to the most developed countries of the world.

In this paper, education of the student population is being taken within the context of the COVID-19 pandemic outbreak and offers insights into their struggle to survive with the challenges of the circumstances brought up in close touch with their education. In this event of a pandemic, however, access to education is extremely limited, particularly in the developing world. Exploring and examining the impact of the pandemic on students and their education across the globe and in India helps us to understand that improvement in ICT would directly enhance their education. It has been observed that massive initiatives have not been taken even by leading institutions in India. There is the least visibility of technology-enabled learning at the mass level in India in comparison to developed countries of the world. Indeed, the current vision for the best way to deal with education during emerging infectious diseases is to prepare educational institutions that could adapt and develop innovative solutions using the most up-to-date means of global communication and collaboration. To predict the fate of future outbreaks, care needs to be taken in designing the curriculum as long as technology-enabled learning is concerned especially for the deprived section of the society. Governments, NGOs, and other public-private organizations must be involved to alleviate this serious deficiency.

References

- Ahrache, Sara Ibn El & Badir, Hassan (2013). Massive Open Online Courses: A New Dawn for Higher Education? *International Journal on Computer Science and Engineering (IJCSE)*, Vol.5, No.05.
- Bordoloi, Ritimoni (2018). Transforming and empowering higher education through Open and Distance Learning in India, *Asian Association of Open Universities Journal*, Vol.13, No.1.
- Chauhan, Jyoti (2017). An Overview of MOOC in India, *International Journal of Computer Trends and Technology*, Vol. 49 No.2 pp.111-120.
- Daniel, J.S. (2009), Highlights of the UNESCO Global Forum on Rankings and Accountability: Uses and Misuses, closing presentation, Paris.
<http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/RANKINGS/Stamenka-JohnDaniel.pdf>
- Health, 81(5), 645-653. doi: <http://dx.doi.org/10.1016/j.aogh.2015.08.014>
- Harris, S. S. (2000). A Dictionary of Epidemiology, Fourth Edition.pdf.
- Jonassen, David, Ed, (2004). Handbook of Research on Educational Communications and Technology. London: Lawrence Erlbaum Associates and a Publishers.
- Kapur, D. and M. Crowley (2008), "Beyond the ABCs: Higher Education and Developing Countries", Working Paper No. 139, Center for Global Development, Washington D.C.
www.cgdev.org/content/publications/detail/15310/

Maurice, J. (2016). Cost of protection against pandemics is small. *The Lancet*, 387(10016), e12.

Rewar, S., Mirdha, D., & Rewar, P. (2015). Treatment and Prevention of Pandemic H1N1 Influenza. *Annals of Global Health*, 81(5), 645-653. doi: <http://dx.doi.org/10.1016/j.aogh.2015.08.014>

Toro, Ulka & Joshi, Millind (2012). ICT in Higher Education: Review of literature from the period 2004-2011, *International Journal of Innovation, Management and Technology*, Vol.3, No.1.

WHO. (2011b). Comparative Analysis of National Pandemic Influenza Preparedness Plans.pdf.

“Adverse consequences of school closures”

<https://en.unesco.org/covid19/educationresponse/consequences>

Anderson, Jenny, “The coronavirus pandemic is reshaping education”, March 30, 2020.

<https://qz.com/1826369/how-coronavirus-is-changing-education/>

BBC News “Coronavirus pandemic: Tracking the global outbreak”, May 26, 2020.

<https://www.bbc.com/news/world-51235105>

“Coronavirus disease (COVID-19) pandemic”

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

“COVID-19 Educational Disruption Response”

<https://en.unesco.org/covid19/educationresponse>

“COVID-19 Educational Disruption and Response”, March 24, 2020.

<https://en.unesco.org/news/covid-19-educational-disruption-and-response>

“COVID-19: Indian Internet infra not prepared for shift to online teaching-learning, says QS report”, April 21, 2020.

<https://economictimes.indiatimes.com/tech/internet/covid-19-indian-internet-infra-not-prepared-for-shift-to-online-teaching-learning-says-qs-report/articleshow/75269679.cms?from=mdr>

“Education in emergencies”

<https://en.unesco.org/themes/education-emergencies>

Gilani, Iftikhar, “Coronavirus pandemic reshaping global education system?”, March 19, 2020.

<https://www.aa.com.tr/en/education/coronavirus-pandemic-reshaping-global-education-system/1771350>

Hauck, Grace & Stanglin, Doug, “Coronavirus updates: Trump declares national emergency; schools in 12 states shut down; cruise lines halted”, March 13, 2020.

<https://www.usatoday.com/story/news/health/2020/03/13/coronavirus-updates-us-testing-death-toll-stocks-school-closures/5032550002/>

Joseph, Andrew, “WHO declares coronavirus outbreak a global health emergency”, Jan 30, 2020.

<https://www.statnews.com/2020/01/30/who-declares-coronavirus-outbreak-a-global-health-emergency/>

Sudevan, Parveen, “Why e-learning isn't a sustainable solution to the COVID-19 education crisis in India”

<https://www.thehindu.com/sci-tech/technology/why-elearning-is-not-a-sustainable-solution-to-the-covid19-education-crisis-in-india/article31560007.ece>

“The Commonwealth of Learning: An Introduction to Open and Distance Learning”, October 24, 2000.

<http://www.col.org/ODLIntro/introODL.htm>

<http://oasis.col.org/bitstream/handle/11599/138/ODLIntro.pdf?sequence=1&isAllowed=y>

Zhaohui, Wu, “How a top Chinese university is responding to coronavirus”, March 16, 2020.

<https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of-online-learning-for-universities/>

“290 million students out of school due to COVID-19: UNESCO releases first global numbers and mobilizes response”, March, 04 2020

<https://en.unesco.org/news/290-million-students-out-school-due-covid-19-unesco-releases-first-global-numbers-and-mobilizes>

<https://www.britannica.com/>

<https://en.unesco.org/>

<https://mhrd.gov.in/>

<https://www.questia.com/>

<https://www.ugc.ac.in/>

<https://www.un.org/>

