

THE DIGITAL TRANSFORMATION OF EDUCATION IN INDIA DURING THE PERIOD OF LOCKDOWN DUE TO COVID-19

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Abstract: This paper sought to an act of measuring the impact of COVID-19 pandemic in unleashing digital transformation in the education sector in India. In order to measure the impact, the study tracked the rate at which the virtual tools were used by various schools and institutions during the COVID-19 lockdown. Data were obtained from secondary sources, mainly newspaper articles, magazines and peer-reviewed journals. The findings are that, in India, during the lockdown, a variety of virtual tools were unleashed from primary education to higher and tertiary education where educational activities switched to online learning. These observations point to the fact that India, generally, has some pockets of excellence to drive the education sector to the next level, which has the potential to increase access. Access to education has always been a challenge due to a limited number of spaces available. Much as this pandemic has brought with it massive human suffering across the globe, there is an opportunity to assess successes and failures of deployed technologies, costs associated with them, and scaling these technologies to improve access.

Index Terms – COVID-19, Digital Transformation, Education.

I. INTRODUCTION

COVID-19 is the novel corona virus which goes with the name severe respiratory syndrome coronavirus-2 (SARS-COV-2). Scientists have associated this virus with the disease referred to as COVID-19, and it was first identified in China at the end of 2019 in Wuhan City. Prior to the outbreak of COVID-19 pandemic the world was dealing with learning crisis, evidenced by high levels of learning poverty. The spread of COVID-19 among a number of disruptions to normal life necessitated more than 160 countries to effect temporary closure of schools. These nationwide closures are impacting over 90% of the world's student population. Several other countries have implemented localized closures impacting millions of additional learners. The World Bank estimates that the closure of schools has left 1.6 billion children and youth out of school. Here in India, government was forced to affect the lockdown which meant that there was closure of all schools, including universities causing a total halt of the learning process. There is concern among some in the society that the wide spread school closures would not lead to loss of learning, but also further loss of in human capital and diminished economic opportunities in the long run.

Across the world, governments have brought forth some mitigating efforts such as utilizing remote learning to manage and cope with the crisis. Accordingly, the World Bank is working effectively with many countries to offer support to the efforts currently being implemented by many Ministries of Education to offer remote learning to opportunities while schools are closed.

Since COVID-19 is a new occurrence, there hasn't been work that has investigated the roll-out and adoption of on-line learning platforms. As such, the question 'what is the effect of COVID-19 in speeding up digital revolution for the purpose of education?' With this article, author investigates the influence of COVID-19 in speeding up the use of internet tools as a platform for providing learning. The paper is organized as follows: The first section will provide a brief description of the education sector in India. This is followed by the literature review and a background of COVID-19. The next section will outline the methodology then result, discussion and recommendations.

II. THE EDUCATION SECTOR IN INDIA

India has the second largest education system in the world. Indian education system has got contribution from both public as well as private sector. It is controlled by Central Government as well as State Government. Education has been specified as one of the fundamental rights in the constitution of India.

There is a national organization that plays a key role in developing policies and programmes, called the National Council for Educational Research and Training (NCERT) that prepares a National Curriculum Framework. Each state has its counterpart called the State Council for Educational Research and Training (SCERT). These are the bodies that essentially propose educational strategies, curricula, pedagogical schemes and evaluation methodologies to the states' departments of education. The SCERTs generally follow guidelines established by the NCERT. But the states have considerable freedom in implementing the education system.

Education System in India

Education	School/Level	Grades	Age	Year	Notes
Primary	Elementary School	1-8	6-14	8	
Secondary	Secondary School	9-12	14-18	4	Includes Standards X and XII- Secondary School Or Senior Secondary School
Tertiary	First University Degree (Bachelor's)	12-15		3	
Tertiary	First University Degree (Engineering & Technology)	12-16		4	

Tertiary	Second University Degree (Master's)	15-17		2	
Tertiary	Doctoral Degree	17-22		5	

Source: Authors' Analysis

Modern Indian education system is divided into many levels: pre-primary level, primary level, middle level education, secondary education, undergraduate level and postgraduate level. Pre primary level education or preschool education is provided to children before the age of five. It aims at satisfying a child's needs of fun, enjoyment, freedom, choice, belongingness, respect and love. These needs form the basis for healthy development and life-long learning.

