

India's digital divide amid pandemic: A Review

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ABSTRACT

The digital divide transcends beyond all boundaries, with over millions of students pushed to adopt virtual learning as the primary means of education almost overnight. Unequal access to technology has raised concerns over further divisions in society as majority of India's population faces significant challenges in making an online presence due to lack of infrastructure. Already existent digital divide has only worsened during the pandemic because of reduced incomes, job losses, and burdening healthcare expenditures. Increasing dropouts at school has deteriorated years of human capital gains due to the issue of digital divide in India amid COVID-19 pandemic and it has impacted both the genders differently. Learning from the experiences of foreign countries, similar attempts could be made here to respond to the challenges posed by the coronavirus pandemic by localizing these action plans. Digital divide poses threat to equal sharing of resources, gender equality, education, access to information and digital services and eventually a threat to decades of gains in human capital, putting future of a highly progressive nation at risk.

Keywords

digital divide, internet, school dropout, human capital, education, COVID-19

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

Introduction

After the Indian government announced a nationwide lockdown on 24 March, 2020, the entire nation came to a halt forcing everyone to go online. Just like developed economies in order to continue imparting knowledge to its students, India's schools and colleges decided to go online. Within weeks it was evident that not many could adopt this new way of teaching and learning as in a country already having a large population devoid of access to the internet, it was impossible to make a shift overnight.

As the online classes continue in most institutions, only the privileged could have the luxury of smart devices and a reliable internet connection. The ones living in rural India are miserable in catching up with the new age technology and are falling short in learning with respect to their peers from cities.

The impact of coronavirus is not regional but a global crisis, most economies from the first world are better equipped in making this shift to online mode of learning, unfortunately developing economies are hit severely and failed to adopt the new normal due to poor infrastructure access and affordability to its large poor population [Tapashi, 2018]. This stark difference in the harnessing the benefits of the technology has created divisions among nations, societies, races and people terming it as digital divide. And this divide has

only risen in India, given its humongous inequality of sharing resources among its citizens. The Ministry of Education has asked States to monitor school dropouts by conducting comprehensive door-to-door surveys amid pandemic [ASER 2020]. This survey is likely to help both centre and state governments and policymakers in devising action plan to arrest rising dropout in schools, improve enrolments, and swift recovery of education loss as a consequence of lockdown. India's 250 million students have stayed home for at least six months, as nation's first schools reopened after over six months post-lockdown. According to the United Nations report, it is estimated that about 24 million school going children are at the risk of dropping out of schools in the year 2021 due to COVID-19 pandemic [United Nations Report 2020].

Any short-term disruption in schooling usually leads to permanent dropout among children who belong to poor households [Reddy and Sinha, 2010]. The marginalised are facing the challenges to connect because where they come from, that is across 6,50,000 villages in India about 40% of the population lies below poverty line and of 2,50,000 *Gram Panchayats*, 72,265 have installed Wi-Fi and only 29,813 *panchayats* have operational services [Bharat Broadband Network Limited, 2018].

Literature Review

Coronavirus disease outbreak has disrupted learning, education, and research facilities across the globe. Major stakeholders of the educational system; students and teachers had no way other than use technology to continue the teaching-learning process. However, this method of education had to face multiple challenges due to poor digital infrastructure, untrained educators, low digital literacy, socioeconomic stress, low adaptation to e-learning platforms. The damaging effects of lockdown on education sector highlights the urgent need for educational institutions, educators, and students to swiftly adapt to new technologies, improvise digital skills which contemporary in the education sector, globally [Onyema 2020]. Due to continuous imparting of education via digital media, it is likely to have resulted in loss of education and learning.

A pandemic has converted the digital divide issue into a crisis. An overnight shift to e-learning after closing down of schools during lockdown has only made India's digital inequality more visible, leading to widening of gap in terms of access to information and thus differences in the development in all aspects. A study of India's digital divide amid pandemic becomes inevitable as country's future potential, more specifically Human Capital Index is severely affected. The human capital theory [Schultz 1961] acknowledges education as an investment which yields for not just the individual but for society at large. Education is one of three dimensions required for computation of Human Capital Index ($HCI = Survival \times Education \times Health$), an economy with high index will have a highly productive workforce in future, which will eventually contribute to economic output. Benefits of education may not be immediate but it is considered of greater importance than direct financial gains [Vaizey & Weisbrod 1962] in long term.

Hence, the study of deepening digital divide as a result of imparting education through online medium amid pandemic becomes extremely important. India's suffering education system is a witness of high dropout rates, poor education infrastructure, low literacy and digital literacy, gender inequalities, and economic opportunities has widened the socio-economic gap. The COVID-19 pandemic has left at least 320 million students affected as they made switched to e-

learning platforms and continued learning through this method of learning for months since March 2020. This transition has not been equitable as India is a land of tremendous diversity and disparity across geographies, cultures, genders, socioeconomic status, and race. Dropout rate amid pandemic is most likely to increase as the crisis has brought facets of challenges like dilapidated socioeconomic conditions, poor ICT infrastructure, ineffective online teaching pedagogy, and slow response by the government and the private sector.

