



OPEN ACCESS INTERNATIONAL JOURNAL OF SCIENCE & ENGINEERING

IMPACT OF COVID-19 ON EDUCATION IN INDIA

Meenal D. Patil¹, Rasika B. Ghadge², Suprimkumar D. Dhas³, Annasaheb V. Moholkar⁴.

Department of Physics, Shivaji University Kolhapur, India. – 416004

Email addresses: patilmeenal001@gmail.com, avmoholkar@gmail.com.

Abstract: *The impact of pandemic COVID-19 has drastically disrupted everywhere in the world as well as India. The education system of the world including India is very badly affected by the spread of COVID pandemic. It has imposed the global lockdown creating an adverse effect on around 0.29 billion students from India. In several education systems such as school, colleges and universities have stopped face-to-face teaching-learning and moved towards the online. The academic year 2020 has already been lost by students but fear is that losing the academic year 2021. Despite all these problems, the education sector of India has fought by reacting positively and managed to conduct online education to continue learning-teaching, research and some other services with new technical tools and digitalization. Due to the corona pandemic, Indian education sectors are implementing new perspectives, many new trends of teaching- learning, the same may go on as we move ahead to a new tomorrow. This paper highlights some positive and negative impacts COVID-19 pandemic on the education sector of India and some fruitful suggestions are also noted to continue the educational activities during the lock-down situation.*

Keywords: COVID-19, Education, India, Impact, digital civilization.

I INTRODUCTION

In December 2019, clusters of pneumonia cases were found in Wuhan city of China and later investigation found the disease was caused by a novel strain of coronavirus. The epidemic novel COVID-19 (an acronym for Coronavirus disease 2019) spread at an alarming rate throughout the globe. The World Health Organization (WHO) declared the public health emergency of international concern on 30 January, and a pandemic on 11 March (2020).

Coronavirus disease is transmitted by inhalation or contact with infected droplets. The symptoms are usually ranging from fever, cough, sore throat, breathlessness, fatigue to several diseases which can push near to death. In order to control the pandemic spread, the first step to avoid transmission or contact with an infected person by maintaining social distance and for this, every country took the step of lockdown. The Government of India (GoI) also set in motion a lockdown from 25th march 2020 to combat the spread of the novel disease.

The action of lockdown is a pivotal and effective step to control the spread, but at the same time affected all aspects of human activities globally ranging from education, research, travel and tourism industry, sports, entertainment, Agriculture,

Healthcare, Hospitality, worship, social gathering, economy, and politics. This pandemic has compelled people to stay at home. The imposed lockdown significantly influenced the education sector as educational institutions throughout the nation didn't get any relaxation to start their educational activities.

The education sectors such as schools, colleges and universities were shut down and forced to suspend all classes, examinations. Although the lockdown disrupted the schedules of the education sector, it creates a new window of opportunities to come out from the rooted classroom teaching model to a new era of online learning (digital model). Many educationalists, decision making excellencies of education and scientists have made an appeal to cope up the new alternatives of using internet facility while working from home. Thus, the pandemic COVID-19 crisis has created both challenges and opportunities in front of educational institutes to continue the teaching-learning process. The entry of COVID-19 changed the entire scenario of the education sector in India.

OBJECTIVES

The main objectives of a present research paper are:

- To analyze the impact of COVID-19 on the education sector.

- To enlist both positive and negative impacts of COVID-19.
- To highlight initiatives taken during this pandemic by Govt. of India for education.

III METHODOLOGY

Data and information collected from various journal articles, e-contents from authentic websites, newspapers relating to impact of COVID-19 on the traditional educational system and discussions with colleagues.

IV IMPACT OF CORONAVIRUS PANDEMIC ON EDUCATION

Education is a basic human right and the foundation on which the world builds peace and drives sustainable development. The COVID-19 pandemic forced millions of students to stay home and has created the largest disruption of the education sector in history. According to the UNESCO report, the closures of schools and other learning spaces affects nearly 1.6 billion learners from more than 190 countries and all continents which is almost 91 per cent of the world’s student population. Among them 0.29 billion learners are from only India. These are the only numbers, but true long-term impact on students will be seen in future. The lockdown followed COVID-19 outbreak worst-hit the conventional schooling due to school closures, which majorly hamper on students in terms of knowledge acquisition, social interaction, psychological development, adequate nutrition and economic. Following the job losses and closure of small businesses leads to large numbers of migration. Such migrant parents withdraw their Children from schools. This pandemic has thrown the education sector in a cascading crisis.