Primary education consists of the education till fifth standard. It is meant for children belonging to age group of 6-11 year. Middle level education is imparted to students studying in classes from sixth to eighth. Secondary education is imparted to students studying in classes from ninth to twelve. After completion of school education, college education starts. College education has two levels generally- Graduation level and post graduation level. After completion of school education, the students choose course of their interest. The undergraduate course lays a foundation of the student's field of interest. After completing the undergraduate course, a postgraduate level course can be pursued. It adds to the knowledge acquired by a student during the undergraduate course. Government is investing a lot of money in education sector to improve the level of education in India.

India has over 250 million school going students, more than any other country. It also has one of the largest networks of higher education institutions in the world. Number of colleges and universities in India reached 39,931 and 993, respectively in 2018-19. India had 37.4 million students enrolled in higher education in 2018-19. Gross Enrolment Ratio in higher education reached 26.3 per cent in 2018-19.

III. COVID-19 IN INDIA

In India, the first confirmed case of COVID-19 was recorded on January 30, 2020. The Prime Minister's Office and the Ministry of Health, Family and Welfare (MoHFW) are closely monitoring preparedness and response efforts. The National Centre for Disease Control (NCDC) has activated Strategic Health Operations Centre (SHOC) room to provide command & control functions and a helpline (+91-11-23978046) opened to answer public queries.

Till February 28, there were only 3 confirmed cases of COVID-19 reported from Kerala. But after that till March 09, a total of 44 confirmed cases have been reported. All states are on high alert, for early detection and management of any further cases. As of March 08, there are 52 laboratories identified by the Indian Council of Medical Research, for testing of COVID-19. A total of 57 laboratories have been identified to support sample collection and referral.

On 11 March, WHO declared the Novel Coronavirus Disease (COVID-19) outbreak as a pandemic (an epidemic that has spread worldwide affecting a large number of people). On the same day, per the direction of the Prime Minister of India, a high-level Group of Ministers (GOM) was constituted to review, monitor and evaluate the preparedness and measures taken regarding management of COVID-19 in the country.

Government of India has invoked powers under the Epidemic Diseases Act, 1897 to enhance preparedness and containment of the virus and declared COVID-19 a 'notified disaster' under the Disaster Management Act 2005.

Hon'ble PM Narendra Modi made a public appeal to encourage public participation in the response towards COVID-19 by observing a 'Janata curfew' on 22 March from 7 AM-9 PM. At 5 PM, all citizens have been asked to participate in showing solidarity and appreciation for health workers by clapping.

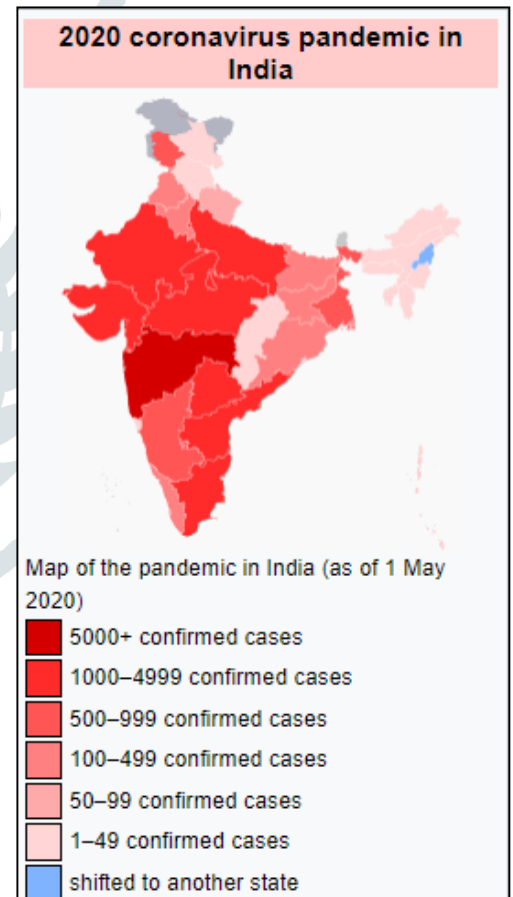
Prime Minister Narendra Modi, in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, issued an order for State/UTs prescribing lockdown for containment of COVID-19 epidemic in the country for a period of 21 days with effect from 25 March, 2020.