The patriarchal system of India favours boys in terms of allocation of household resources as the opportunity costs involved in girls schooling is high, as they are majorly occupied in household chores and are involved in meagre jobs for additional financial support to their family [Jejeebhoy 1993]. The circumstances arising amid pandemic has dramatically increased the burden of unpaid care work as families are raising and educating their children without any institutional support [Kate 2020] threatening the schooling of a girl child. Similarly, boys are likely to dropout as they looking out for permanent job opportunities to take care of their families' expenses. Moreover, socioeconomic situations are not the only dimension responsible for dropout among children amid COVID-19 pandemic, concern for possibility of getting inflicted by the virus and safety measures taken by schools has put many parents in a state of dilemma of whether to send their kids to schools as many states have allowed reopening of educational institutions.

Research Objective

To review the state of digital divide amid pandemic and understand its implications on school dropout, gender digital divide, and human capital in India.

Digital Divide

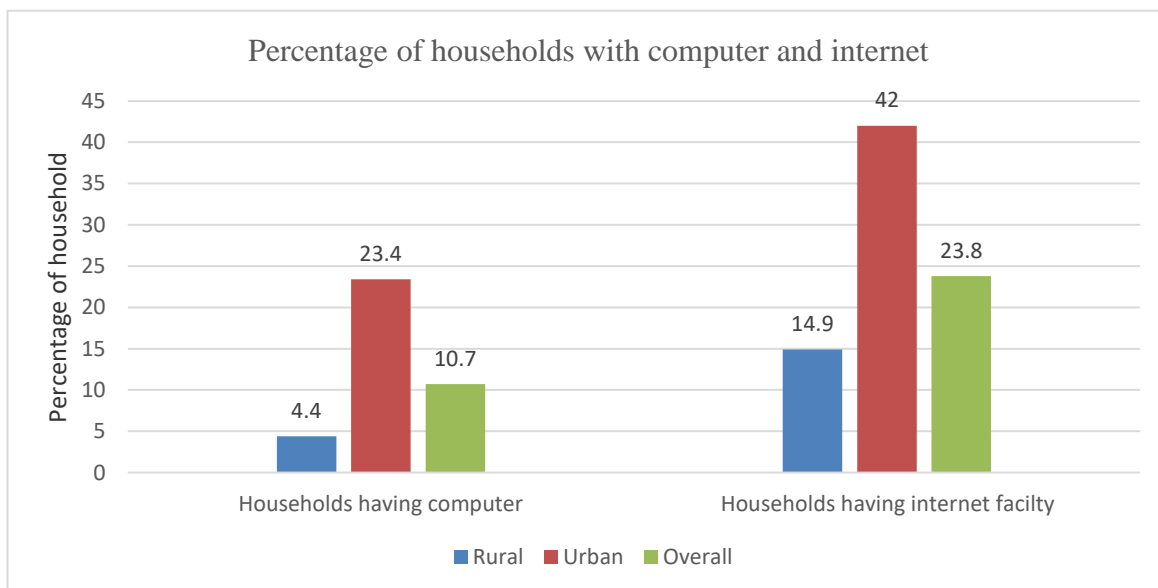
The digital divide is the uneven access of new forms of information technology between those who do and those who do not [Dijk, 2006] based upon gender, age, geography, economic status, or otherwise. This unequal access to technology has resulted in a large unproductive population and driving many out of India's growth story. Inaccessibility to the internet leads to isolation, inability to claim benefits provided by the government, devoid of public services like

housing, food programs, and healthcare [National Digital Literacy Mission]. As the central and state governments take multiple initiatives to enhance accessibility, transparency and efficiency into the conventional ways of governance, it is possible for them to even reach geographically distant regions but a large population being offline seems far from joining the mainstream.

In a country where digital literacy is almost non-existent among 90% of its population [Bloomberg 2020]. The stark digital divide could be well understood by the recent report by NSO which says that only one in every ten households in India have a computer (desktop, laptop or tablet). Majority of which resides in rural areas and are too isolated to benefit from the country’s growth and economic progress but despite these challenges lies strong aspirations of people residing in these areas to join the mainstream. The Indian telecom industry has witnessed a number of unprecedented growths like increase in mobile network coverage, availability of much affordable smartphones, allied internet services, and

affordable high-speed internet to name a few. In recent times the telecom industry has become the most important facilitator for all other kinds of businesses and with 5G technologies to soon roll out in the country, the future of telecom industry looks bright. The emergence of new services, swift technology adoption, fresh investments, and affordable data plans due to cutthroat competition has resulted in 28.9% growth of internet subscriber base (including urban and rural subscribers) in the country in the year 2019 as compared to 2018. [TRAI 2019]

In a recent survey conducted before the coronavirus pandemic nearly 4% of the rural household and 23% of urban household possessed computer (desktop, laptop, notebook, netbook, palmtop or tablet) and only 24% of India’s households had access to internet contributing to which further proportions were only 15% rural households and 42% from urban households. Moreover, only 24% in rural areas and 56% in urban areas were able to operate a computer [NSO 2018].

