TRANSITION TO DIGITAL EDUCATION IN INDIA: PROMISE OR PERIL?

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ABSTRACT

The Covid-19 pandemic led to a drastic transformation in the education system worldwide when traditional teaching and learning was disrupted due to closures of educational institutions. This unanticipated change has been a concern for all stakeholders involved especially in the developing countries which suffer from inadequate digital inclusion and limited resources. This paper highlights the challenges of digital education in India. It also critically analyses how a complete shift to the digital mode of education may potentially magnify the existing inequalities in the country due to digital divide and skewed accessibility of technology required for digital education.

Introduction

It has been more than two years since the outbreak of the Covid-19 pandemic in the world, but a significant majority of the world's students are still affected due to closures of educational institutions. In India, a health crisis has snowballed into an education crisis as well. Educational institutions in India have been closed for more than a year now and there has been a transition to the digital mode of education.

Digital education is the use of digital or electronic tools and techniques used for teaching and learning purposes. This unanticipated transition to the online mode of learning has sparked a widespread debate on the efficacy of online learning. The fundamental question however remains that even if digital learning is effective, would its benefits be enjoyed by all or would it be concentrated in the hands of the few.

AUNICEF study which evaluates the impact on student learning due to school closures during the COVID-19 pandemic found that nearly40% of students in the six surveyed states did not use any form of remote learning in the first six months of the school closures (UNICEF, 2020).The

study also highlights the divide between private and public-school students. It has been found that the use of textbooks, as well as low-technology tools such as TV, is higher among government school students compared to private schools. Private school students are more likely to use high-technology devices such as smartphones and laptops for remote learning (UNICEF, 2020).

While some students had no choice but to adapt themselves to the new normal, many still do not have the capacity to do so. The problem is much more about the accessibility of digital resources, instead of availability. Education inaccessibility can lead to a lower participation rate which could adversely impact the learning outcomes of an entire generation of learners.

Moreover, it has been observed that there is aregression in learning. It has been found that the linguistic and mathematical abilities of students have deteriorated in an online learning mode (Research Group, 2021). This loss of learning observed can be further compounded and can reflect in the academic performance of the students and later employment opportunities. Students from socio-economically backward communities are most likely to suffer more andespecially the ones who are first-generation learners.

In this paper, some challenges associated with digital education and digital inclusion in India have been discussed. The paper has been divided into four sections. Section 1 is the introduction, Section 2 discussed the challenges of providing digital education in India while Section 3 examines the multiple ways in which digital education may potentially magnify the pre-existing learning inequalities leading to increased social, regional and gender divide. Finally, section 4 is the conclusion.

Challenges to Digital Education

Digital learning emerged as the only solution in the pandemic hit world as schools and colleges have been shut down physically for more than a year now. Some have even started perceiving digital learning as the new normal and the way forward. However, one cannot possibly ignore the challenges of digital education especially in a developing country like India. Some of the pressing problems related to digital learning are discussed below.

Digital Divide

The digital infrastructure in India presently is not adequate to support digital education. A significant number of people do not have the adequate resources to purchase electronic devices essential for e-learning such as smartphones or computers. Manyparents who lost their only source of livelihood during the nationally imposed lockdown were struggling to make ends meet.

One cannot expect them to purchase expensive electronic devices for their kids and incur the recurring costs associated with it.

Further, there is a problem of inadequate internet penetration and slow internet speed coupled with expensive data plans. Digital education as a method of learning disproportionately favours the rich and the urban dwellers and adversely affects the marginalised, rural and poor people. In Section 3 of this paper, it has been discussed how this digital divide can exasperate the problem of inequality in India ultimately lead to social, regional and gender divide.

Lack of Appropriate Study Space

Due to the pandemic, students have been confined to their homes. Often, students do not have a separate room or a place to study. Having a separate room is a luxury for a majority of the students in this country. When students do not have the required ambience to focus on their lessons and concentrate, it can adversely impact their learning outcomesand may often lead to attention deficit. Moreover, for many, schools have been a safe space where they spend their time when both the parents are working. The question is who will take care of their safety and be responsible for the students at home when their parents return to their workplaces.