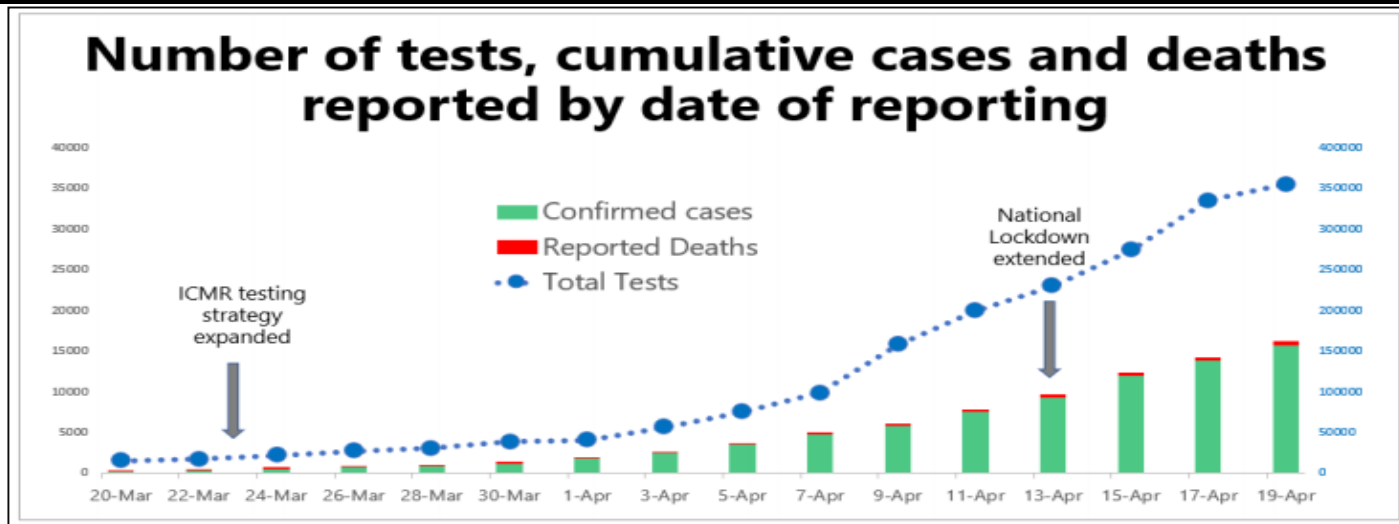
Government of India launched a mobile app ArogyaSetu (02 April) through a public-private partnership to enable people to assess their risk of COVID infection (in line with privacy and data security parameters). On 3 April, PM Modi addressed the nation to turn off the lights for nine minutes and lighting the candles on 5 April.

In light of the COVID-19 situation on consultation with States PM announced the extension of the national lockdown in India till 17th of May (tentatively).

In an address on 14 April PM Modi asked the citizens to follow seven steps to help in the fight against coronavirus, "Use homemade masks, Take care of elderly people, Protect jobs, Help the poor and needy, follow the guidelines set by Ministry of AYUSH to improve immunity and Download the Arogya Setu app to track your health.

As of 1 May 2020, according to the Ministry of Health & Family Welfare (MoHFW), a total of 35,043 COVID-19 cases in 32 states/union territories. These include 8,889 who have been cured/discharged, 1 migrated and 1,147 deaths.





Source: WHO, India Situation Report-12 on COVID-19; Date April 19, 2020

IV. BRIEF REVIEW OF LITERATURE

The evidence provided in the literature indicates that the source of the COVID-19 is animals and the virus spread from human to human transmission (Sansa, 2020). Sansa (2020) went on to state that the COVID-19 virus the virus is transmitted through respiratory droplets that human beings sneeze, cough, or exhale.

McKibbin (2020) in the article, the global macroeconomic impacts of COVID-19: Seven scenarios argued that the evolution of COVID-19 is uncertain and making it difficult for policymakers for policymakers to formulate an appropriate macroeconomic policy response. In a way to understand possible economic outcomes, McKibbin, (2020) explored seven different scenarios of how COVID-19 might evolve in the coming year using a modelling technique. It examines the impacts of different scenarios on macroeconomic outcomes and financial markets in a global hybrid DSGE/CGE general equilibrium model. The study finds that even though the pandemic is contained, it could significantly impact the global economy in the short run. These scenarios demonstrate the scale of costs that might be avoided by greater investment in public health systems in all economies but particularly in less developed economies where health care systems are less developed, and population density is high.