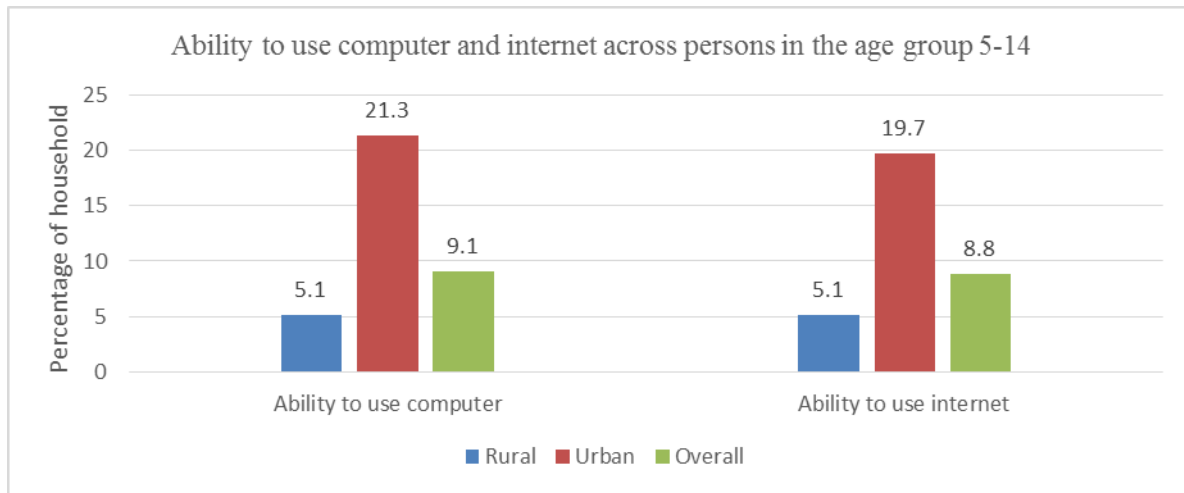


Source: Household Social Consumption on Education in India Report by NSO, 2017-18

Note: Computer includes desktop, laptop, notebook, netbook, palmtop or tablet. It does not include smartphones.

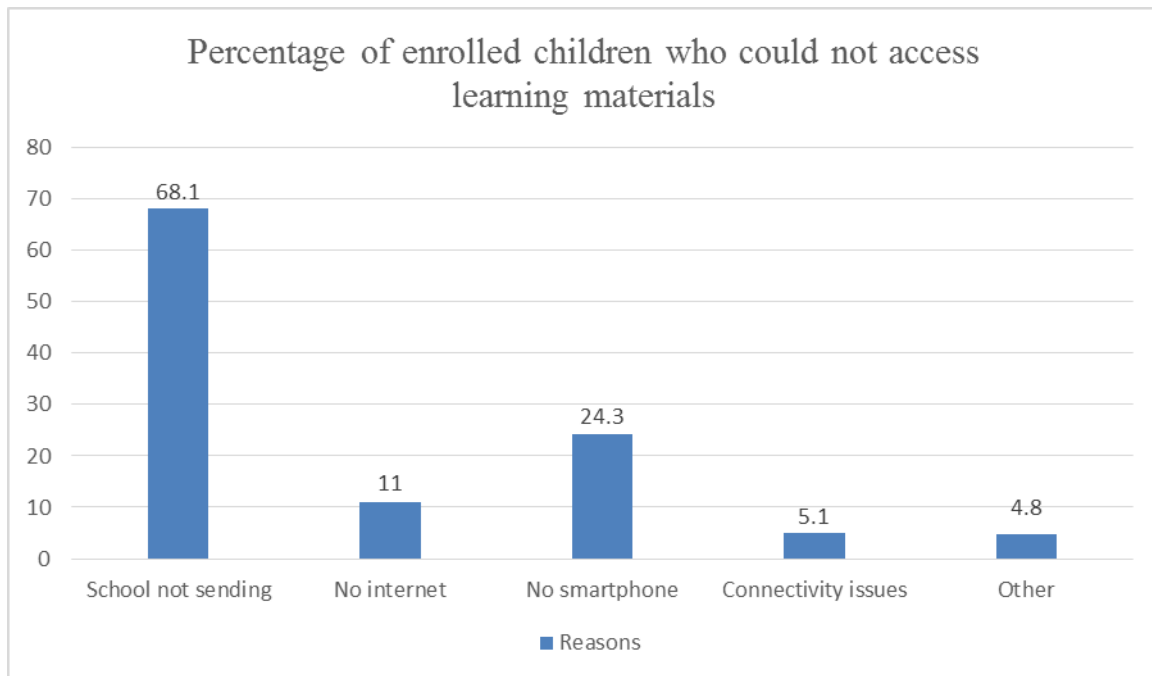
The report also states the percentage of persons of age 5 years and above (All India rural and urban population) with ability to operate computer and ability to use internet, only 16.5% of persons of 5

years and above were able to operate a computer, only 20% of persons were able to use internet (use internet browser for website navigation, using e-mail and social networking application to find, evaluate and communicate information), and 17.6% persons of the same age group had used internet during last 30 days from the day of survey.



Source: Household Social Consumption on Education in India Report by NSO, 2017-18

Note: Computer includes desktop, laptop, notebook, netbook, palmtop or tablet. It does not include smartphones.