Inadequate Teacher Training

When online classes became a norm, there was an unanticipated shift to digital learning which required a different pedagogy than what teachers have been traditionally trained for. Most teachers had no experience of engaging in the electronic method of teaching. During the pandemic, some schools that had the resources gave teachers online training to teach their students through the online mode. This is indeed quite ironic as many teachers are not accustomed to electronic devices themselves but even then, they were trained online. The efficacy of digital learning is hence questionable if the teachers are themselves underprepared and uncomfortable with the teaching methodology.

Health Issues

In the case of online learning, students would be confined to their homes with absolutely negligible physical activity. Prolonged exposure to computer or mobile phones screens can increase their screen time much beyond what is recommended and they can suffer from eyesight problems as well as diseases such as dry eyes. There can also be other health problems related to the neck and back due to bad posture and insufficient movements. Continuous online classes may lead to exhaustion and fatigue. Moreover, students may also be prone to mental health issues due to inadequate social interaction.

Limited Social Interaction

Education has the potential to have a positive spill over effect where students learn from each other and from their teachers. Online learning has reduced education to a unilateral transfer of facts. Instead of learning, the focus shifts from knowledge creation to mere completion of the syllabus. Learning is a social activity that also involves critical analysis and debate. There is negligible social interaction during the classes especially in cases where class sizes are large. Moreover, public institutions serve as the place where students interact irrespective of their classes, castes, creed and gender. The mingling of people contributes to social inclusion reducing social inequality. Digital education therefore limits social cohesion to some extent.

Digital Education or Digital Exclusion? -Exploring the Great Divides

As per the Right to Education Act, every child of the age of six to fourteen years has the right to free and compulsory education in our country. Moreover, the act also emphasises on the equality of opportunity (RTE Act 2009). In a developing country like India, there is limited infrastructural support for digital learning along with insufficient digital inclusion. Therefore, the sudden transition to a system that benefits a few overlooking the vast majority can go against the equality of opportunity and the RTE Act.
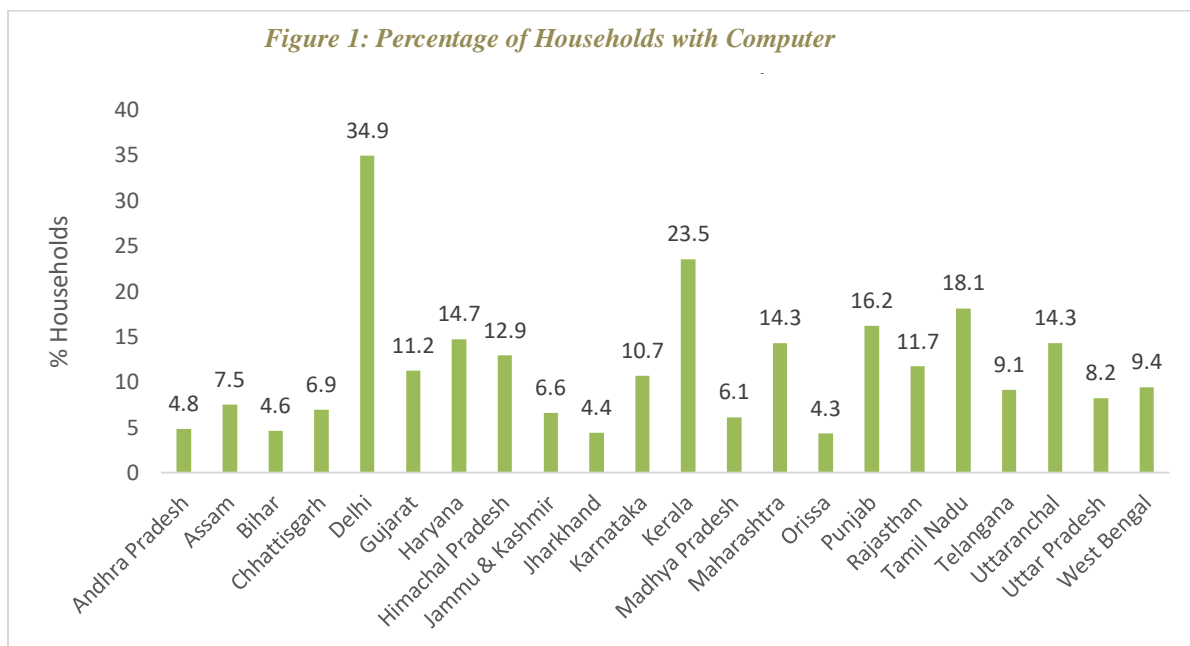
Social Divide