In their work Wenham et al. (2020) found that, ‘there was gender analysis of the outbreak by global health institutions or governments in affected countries or in preparedness phases’. . Wenham et al. (2020) went further to argue that the closure of schools to control COVID-19 transmission in China, Hong Kong, Italy, South Korea, and beyond might have a differential effect on women, who provide most of the informal care within families, with the consequence of limiting their work and economic opportunities.

ported by data under consideration than CAPM.

V. METHODOLOGY

The study is chiefly based on the review of secondary data sources; mainly newspaper articles, magazines and journals. The study benefited for recently published journals, policy and reports from national and international organizations. The conceptual nature of the article presents a particular limit due to the limited nature of data and the fact that both the COVID-19 is a current event.

VI. THE IMPACT OF COVID 19 ON DIGITAL TRANSFORMATION OF EDUCATION SECTOR IN INDIA DURING LOCKDOWN

The Coronavirus pandemic and the ensuing lockdown has forced schools and colleges across India to temporarily shut and this unprecedented move had created a big gap in the education system despite the central and state government doing their best to provide support for e-learning and online education. On 16 March, India declared a countrywide lock-down of schools and colleges. On 19 March, the University Grants Commission asked universities to postpone exams till March 31. The board exams conducted by CBSE and ICSE boards have also been postponed until March 31.

By March 12, more than 370 million children and youth were not attending school because of temporary or indefinite country wide school closures mandated by governments in an attempt to slow the spread of COVID-19. By 29th March, nearly 90% of the world's learners were impacted by closures.

Several schools in the country are now starting to provide online classes to help students continue their education from the comfort of their homes. We are of the view that this pandemic has acted as a driving force towards digital transformation in the education sector. In this regard, to determine how the sector has responded to the pandemic as a mitigation that ensures that learning continues, we have extracted some of the tools used by the sector during the lockdown.

Virtual learning tools during lockdown

Tools used	Description	Connectivity	Platform	Target Group	Conditions of Use
Television	NCERT and SCERT Programmes	Offline	Television	Primary Secondary	Free
Radio	NCERT and SCERT Programmes	Offline	Radio (All India Radio)	Primary Secondary	Free

Diksha & Nishtha Applications	Learners access learning material from educational App	Online	Mobile	Primary	Free
Mobile Platforms and applications	Learners access learning material from educational and informational websites	Online	Desktop Laptop Mobile	Primary Secondary Tertiary	Free
Internet	Teachers in public and private schools offer classes through a live stream	Online	Desktop Laptop Mobile	Primary Secondary	Free
Internet (Websites) YouTube(some universities)	Learners Learn on their own at home	Online	Desktop Laptop Mobile	Tertiary Secondary Primary	All Rights Reserved
Microsoft Teams	Used mainly by staff and learners in tertiary institutions to hold discussions	Online	Desktop Laptop Mobile	Tertiary	All Rights Reserved
Microsoft Teams (The British School, The Aardee School, NFC; New Delhi)	Teachers in schools offer classes through a live stream	Online	Desktop Laptop Mobile	Primary Secondary	All Rights Reserved
Skype	Used mainly by staff and learners in tertiary institutions to hold discussions	Online	Desktop Laptop Mobile	Tertiary	All Rights Reserved
WhatsApp Groups	Used mainly by staff and learners in tertiary institutions to hold discussions	Online	Desktop Laptop Mobile	Tertiary	All Rights Reserved
WhatsApp Groups	Teachers deliver lessons on Groups	Online	Mobile	Primary Secondary	All Rights Reserved
Zoom	Group Discussions	Online	Desktop Laptop Mobile	Tertiary	All Rights Reserved
Google Classroom	Teachers deliver lessons and bring assignments and home work	Online	Desktop Laptop Mobile	Tertiary Secondary Primary	All Rights Reserved
Google Meet	Used mainly by staff and learners in tertiary institutions to hold discussions	Online	Desktop Laptop Mobile	Tertiary	All Rights Reserved

Source: Authors' Analysis

The reality of the lockdown has forced many institutions of higher learning to switch to on-line learning. Several universities in India switched to on-line learning even though they are yet to officially announce the move. Apart from what the Universities are doing with regards to the on-line learning, the Department of Basic Education has also taken step for online study through DIKSHA and NISHTHA applications and epathshala.nic.in website. They provide study material including e-textbooks, e-worksheets, revision booklets, and study guides on their applications and website.