Source: ASER 2020

Note: Survey was conducted among children enrolled in both government and private schools across India

Since schools and colleges have been closed in India due to the virus outbreak and classrooms have gone digital over online tools like WhatsApp, Google Meet, Youtube Live, Zoom and Microsoft Teams etc. This new way of learning enabled students to access internet using someone else’s smartphone but it was the schools which lacked the dynamic teaching pedagogy [ASER 2020] and did not send educational materials to students during lockdown.

1.1. The Gender Digital Divide and dropout

The pandemic has deepened the education divide that already existed. Girls who come from poor households are more vulnerable to child marriages, domestic violence, pregnancies and several other development issues (Birchall 2018) leaving them in a state of isolation from the online education as compared to their peers from the other half. Many Indian parents consider a boy child as helping hand and someone who will earn bread for the family causing bias in terms of education expenditure which only supports boy child, whereas girls are required to undertake additional household responsibilities. Many of these households during the lockdown lost their

livelihoods and many migrants were unable to send remittance back to their homes in rural areas making it difficult to survive and supporting their child’s education and continuing it online was in absence of resources to buy new ICT devices was out of question.

A girl child has to face exploitation starting from her birth to every stage of her life. India has an underlying stark division in terms of opportunities for both genders that the coronavirus pandemic has only enhanced the gender disparity. Even though girls are safer in their homes studying online but not every girl has equal access to these platforms as compared to their male counterpart. A girl child in India is more likely to dropout of the school and this crisis has only made her more vulnerable.

The divide gets more concerning if we take gender (persons of age 5 years and above) as a parameter to usability of internet across all states of India, Jharkhand and Madhya Pradesh have only 4% females from rural areas for both the states (individually) and around 67% males of Himachal Pradesh residing in urban regions were able to use internet. Figures for the nation’s capital Delhi are not promising either, just 56% of males and 45% of females were able to use internet despite being a metropolitan city [NSO

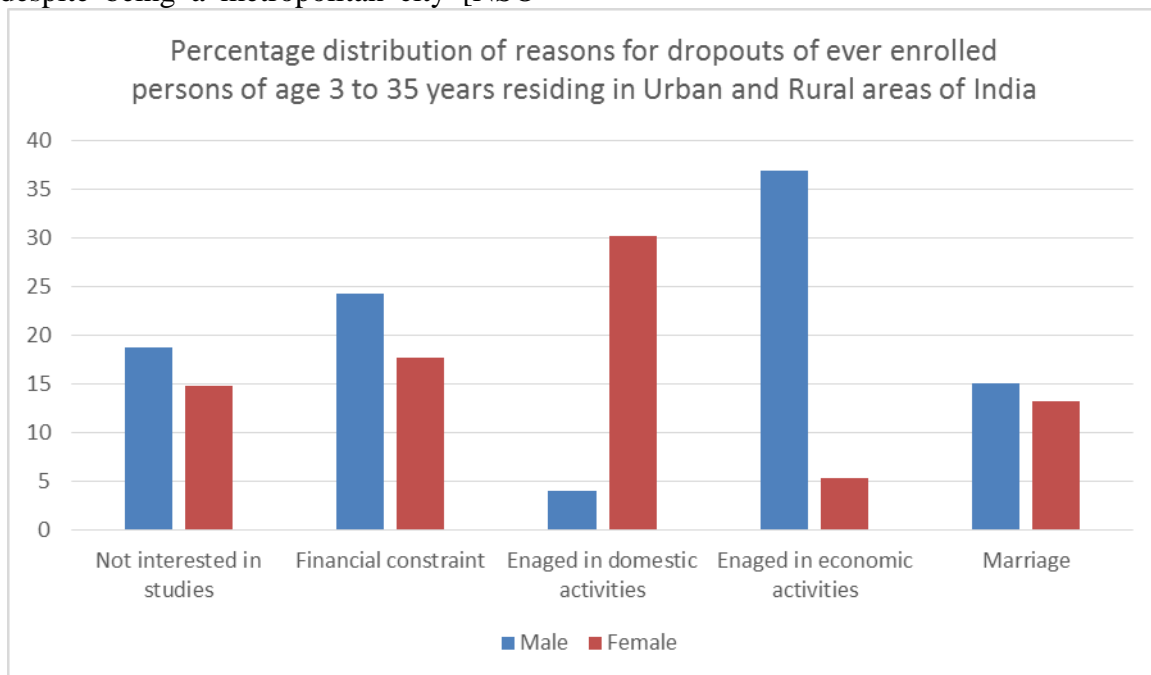
2018]. Whereas, Assam is that one state where the inequality among its citizens in terms of internet access is the highest.

Percentage of persons of age 5 years and above with ability to use internet

States	Rural		Urban	
	Male	Female	Male	Female
Delhi			55.9	45
Himachal Pradesh	37.1	24.9	66.9	47.5
Jharkhand	12	4	37.3	22
Madhya Pradesh	11.7	4	36	24.4
All-India	17.1	8.5	43.5	30.1

Source: Household Social Consumption on Education in India Report by National Statistical Office, 2017-18

Despite access to ICT tools at home, the girls are least likely to benefit from it as boys use computers more often than girls, which limit girls’ use of digital technologies leading to this unequitable access [UNICEF]. Setting up digital infrastructure is insufficient to address the digital divide in today’s time as despite this supply side infrastructure facilitates remote learning, an equitable remote learning is impossible unless the digital gender divide is addressed [UNICEF].