The current crisis in education is deepening due to limited accessibility of infrastructure support which includes regular electricity support, electronic devices and an uninterrupted internet connectivity at affordable costs. The digital divide can be clearly seen between the rich and the poor and between rural and urban areas. Electronic devices such as smartphones and laptops are still a distant dream for many. In 2018, only 4% of rural households and 23% of urban households possessed a computer (NSS, 2018). Those who are can afford the requisite technology may struggle with recurring costs. In India, less than half of villages i.e., 47.26% have electricity for more than 12 hours (GOI, 2021). In many homes, students might not get something as basic as a study room and may face constant distractions while studying. Moreover, even if electronic devices are available, assuming that those with limited resources are somehow able to manage a laptop or a smartphone, there would most likely only have one device per household while there may be a greater number of children. Since the school timings are the same for all classes, only one child can have classes at one particular time.

Apart from access, there must be the technical know-how on how to use the required technology and access the online study materials. Ownership is different from usage and is dependent on literacy as well as digital literacy. This problemwould especially be faced by primary school

students who are first-generation learners of their families. Moreover, socio-economically backward communities such as SCs and STs would most likely be at a greater disadvantage in terms of accessibility and usage of the technology as literacy rates amongst them are substantially lower than the national average.

Regional Divide

The digital divide in India is exasperated by the prevalent regional disparity. While the poor are disadvantaged in terms of accessibility to digital learning, there is a double burden on them if they belong to certain states within India. The figures of percentage of villages with greater than 12 hours of electricity are only 8.4% in Jharkhand, 16% Assam, and 24% in Arunachal Pradesh as compared to 95% in Gujarat, 93% in Goa and as high as 96% in Kerala (GOI, 2021). These figures show the widespread disparity within India in terms of accessibility to electricity, a vital requirement for digital learning. Other requirements for digital learning are computers and internet facility. Figure 1 shows the state wise percentage of households with Computers and Figure 2 shows the percentage of households with internet facility as per the Household Social Consumption on Education in Indiaconducted during 2017-2018.