VII. DIGITAL LEARNING INITIATIVES OF MINISTRY OF HRD

A list of key Digital / e-Learning Platforms which are provided by MHRD for online education is as under:

A. SCHOOL EDUCATION:

- DIKSHA: Diksha has more than 80,000 e-Books for classes I to XII created by CBSE, NCERT and States / UTs which are available in multiple languages. The contents can also be viewed through QR codes on textbooks. The app can be downloaded from IOS and Google Play Store.

Website: <https://diksha.gov.in> or <https://seshaqun.gov.in/shaqun>

- e-PATHSHALA: In this web portal NCERT has deployed 1886 audios, 2000 videos, 696 e-Books (e-Pubs) and 504 Flip Books for classes I to XII in different languages. Mobile Apps is available.
Website: <http://epathshala.nic.in> or <http://epathshala.gov.in>
- National Repository of Open Educational Resources (NROER): NROER portal has a total of 14527 files including 401 collections, 2779 documents, 1345 interactive files, 1664 audios, 2586 images and 6153 videos on different languages.
Website: <http://nroer.gov.in/welcome>

B. HIGHER EDUCATION:

- SWAYAM: SWAYAM is the national online education platform hosting 1900 courses covering both school (classes IX to XII) and higher education (under graduate, post graduate programs) in all subjects including engineering, humanities and social sciences, law and management courses. A unique feature of SWAYAM is that, it is integrated with the conventional education. Credit transfers are possible for SWAYAM courses (max. 20%).
Website: swavam.gov.in
- SWAYAM PRABHA: SWAYAM Prabha has 32 DTH TV channels transmitting educational contents on 24X7 basis. These channels are available for viewing all across the country using DD Free Dish Set Top Box and Antenna. The channel schedule and other details are available in the portal. The channels cover both school education (classes IX to XII) and higher education (undergraduate, postgraduate, engineering Out-of-school children, vocational courses and teacher training) in arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture.
Website: swavamprabha.gov.in

VIII. COVID-19: 10 RECOMMENDATIONS TO PLAN DISTANCE LEARNING SOLUTIONS BY UNESCO

School closures in a growing number of countries to contain the spread of COVID-19 are disrupting the education of millions students across the globe. UNESCO is sharing 10 recommendations to ensure that learning remains uninterrupted during this period:

1) **Examine the readiness and choose the most relevant tools.**

Decide on the use high-technology and low-technology solutions based on the reliability of local power supplies, internet connectivity, and digital skills of teachers and students. This could range through integrated digital learning platforms, video lessons, MOOCs, to broadcasting through radios and TVs.

2) **Ensure inclusion of the distance learning programmes.**

Implement measures to ensure that students including those with disabilities or from low-income backgrounds have access to distance learning programmes, if only a limited number of them have access to digital devices. Consider temporarily decentralizing such devices from computer labs to families and support them with internet connectivity.

3) **Protect data privacy and data security.**

Assess data security when uploading data or educational resources to web spaces, as well as when sharing them with other organizations or individuals. Ensure that the use of applications and platforms does not violate students' data privacy.

4) **Prioritize solutions to address psychosocial challenges before teaching.**

Mobilize available tools to connect schools, parents, teachers and students with each other. Create communities to ensure regular human interactions, enable social caring measures, and address possible psychosocial challenges that students may face when they are isolated.

5) **Plan the study schedule of the distance learning programmes.**

Organize discussions with stakeholders to examine the possible duration of school closures and decide whether the distance learning programme should focus on teaching new knowledge or enhance students' knowledge of prior lessons. Plan the schedule depending on the situation of the affected zones, level of studies, needs of students needs, and availability of parents. Choose the appropriate learning methodologies based on the status of school closures and home-based quarantines. Avoid learning methodologies that require face-to-face communication.