Source: Household Social Consumption on Education in India Report by National Statistical Office, 2017-18

1.2. The digital divide and school dropout

Previous researches have shown that any short-term disruption in schooling usually lead to permanent dropout among children who belong to

marginalized households [Reddy and Sinha, 2010]. The average annual dropout rate in school education at primary level in India is above 4% and it is close to 7% for students coming from Schedule Caste category. This dropout figure is above 17% for all the students at secondary level and close to 25% for students coming from Schedule Tribe category [NIEPA 2020]. Interest in studies, education expense, household works, and repeated failures are major reasons for school dropouts in India [Gouda & Sekher 2014].

According to an estimate by UNICEF, about 24 million learners worldwide were at the risk of not returning to school in 2020 due to economic shocks posed by COVID-19. In a recent study conducted among 180 countries suggests that there was concerning differences in enrolment of boys and girls in school arising from economic changes that were inevitable such as job losses, pay cuts, no sustainable income to support resources required for online mode of learning. Globally, nations in South and West Asia comprising of Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, and Sri Lanka where learners at both primary and secondary levels are at severe risk of not returning back to school [UNESCO 2020].

Another aspect of prolonged closure of schools was worsening health conditions of children in rural areas due to undernourishment. Under the National Programme of Nutritional Support to Primary Education (NP-NSPE), a cooked mid-day meal for all children studying in primary level is served to achieve daily calorie requirements of children [Jena 2020]. Attending school was an opportunity to empower children to have a healthy life and reduce absenteeism in school, but due to unfortunate times many children from poor families are severely hit. The Ministry of Education has reviewed the status of the scheme with the states over the provisions for Food Security Allowance to children, so that they can meet their daily nutrition requirements even in the times of pandemic. Unfortunately, many are yet to receive these allowances and the combined effect of inaccessible education, poor food security and burdening economic and social distresses are more likely to send these unfortunate children in a state from where they will never return to their schools even after they reopen [Oxfam India].

India's unorganized sector employs over 80% of the total workforce and workers witnessed a

22.6% fall in wages. India's wage growth rate was sluggish before the pandemic and now it has fallen, indicating a challenging recovery [International Labour Organization]. Among all the countries in Asia Pacific, India's monthly gross wage of \$215 (~Rs 15050) was third from the bottom in a group of 30 countries studied for the year 2019, according to report by International Labour Organization. The Tendulkar committee Constituted by Planning Commission computed India's poverty line at Rs 816.0 per capita per month in rural areas and Rs 1000.0 per capita per month in urban areas for the year 2011-12 [PRS Legislative Research]. About 22% were estimated to living below the poverty line for the year 2011-12 and data for the year 2021 is yet to be released. Unfortunately, India's already sluggish wage growth was hurt by the COVID-19 pandemic posing threat to livelihoods of many marginalized Indians and its pangs were inevitable to be not seen on young learners who had to dropout as their families' income saw a cut but the education expenses increased.

Following table shows household expenditure in INR (Rs) per annum on education during the academic session 2019 for general courses in India.

Level	Average	Rural
Pre- Primary	8997	5655
Primary	6024	3545
Upper Primary	6866	3953
Secondary	9013	5856
Higher Secondary	13845	9148
Graduate	14264	11845
Post Graduate	18110	15827

Source: Household Social Consumption on Education in India Report by National Statistical Office, 2017-18

As the NSS 75th round data suggests that over 30% female students from both urban and rural regions combined dropped out due to their engagement in domestic activities in the year 2017-18 and about 37% of male students did not complete their education as they got engaged into economic activities to support their families. Many of these children come from families which subsists on daily wages, but the pandemic

displaced many of these families from urban areas to rural areas as the economy contracted by 24% in the FY 2020 and there were hardly any jobs for them. Around 85% of the responding organizations think that school dropouts are likely to rise as household incomes are disrupted and expectations that children should take up jobs to support the family intensifies, according to a recent survey organized by Nobel Laureate Kailash Satyarthi.

However, government's initiatives like MNREGA just brought a spontaneous relief but was insufficient to support anything beyond subsistence like education and healthcare expenses of these families. Apart from economic factors, interest in education is also a major dimension for dropouts. Continuous online education has n number of challenges like data downloading errors, software installation, audio-video problems, networks issues, unreliable ICT tools resulting in boring and unengaging online learning experience [Dhawan 2020]. An online way of learning can never replace the effectiveness of a physical classrooms and parents of such learners who undergo these challenges of are often uneducated and have no training to handle the problems faced by their wards during an online session which ultimately questions the future of these learners.