Figure 1: Percentage of Households with Computer

Source: Household Social Consumption on Education, NSS 75th Round Survey

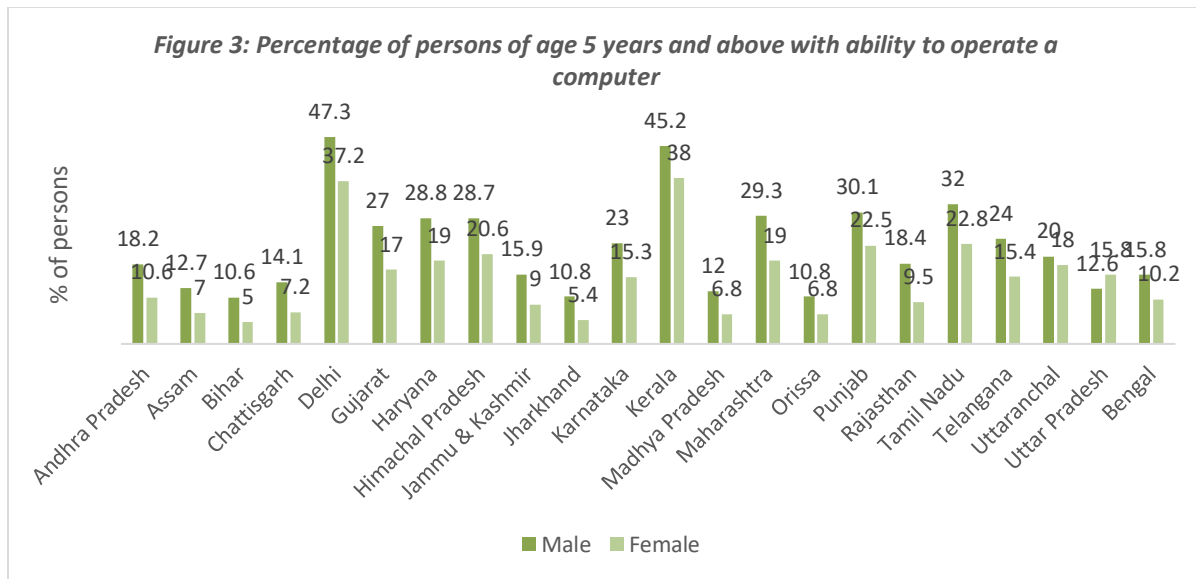*Figure 2: Percentage of Households with Internet facility*
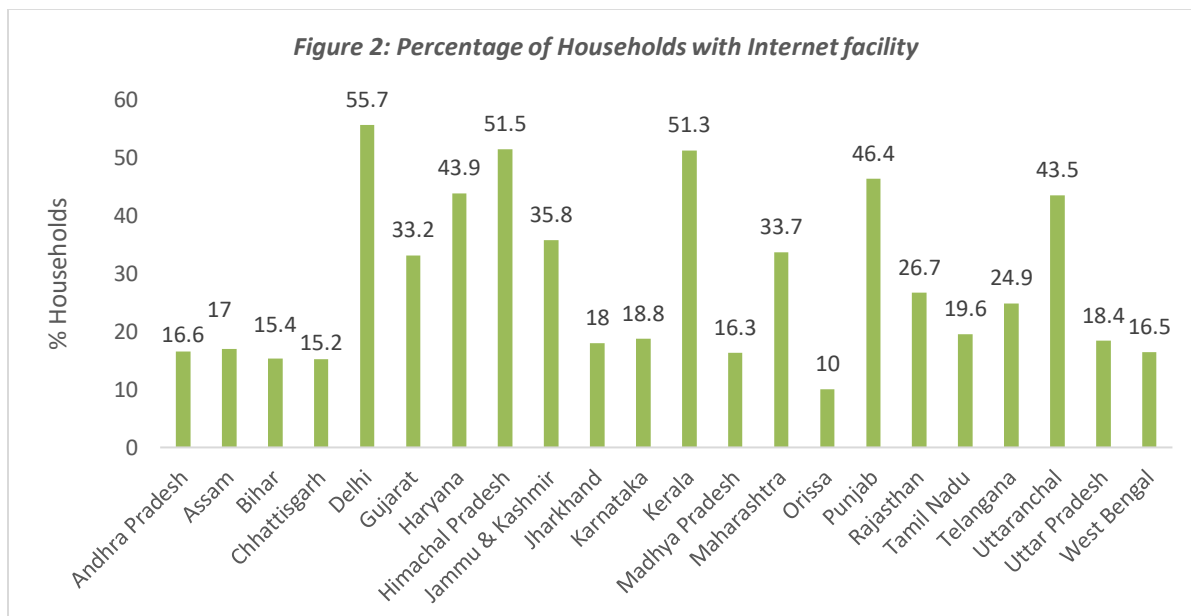
Source: Household Social Consumption on Education, NSS 75th Round Survey

The above two figures show how deep the divide is between many Indian states in terms of access to computers and internet penetration.States like Assam, Bihar, Jharkhand, Chhattisgarh and Orissa are way behind the states of Kerala, Punjab, Himachal Pradesh, Maharashtra and Union Territory of Delhi in terms of the infrastructural needs for digital learning.

Gender Divide

Further deepening the digital divide is the gender divide between male and female students. Females often do not have the same access to digital technology as their male counterparts as they are often discriminated against.Figure 3 given below shows the state wise differences amongst males and females in percentage of persons of age 5 years and above with ability to operate a computer.

Figure 3: Percentage of persons of age 5 years and above with ability to operate a computer

Source: Household Social Consumption on Education, NSS 75th Round Survey

Figure 4 shows the state wise differences amongst males and females in percentage of persons of age 5 years and above with the ability to use internet.