V HOPE THROUGH ONLINE LEARNING MODE

The COVID-19 pandemic created many challenges in front of us such as continuing the teaching-learning process when students and teachers could not present physically in the campuses. In order to maintain educational continuity in absence of face-to-face classes, we need to introduce a suitable online learning mode. The silver lining in the pandemic is that the institutions have boosted adoption of digital technologies to deliver education. Initially, the educators and the students were quite confused about the online teaching and learning process. But later all teachers and students adopted technology and were inspired to engage more technology dependent to tackle within the emergence of such pandemics.

The education institutes have started conducting faculty development programs, meetings, webinars and conferences with the aid of different e-resources like Google Meet, Zoom, Skype, Youtube, Facebook, Cisco, WebEx etc. to furnish support services in education to the students. The effective sharing of information, instructions or notices among teachers, students and

parents has been improved by making use of e-mail, WhatsApp, Telegram groups.

These digital initiatives cannot replace the classroom learning, but definitely create an effective virtual environment of teaching learning among students for online activities. It gives access to a large number of learners at a time across the globe. With the help of e-learning tools of modern technology educational sectors started collaborative work. The official work like admission procedures, admission fee paid by online mode so students went close to banking technology. The pandemic opened the doors of self-learning with the help of Open and Distance Learning (ODL) mode in nominated institutes. Concepts are made more interesting by animated videos and monitoring the performance of students gets easier. The learners no longer depend on classroom teaching for his thunder of knowledge. They can access any information anytime, anywhere. Thus, virtual learning builds confidence in educational poor students and motivates them. Even in a pandemic outbreak, digital literacy was increasing day by day.

VI TECHNOLOGICAL THERAPY: INITIATIVES OF GOVT. OF INDIA ON EDUCATION

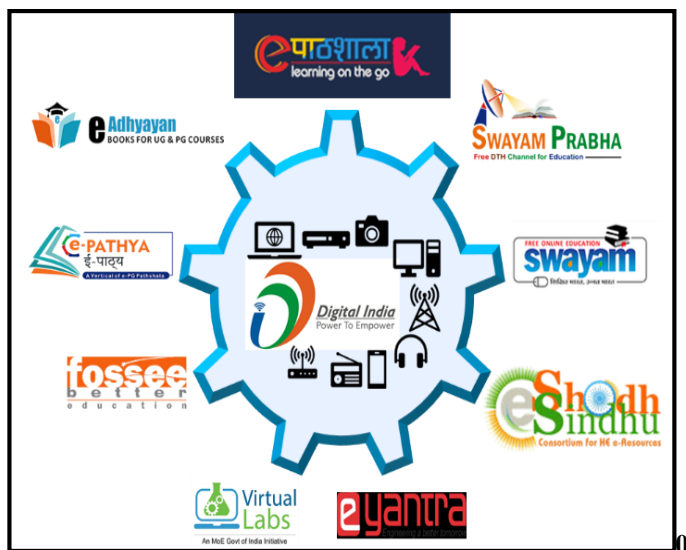


Figure 1. Initiatives of government for Digital India

The Ministry of Human Resources Development (MHRD) took the challenge of continuing teaching-learning in the corona outbreak. It promotes digital education through online educational platforms through the mediums of TV and radio. The government initiatives such as Digital India campaign have created a conducive environment and functionalize digital education system. A comprehensive initiative PM-eVIDYA, unifies all efforts related to digital/online/on-air education to facilitate multimode access to education. The integrated platform of SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) hosting free online courses for school (9th to 12th) to Post Graduate Level students. (<https://swayam.gov.in/>). Government

initiative Swayam Prabha platform is offering high-quality educational content via a group of a 34 DTH channel round the clock using GSAT Satellite. (<https://www.swayamprabha.gov.in/>).