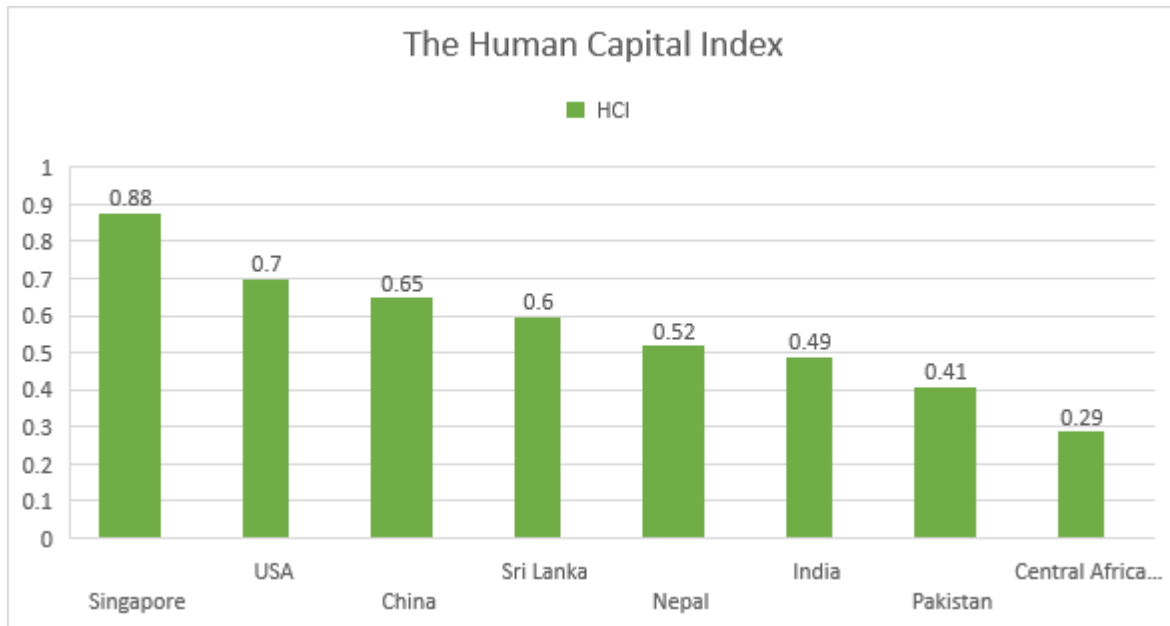
1.3. The digital divide and Human Capital Index

Only in the past two decades, India's policymakers and social scientists have shown concerns over the ever-increasing divide that exists between those who have access to information communication technologies and those who do not. The country was making an unprecedented growth in both accessibility and usability of the internet in recent years,

unfortunately a country under total lockdown due to the coronavirus pandemic has destroyed years of efforts and progress in a matter of a few months, putting itself at least five years behind [The World Bank].

The Human Capital Index (HCI) is a measure of the amount of human capital that a child born today can expect to attain by age 18, given the health and education risks that prevail in the country where she lives [The World Bank]. HCI helps us determine the future of the next generation of workers of a country given the current scenario of education and health parameters. HCI is obtained after multiplying the key components like survival from birth to school age (measured using under-5 mortality rates), the quantity and quality of education, and the overall health environment which is mathematically represented by $HCI = Survival \times Education \times Health$ [The World Bank].

In the wake of the virus outbreak, over a billion students around the globe are expected to be out of school and severe disruption of health services specially for women and children posing threat to years of progress in building Human Capital. India ranked 116th out of 174 nations which amounts to 98% of the world population. However, India's score in the updated World Bank Report 2020 improved to 0.49 from 0.44 (Human Capital Index ranges between 0 and 1) in 2018. A score of 0.49 for India means that productivity as a future worker of a child born in India in the year 2020 is only half of what it could have been achieved under full potential. Also, Singapore has the most productive next generation of workers, substantiated by the Human Capital Index of 0.88 [The Human Capital Index 2020 Update: Human Capital in the time of Covid-19, World Bank].