Figure 4: Percentage of persons of age 5 years and above with ability to use internet
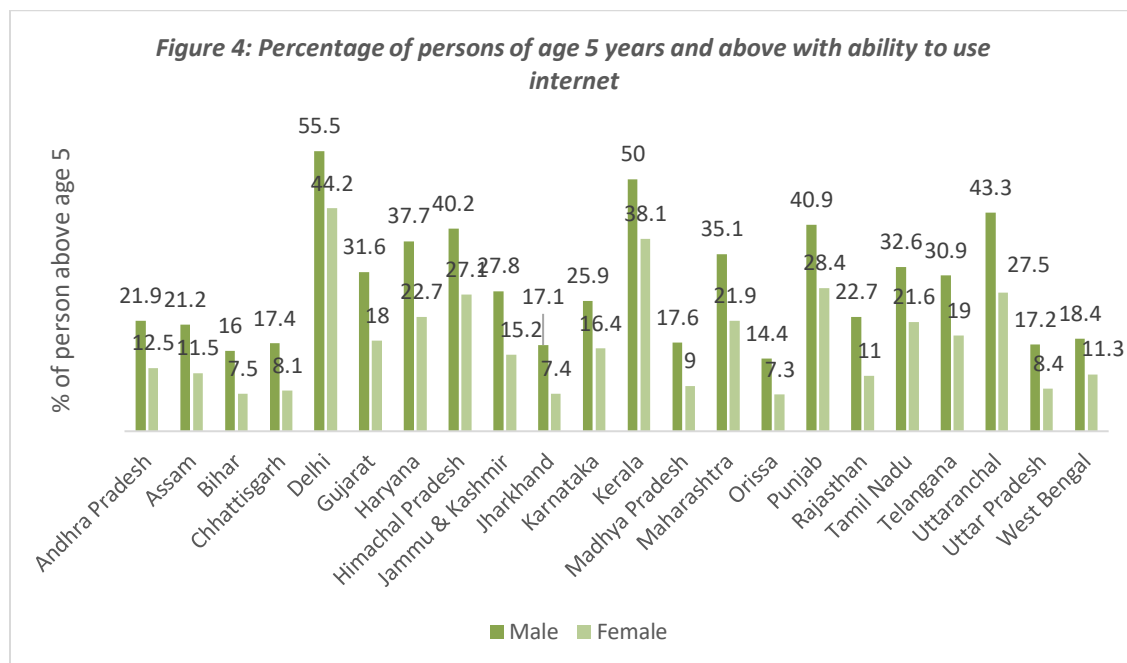
Source: Household Social Consumption on Education, NSS 75th Round Survey

The ability to use computers and internet is crucial in engaging female students in digital learning. However, as we can see there is a stark contrast between males and females in both these respects. This difference is observed in all the states of India including states like Kerala, Punjab, Himachal Pradesh, Maharashtra and Union Territory of Delhi which perform relatively better in terms of accessibility of computers and internet as seen previously. It can be concluded from the two figures that in many cases men are twice more likely to have the ability to use computer and the internet as compared to women.

Females disproportionately carry the burden of household chores and often do not have the same opportunities as males. This would mean that even if they have access to digital learning, their participation in remote learning may be hindered as they are expected to undertake household chores.

Even before the pandemic, the gender divide in education has been prevalent over the years. As per the Census 2011, female literacy is 65.5% compared to male literacy of 82%. Also, the dropout rate for females is around 52% amongst which 63% percent dropped out between 5 to 15 years of age. The majority of the female students dropped out due to engagement in domestic activities(Census, 2011). A study by OXFAM India shows that 40% of the teachers fear that prolonged school closures may lead to more than 33% of the students dropping out (Vyas, 2020).

Discontinuance of education can have an everlasting influence on the lives of women apart from depriving them of education, a fundamental right. Girls may be pushed into child marriages, early pregnancies, child labour and probably a lifetime of poverty. Many adolescent girls who stopped going to school may actually never return even after the schools reopen.

Conclusion

Policy makers have always given a lot of emphasis on education as it is often seen as an essential tool for social and economic development. While we are prioritising economic recovery, we must not side line education recovery. As educational institutions shut down due to the pandemic, regression in learning has been observed due to the sudden shift to the digital mode of learning. The digital divide has the potential to contribute to learning loss to an entire generation of learners, a lot of whom are first generation learners. Quality education has the potential to reduce social, spatial and gender inequality. However, completely transitioning to digital education also has the potential to magnify such inequalities due to the digital divide and lack of digital inclusion.

A system of digital education has its own advantages but one cannot overlook the challenges in a developing country such as India where its benefits may not be uniformly enjoyed by all. It is

important to realise that transitioning into digital learning does not merely mean watching videos of lectures. Rather, it is about using appropriate tools and technology to curate learning content that helps students grasp the concepts better and expand their pool of knowledge. The Indian education system on the whole is at a very nascent stage and fully transforming into a mode of digital education cannot happen unless the challenges are addressed. Digital learning can complement the traditional methods of learning but cannot be a complete substitute for it.

While there have been government initiatives to provide online learning such as e-PG Pathshala and SWAYAM amongst others, the persistent problem of accessibility of resources rather than availability. At least at present, digital learning or e-learning is neither a viable nor a sustainable alternative for physical classrooms.

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