6) **Provide support to teachers and parents on the use of digital tools.**

Organize brief training or orientation sessions for teachers and parents as well, if monitoring and facilitation are needed. Help teachers to prepare the basic settings such as solutions to the use of internet data if they are required to provide live streaming of lessons.

7) **Blend appropriate approaches and limit the number of applications and platforms.**

Blend tools or media that are available for most students, both for synchronous communication and lessons, and for asynchronous learning. Avoid overloading students and parents by asking them to download and test too many applications or platforms.

8) **Develop distance learning rules and monitor students' learning process.**

Define the rules with parents and students on distance learning. Design formative questions, tests, or exercises to monitor closely students' learning process. Try to use tools to support submission of students' feedback and avoid overloading parents by requesting them to scan and send students' feedback.

9) Define the duration of distance learning units based on students' self-regulation skills.

Keep a coherent timing according to the level of the students' self-regulation and metacognitive abilities especially for live streaming classes. Preferably, the unit for primary school students should not be more than 20 minutes and no longer than 40 minutes for secondary school students

10) Create communities and enhance connection.

Create communities of teachers, parents and school managers to address sense of loneliness or helplessness, facilitate sharing of experience and discussion on coping strategies when facing learning difficulties.

IX. CONCLUSION & RECOMMENDATIONS

In this study a secondary research was done to understand the impact of COVID-19 in influencing the digital transformation in the education sector. In essence, the study investigated the how the education sector adopted the use of virtual tools during the COVID-19 lockdown period. The study was based on the reviewing of secondary data sources; mainly newspaper articles, magazines, peer-reviewed journals and recently published journals and policy reports from national and international organisations. Our finding is that in India, during the lockdown, the education sector massively adopted different virtual tools (digital transformation) from primary education to higher and tertiary education. The lockdown motivated the creation of virtual learning, the use of free applications and educational websites and finally, the sector generally switched to online learning.

General Comments:**Transitioning to online learning at scale is a very difficult and highly complex undertaking for education systems, even in the best of circumstances**

Few (if any) education systems, even the most high performing, are well equipped to offer online learning for all students at scale, quickly. 'Failure' is common, and success is often a result of experience and learning from past failures. Technological advances often outpace the ability of decision makers to keep up. Costs, especially capital costs, are usually quite high. Providing sufficient infrastructure is often seen a primary hurdle to be overcome. While infrastructure is certainly important, and expensive, much greater challenges relate to supporting teachers so that they can in turn support learners in a new learning environment; offering high quality, curriculum-relevant digital learning content and assessment tools; promoting the development of a variety of digital skills to enable students to be able to use technology effectively in support of their learning; implementing supportive data and information management systems; monitoring and evaluating what is happening, and its impact; and enacting enabling policies.

Where online learning is already widespread, 'success' is more likely

Where online learning, and tools to support online learning, are already a constituent part of what an education system (or an individual school) is able to provide, the potential for success is greater.

Good schools, in good education systems, are most likely to do the best

Very good, well prepared schools already using technology reasonably effectively are those most likely to navigate the transition to online learning most effectively and efficiently. Often, these are located in well resourced, reasonably affluent communities. Conversely, students and teachers in schools and education systems that are under-resourced school and/or in poor communities are typically much less able to benefit from online learning opportunities.

Students:**Most online learners will experience difficulties**

Most children will have great difficulty accessing online learning, the impact of which will probably be of limited value for most of them. This is especially true for children in poor communities, in households where Internet access is poor (or non-existent), who have little prior experience with online learning, and/or are subject to numerous other disadvantages.

Highly motivated learners, especially those with previous experience in online learning, are the most likely to take the most advantage of online learning opportunities

Where education systems (or schools) are not able to support online learning opportunities at scale, some highly motivated students with access to sufficient bandwidth, connected devices, and ability to learn independently may be able to take advantage of online learning resources offered by companies and non-profit groups. Where education systems are unable to provide such online learning opportunities themselves, there is value in alerting students to the availability of such resources.