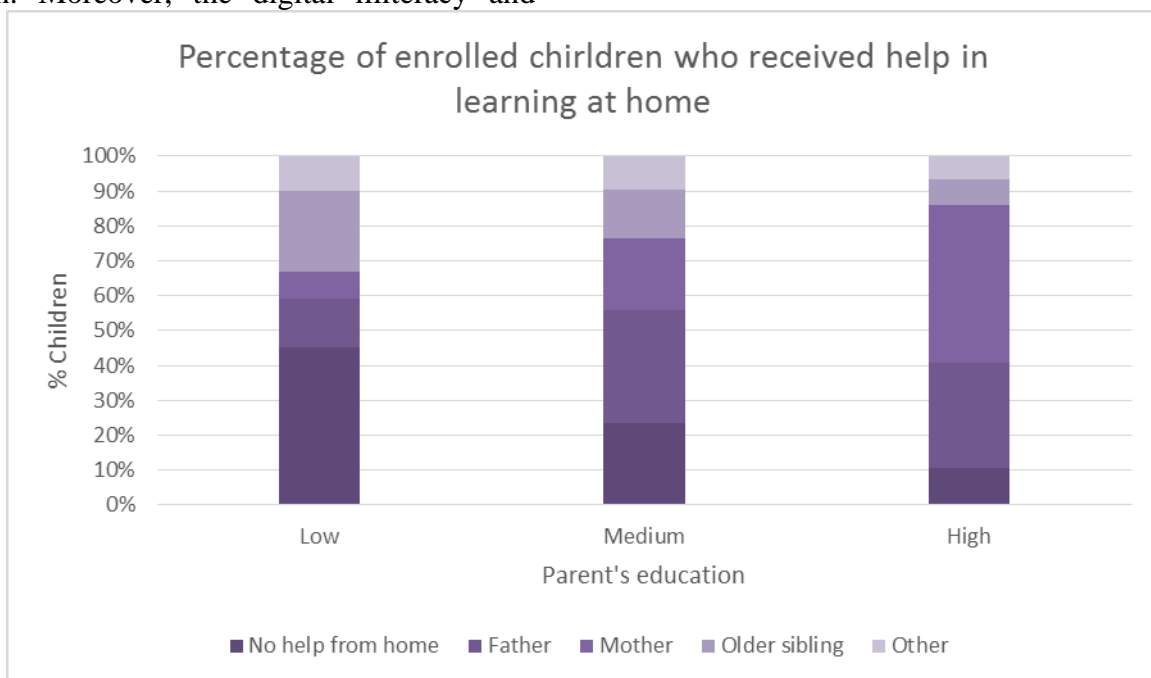


Source: World Bank calculations based on the 2020 update of the Human Capital Index

Note: The Human Capital Index ranges between 0 and 1. The index indicates the productivity of the upcoming generations of workers in an economy. An economy with score of 1 indicates that a child born today can expect to achieve complete education and full health.

The human capital losses are not evenly distributed among the population as children are based in different geographical locations and have differences in the levels of access to online education. Moreover, the digital illiteracy and

even lack of basic literacy among many parents are making them incapable of helping their children, resulting in slow or loss of and learning. This has increased the possibility of school dropout, particularly for the unprivileged and for girls [The Human Capital Index 2020 Update: Human Capital in the time of Covid-19, World Bank]. In collaboration with international organizations like the World Bank, the Government of India is investing in human capital to swiftly recover and accelerate progress towards a future where citizens can achieve their full potential.



Source: ASER 2020

Note: Both parents have completed Std V (including without schooling) are classified as

'low' parental education, whereas 'high' parental education category comprises of families where both parents have completed at least Std IX.

India's GDP shrunk by 23.9% in the first quarter (Q1) of the financial year 2020-21 as the result of the COVID-19 pandemic. The economy was believed to have suffered severely because of the nationwide lockdown since March, 2020. This drop in GDP is likely to lead many children dropout of school, leading to some in expected years of schooling [The Human Capital Index 2020 Update: Human Capital in the time of COVID-19]. Moreover, the loss to years of schooling is due to closure of schools and insufficient infrastructure to continue imparting education during lockdown. Most schools in India were closed for at least six months out of a 10-month school year, without any sound mitigation plan, learners have lost half year of school. According to The World Bank, behavioral changes like concerns of parents about their children's well-being paramount amid pandemic and these parents are reluctant to send their kids to schools even after reopening of schools. Also, any estimates that only considers financial position of a family to school dropout is most likely to underestimate the effects of pandemic on education.

By World Bank income group	% drop in HCI
High income	-5.17
Upper-middle income	-4.71
Lower-middle income (India)	-4.00
Low income	-3.07
Global	-4.45

Source: World Bank calculations based on the 2020 update of the Human Capital Index and on Azevedo et al. (2020)

International Experience

Digital Divide is not just native to India but is existent across all economies, geographies, societies, races, genders, cultures, and age groups. Countries around the world are investing into health, survival rates, and online education infrastructure for all to recover and build up the damaged human capital in times of pandemic so

that their citizens can reap the most of their potential.

To help with aspirations of many countries to swiftly recover from the socio-economic brunt caused by the coronavirus, the World Bank is helping in building online education infrastructure and providing necessary equipment to safely reopen schools and improve school enrolment.

For example, the World Bank has approved \$100m to Jordan to foster new education reforms aligned with challenges of digital teaching-learning experience. Continuing with Jordan's efforts in developing the quality of education for its children, World Bank's financing to help restore poor or with no income families, sustain jobs, equip schools to safely reopen came at the right time. With collaborative efforts of the local Jordanian government and international organizations, the access to quality education is restored and the risk of digital divide is effectively addressed [The World Bank 2020].

In an emergency and sustainable response to COVID-19, Turkey with help of \$160m from the World Bank is building a robust education framework which is more safe, resilient to disaster, and sustainable beyond the times of pandemic. Turkey aims to invest into building up robust digital infrastructure to support equitable quality education (classroom-on-line), online training programs for teachers, and strategies of safe and early return of children to schools. It also aims at developing an education framework which is resilient to all kinds of disaster be it natural or manmade, hence Turkey's efforts are not just a quick recovery response to the crisis but are also sustainable in building human capital in the long run [The World Bank 2020].

One of the most affected nations due to the coronavirus outbreak is the United States. When the schools in America got shut, the obvious choice available was the digital classrooms. America's digital divide only got magnified as a result of large disparities in accessing educational technologies. America's marginalised households which comprise low-income, non-English speaking immigrant population, lack access to computers and fast internet connection, and inhospitable environment at home to study. These challenges have led many students out of reach of continuous learning opportunities when their peers from rich families have it easily accessible, further

aggravating the digital divide [Kim and Padilla 2020].