Further some initiatives started to access e-content such as journals and e-books. The e-PG Pathshala platform provides 700+ e-books (e-Adhyayan), online courses(UGC-MOOCs), offline access (e-Pathya), executed by MHRD-UGC. (<https://epgp.inflibnet.ac.in/>). The IGNOU offered digital programs such as virtual classes- Gyandarshan and Gyan Dhara; eGyanKosh. The Gyandarshan devoted to educational and developmental needs of the society (<https://www.ignouonline.ac.in/gyandarshan/>), Gyan Dhara is an internet audio counseling service (<http://gd.ignouonline.ac.in/gyandhara/>), while eGyanKosh used to store, preserve, and share the digital learning resources (<http://egyankosh.ac.in/>). The vision of National Digital Library of India (NDL) project is to develop the virtual facility framework for learning e-content with a single-window search facility (<https://www.ndl.gov.in>). The Shodhganga provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. (<https://shodhganga.inflibnet.ac.in/>). The e-content access is also provided by e-ShodhSindhu (<https://ess.inflibnet.ac.in/>).

The hand on training accelerated through following initiatives: The FOSSEE (Free/Libre and Open-Source Software in Education) Project promotes the use of Open-Source Software tools and reduces the dependency on proprietary software in educational institutions to improve the quality of education in our country. (<https://fossee.in/>). Students can strengthen their concepts with the help of Virtual Labs, which provides remote access to Labs in various disciplines of Science and Engineering for the students at the undergraduate level, postgraduate level as well as to research scholars. (<https://www.vlab.co.in/>). e-Yantra provides hands-on experience for effective education across engineering colleges in India (<https://www.e-yantra.org/>). The Spoken Tutorial is an initiative to promote national IT literacy through open source softwares. (<https://spoken-tutorial.org/>).

The premier database of VIDWAN and IRINS provide profiles of scientists/ researchers/ faculty members working in the educational sector of India, helping to track your progress in the field. Also, MHRD provides plagiarism detection software-shodhshudhhi to all the Universities to facilitate easy detection of plagiarized content in the academic and research works. They launched a major and unique online initiative ‘Annual Refresher Programme in Teaching’ (ARPIT) for online professional development.

These are important initiatives to up-surge digital learning for functioning of the Indian education system in the corona outbreak.

VII CHALLENGES IN ONLINE EDUCATION

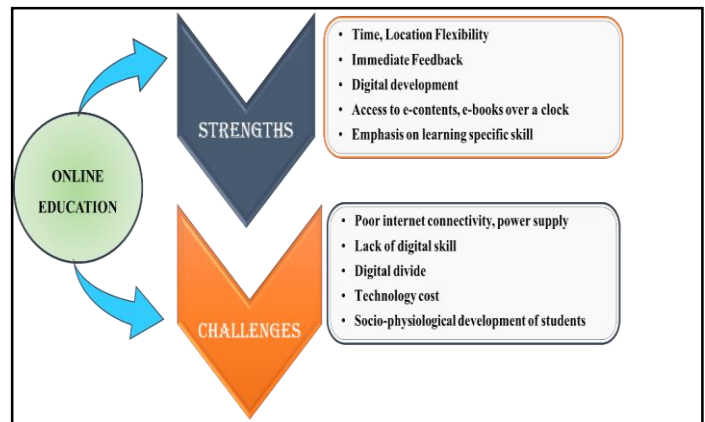


Figure. The strength and challenges in online education.

In a corona crisis education sector has been victimized, even we have seen a ray of hope – digital learning- to continue education. The educational activities such as classes, exams, entrance tests etc. hampered. The experience of individuals of doing the experiments in laboratory, has been the concept rushed of the education. The students and teachers from rural areas face problems such as poor internet connectivity, power supply, technology handling skills. Thus, the opportunity for online learning still has many challenges. It is not possible for every parent to take responsibility to educate their children. Due to unemployment some parents from poor backgrounds would not afford the school fees, they may show unwillingness to send their children to schools. This may lead to a huge gap in rich/poor and urban/rural. Those students have accessibility and availability of technology, they get addicted which severely affect their health. Closure of schools detached students from the playground, which will affect their physical development. It is necessary for educational institutions to build up their knowledge, technology, and infrastructure for facing COVID-19 crisis.