Online learning for young learners is more difficult - older students do better

There are few successful examples of sustained online learning at scale for young students. Where such examples exist, online learning sessions are typically of shorter duration, are led by highly competent teachers, feature engaging content, class sizes are very small, access to bandwidth and connected devices is very good, and the process is supported by a very involved caregiver. In such contexts, interactions with learning content on devices are most impactful in short increments, with the support of a caregiver. The use of educational radio or television, and not online learning at scale, may be more relevant for many young learners. Targeting older learners is a more viable option

When first going online, education systems (and parents) should expect dips in student achievement

The transition to fully online, virtual learning almost always results in lower educational outcomes in the short term. This occurs for a number of reasons, including a lack of familiarity with the tools and process; a lack of a conducive environment at home to support online learning (including insufficient access to bandwidth and devices); differential impact related to a range of equity issues; and a lack of

congruence between what is taught in classrooms and what is taught online. Motivation to continue with online learning can present a real challenge for both students and teachers, especially over time.

Teachers and teaching:

Few teachers are able to easily transition to online learning environments quickly and effectively

Teaching online differs greatly from teaching in the classroom. While the subject matter and learners may be the same, teaching exclusively online requires a different skill set than teaching face-to-face. Even teachers well experienced in the use of educational technologies to support student learning in classroom environments, and whose students regularly use educational technologies outside of class, can struggle when operating in a wholly online environment.

Teachers working online need to be trained and supported

Teachers who do not have access to sufficient broadband and a connected device at home will (obviously) not be able to support student learning online. Where such support is required, education systems will need to make available related infrastructure. Very few classroom teachers have received training on online instructional approaches and tools. If they are to support online learning by their students while schools are closed, they will need to be prepared to do so before schools are closed. Where this is not possible, education systems should not develop an approach to online learning that relies on teacher instruction or involvement. The existence of peer support groups, especially where they are already enabled through the use of technology tools such as email, online message boards, Facebook and WhatsApp, can be invaluable when teachers are forced to work fully online.

Teachers are often parents too, and may need to assist their own children with online learning

In times of massive school closures, teachers expected to support students through online learning may have to support the online learning of their own children, compromising their availability to teach and support their students.

Some pedagogical approaches can be more easily translated to online learning and distance education environments than others

Instructional practices that rely heavily on teacher lectures, or teacher assignment of self-study materials, are more easily transferable to online learning environments than more sophisticated pedagogical approaches such as those typically found where students are engaged in more learner-centered or project-based approaches.

REFERENCES

- [1] India Situation Report (1 to 13) on COVID-19 available on who.int.
- [2] McKibbin, W. J. and Roshen, J. (2020) The Global Macroeconomic Impacts of COVID-19: Seven Scenarios (March 2, 2020). CAMA Working Paper No. 19/2020. Accessed 08/04/2020, available from SSRN: <https://ssrn.com/abstract=3547729> or <http://dx.doi.org/10.2139/ssrn.3547729>
- [3] Sansa, N.A. (2020). Analysis for the Impact of the COVID - 19 to the Petrol Price in China (March 2, 2020). Accessed 08/04/2020, available from <https://ssrn.com/abstract=3547413>.
- [4] Tech Financials. (2020). Coronavirus: Overcoming the Educational Digital Divide in South Africa. Accessed 08/04/2020, available from <https://techfinancials.co.za/2020/04/02/coronavirus-overcoming-the-educational-digitaldivide-in-south-africa/>
- [5] UNESCO (2020). [COVID-19: 10 Recommendations to plan distance learning solutions](#). (06-03-2020)
- [6] Varsha Meghani, (2020). Article published in Forbes India: [Covid-19 lockdown gives e-learning a boost](#). 31-03-2020
- [7] Wenham, C., Smith, J. and Morgan, R. (2020). COVID-19: the gendered impacts of the outbreak. *The Lancet*, 395(10227), pp.846-848
- [8] World Bank. (2020a). Guidance Note on Remote Learning and COVID-19 (English). Washington, D. C.: World Bank Group. Accessed 08/04/2020, available from <http://documents.worldbank.org/curated/en/>
- [9] World Bank. (2020c). Remote Learning, Distance Education and Online Learning During the COVID19 Pandemic: A Resource List by the World Bank's Edtech Team (English). Washington, D.C. World Bank Group. Accessed 08/04/2020, available from <http://documents.worldbank.org/curated/en/>
- [10] Website: www.mhrd.gov.in