Even though China was the epicentre of the coronavirus outbreak, it was also among the first countries to reopen their economy. China's success in dealing with the coronavirus comes from a robust digital infrastructure at least in the urban regions. A developed digital infrastructure helped China to rapidly go online and continue major economic activities further strengthening their market position when all other major economies are struggling to achieve a positive growth rate figure. Surge in the usage of remote work applications like WeChat Work, Tencent Conference, and DingTalk in China helped stay in touch with friends, relatives, colleagues and build up digital communities [UNCTAD 2020]. China was successful in leveraging this huge network of data sharing into contact tracing, forecasting, surveillance, controlling and analysing human activities to create a database for further action plans to arrest virus spread [UNCTAD].

As the world is seeing a shift in the conventional stages of development and innovation in diminishing the distance between the physical and digital world. Most of these investments in technology start-ups in the field of digital infrastructure, medical, ed-tech, payment systems, contactless delivery systems via drones are from emerging economies like Africa, China, and India enabling these economies to leapfrog conventional stages of growth. Unfortunately, investments from these economies are highly disproportionate, further sowing the seeds of digital inequality among nations [World Economic Forum 2020].

Discussions

The extent of digital divide is only getting bigger as the country's millions of students were asked to make shift to digital mode of learning literally overnight. Those who could afford, have somehow managed to keep up with the nuances of this new educational pedagogy. As the nation had made immense progress in building up a credible human capital over the decades, all those efforts have vanished and put the nation at least five years back [The World Bank 2020]. Many children belonging to marginalised families are at the risk of never returning to school even after the schools reopen in near future [Oxfam India 2020]. Long before this pandemic, India's digital divide has been segregating its population into two

halves, with the fortunate side having access to information and technology enabling them to be part of India's growth story, whereas the other unfortunate side is struggling for its own subsistence, leave alone contributing to the economy. Though this pandemic has inevitably made years of digitalization progress within a matter of few months, but it has totally disregarded the ones who are incapable of making the switch. Continued government services, healthcare, financial services, retail businesses, customer services, entertainment, and education on digital platforms have deprived the marginalized from the benefits of these opportunities, further exacerbating the disparity as a result of digital divide.

As the restrictions over major economic activities are being relaxed in stages due to the rising concerns over job losses and reduced incomes, many are expected to be severely hit by poverty [The World Bank 2020]. With meagre or no sources of income, many households are facing challenges in having adequate food security, buying a new smart device with high-speed internet is out of question. Poor health conditions and inhospitable conditions in many rural as well as urban households make it even more difficult for children to focus on their studies despite having access and affordability of going online.

The Government of India in collaboration with State Governments, NGOs, and various international organizations is making efforts in devising strategies of new educational framework which is student friendly yet achieves the goals of education without letting absence of physical education as a challenge. Several other initiatives are undertaken by authorities to enhance the affordability and accessibility of ICTs disregarding the societal structure that has always been a problem area into unequal access to opportunities.

The inequality between ability to use internet among males of Himachal Pradesh and females of Madhya Pradesh has shown the underlying stark digital gender divide within the nation [NSO 2018] and this difference has only exacerbated in the times of pandemic. This unequal privilege has resulted in inequality among citizens living in the same country. This will eventually form sections of which one is highly progressive and productive, whereas the other struggling to keep up with the ever-changing digital world.

Since the challenges ahead of India are unprecedented and on a mammoth scale, partnerships with other successful nations in response to COVID-19, international organizations, and corporates can help in recovering from the brunt of the lockdown swiftly. The World Bank has announced funds and assistance to support India's efforts to help the poor households with cash transfers, food security allowances, and adequate protective kits to safely reopen schools. The success of these campaigns is however dependent upon unbiased sharing of resources to avoid further divisions in terms of access to relief.

The response to COVID-19 by various economies have been very unique and unexpected. Most developed economies like USA, Spain, and Britain despite having the best of healthcare facilities in the world were among the worst hit nations by the outbreak. Whereas, China despite being an emerging economy and the hub for coronavirus outbreak itself was successful in arresting the spread of virus by utilising its robust digital infrastructure and enforcing strict surveillance systems to track people's movement. Large amount of database helped in creating digital intelligence to tackle problems, extract data, and devise strategies not just to control the virus spread but also to keep engines of economic growth run simultaneously [UNCTAD, 2020]. Despite being a developing economy, China was successful in going back to normalcy quickest, thanks to its sound digital infrastructure that could not have arrived at a better time.

A robust digital infrastructure is as important as basic infrastructure. A society with better access to ICT technologies is progressive and an online presence can help in dodging the risk of being handicapped by the natural as well as manmade disasters. An equal access to these technologies fosters equality among citizens in a digital world, depriving any citizen from these privileges in the 21st century is a violation of fundamental rights under the court of law in India [Sindhu 2020].

Conclusion

India's digital divide has exacerbated to an unprecedented level during the coronavirus pandemic, posing threat to millions who are left out of the system and sent to extreme poverty. Lack of sound digital infrastructure has jeopardised the future of millions of students

specially the ones studying in primary levels in rural areas. Gender disparity during the pandemic has widened as responsibilities of a girl child in caretaking has increased and boys are likely to dropout in order to support their family financially. Education loss amid pandemic as a result of poor access to ICTs, school dropout, rising socioeconomic stress has threatened decades of gains in human capital as a child born just before the coronavirus outbreak is likely to achieve a relatively low potential productivity as a future worker.

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