VIII IMPORTANCE STUDENT’S EXPERMENTS LEARNING SKILLS: LABORATORY SKILLS

One of the disadvantages of online education process is that the experience of individuals of doing the experiments in laboratory, knowing its basic concept and reasoning both logically and scientifically, has been totally lost the concept rushed of the practical education. How the students can guess about the scientific consequences of the experiments, various laws involved in it, different aspects of the observation, Champing these observations into desired values for the confirmation standard results. Finally, the conclusion’s tested for which the experiment was carried out. All these deficiencies will certainly not provide the essence of offline classes, for which the practical/experimental sessions meant for. How students can be realized about the future perspectives of the doing routine experiments and imagination addition or new approach of that experiment. How he can believe

that what has theoretically predicted has been proved by experimentation. Such type of doubts will be always present in his mind even though at the online year ending he has been upgraded to next level of his schooling. Such type on online teaching will force him to be uncurious, unconscious, reluctant and retaining in the framework of theoretical aspects only.

IX CONCLUSION

The present study outlined the impacts of the corona outbreak on the education sector in India, as education plays a major role in the development of people. The COVID-19 imposed many challenges such as prolonged school closure. But it is the time to change the challenges into opportunities and continue the teaching-learning process. As a solution, adopting virtual learning plays a titanic role. Virtual learning gives access to number learners at a time over a clock to advance their skills, knowledge and digital capabilities. Government of India comprehensive initiatives such as SWAYAM, e-Pathshala, NDL, virtual lab, etc., provide not only access to various e-content from journals and e-books, but also hand on experimental training. Although virtual teaching cannot replace classroom teaching, it is the best solution to continue education in pandemic. Digital learning created a smarter civilization.

REFERENCES

1. Pravat Kumar Jena, "Impact of Covid-19 on higher education in India", International Journal of Advanced Education and Research, vol. 5, No.3, pp. 77-81, 2020.
2. Edeh Michael Onyema, Dr. Nwafor Chika Eucheria, Dr. Faith Ayobamidele Obafemi, Shuvro Sen, Fyeface Grace Atonye, Dr. Aabha Sharma, Alhuseen Omar Alsayed, "Impact of Coronavirus Pandemic on Education", Journal of Education and Practice, vol. 11, No.3, pp. 108-121, 2020
3. M. D. Patil, D. N. Godase, "Convalescent Plasma Theory: A Ray of Hope for India", NAVJYOT, Vol. IX, No. II, pp.42-47, 2020.
4. Pravat Kumar Jena, "Impact of pandemic Covid-19 on education in India", International Journal of Current Research, vol. 12, No.7, pp. 12582-12586, 2020.
5. https://www.education.gov.in/sites/upload_files/mhrd/files/pragyata-guidelines_0.pdf
6. <https://www.education.gov.in/en/ict-initiatives>
7. <https://en.unesco.org/covid19/educationresponse>

BIOGRAPHY



Ms. Meenal D. Patil is currently pursuing Ph.D. in Material science at Thin Films Nanomaterial Laboratory (TFNML), Department of Physics, Shivaji University, Kolhapur, Maharashtra, India. She received her master's degree from Shivaji University Kolhapur, Maharashtra, India (2017). She qualified CSIR-NET and SET exams in Physical science.



Rasika Bharat Ghadage currently pursuing master's degree in Physics from Shivaji University, Kolhapur. She holds bachelor's degree in Physics from Smt. Kasturbai Walchand College, Sangli, Maharashtra, India.



Mr. Suprimkumar D. Dhas is currently pursuing Ph.D. in Material science at Thin Films Nanomaterial Laboratory (TFNML), Department of Physics, Shivaji, University Kolhapur, Maharashtra, India. He received his master's degree from Shivaji University Kolhapur in 2014. He qualified SET exam in

Physical science.



Dr. A.V. Moholkar is an assistant professor of Department of Physics, Shivaji, University Kolhapur, Maharashtra, India. He holds master's and doctorate degree from Shivaji University. He has been awarded the many prestigious awards like 'Better Opportunities for Young Scientists in Chosen Areas of Science and Technology' [BOYSCAST] Fellowship (2009), 'Young Scientist Award' (2019). In the 2020, he has been listed in Top 2% World Wide Scientists. He has more than 15 years research experience on the different materials which are useful in various fields of Science and Technology. He has successfully completed Six research projects funded by diverse agencies.