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Challenges to Digital Education During Covid-19: Insights from Uttar Pradesh

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Abstract
If anything, covid-19 stretched the pre-existent inequalities in education system in India. If prompt corrective action is not taken, the number of girls dropping out of schools will continue to climb, opening the door for early marriages, sexual exploitation, and domestic abuse. In order to answer the following questions, we will examine access and challenges to education during covid-19 in Uttar Pradesh in this article- How does education during a pandemic impact children's learning and continuity in education? Focus groups were held in both rural and urban areas of Uttar Pradesh with head teachers, schoolteachers and students (mostly girls) from higher secondary sections of schools to propose possible corrective measures to increase access to education and to raise awareness of potential issues that teachers and students may encounter. Our findings recommend that digital education needs a new outlook towards the core syllabus as well, which should be flexible to adapt to new methods of teaching-learning process. The study also proposes introduction of bridge courses to fill up the learning gap caused during the lockdown.

Keywords: Education, challenges, digital education, covid-19.

1. Introduction

Stefania Giannini (2021), UNESCO's Assistant Director-General for education, expresses concern over an increasing dropout rate that have unreasonably affected adolescent girls, resulting into further cementing an entrenched gender gap in education and increased rate of sexual exploitation. She estimates, on the basis of reports and studies conducted by UNESCO, that there has been an 84% of global school drop outs because of covid-19. World Bank (2018) reported that children of under-educated parents in India find it much more difficult to rise up in the educational and income ladder than in other large developing countries like China, Brazil, Indonesia, Egypt, and Nigeria.

As the school education of millions of children was disrupted during covid-19, it became more and more evident that what we were experiencing was a learning catastrophe. It had been anticipated that the pandemic will leave a massive negative impact on learning outcomes, with 290 million students missing the school (UNESCO, 2020). The World Economic Forum (2020) predicted that 78% of children in South Asia are likely to fail the same basic literacy test, compared with 60% before the pandemic, indicating the grave situation in the region. The World Bank also noted in 2022 that India's "learning poverty" had increased from 54% to 70%, exacerbating the effects of the pandemic on the nation's educational system.

In this paper we discuss the challenges of access to education during covid-19 in Uttar Pradesh. The state of Uttar Pradesh (UP) has been selected for this study because it is not only the most populous state in India but also the most populous country subdivision, globally. The quality of instructors appointed to UP's government schools has come under fire, as per a report released by Education Word dated 17 June 2022. The state of education in the state has been closely scrutinised in the report which states that, out of the approved 760,000 instructors, an estimated 30,730 upper primary and 18,119 elementary school teachers lacked the necessary training or credentials. Additionally, there was a 175,000 teacher shortfall. An editorial piece (The Hindu, 2021), from during the pandemic states that, students and teachers have not been able to use computers and; the internet was acknowledged to be a form of deprivation, during the pandemic, just as the inability to attend in-person classes was another. The data presented in the article confirmed that a mere 22% of schools across the country on an average have internet access, while government institutions are much worse with just 11%. The national average was 37% and, for government schools it was 28.5%. Beyond the averages, the range of deficits reflects deep asymmetries where, 87.84% of Kerala schools and 85.69% schools in Delhi had internet facility, compared to 6.46% in Odisha, 8.5% in Bihar, 10% in West Bengal and 13.62% in Uttar Pradesh. A survey by Parliamentary Standing Committee found that Classes 8-12 in centrally run schools showed last August that 80-90% students were dependent on mobiles rather than laptops for digital schooling, while 30% were affected by electricity supply disruptions (Jebaraj, 2020). On the grounds of such findings, the House Panel on Education requested the Centre to assess the account of how badly school students have been hit by the pandemic and asked to collect States' surveys on access to digital education. Interestingly, the Ministry of Education via the Unified District Information System for Education Plus (UDISE+) (2020), reported that general availability of infrastructure in schools has improved in 2019-20 compared to previous year.

2. Analysis of Challenges during Covid-19

In India, there is a notable discrepancy in access to digital infrastructure between men and women as well as between urban and rural areas. It is also important to consider that only 47% of Indian families have access to electricity for more than 12 hours a day. Just 24% of Indian homes have access to the internet, as per the Ministry of Statistics and Program Implementation (MoSPI) (2019). According to the National Statistical Office (NSO) (2019), there is a significant difference in internet access between rural and urban areas of India, with only 4.4% of rural families having access to the internet. According to the Internet and Mobile Association of India (2019), just 33% of women and 67% of men have access to the internet, indicating that there is a significant gender gap in both access and proficiency with digital infrastructure. This difference is even more glaring in rural India where 72% men and only 28% women have access to the internet (MOSPI, 2019).

With almost 1.5 million schools closed and millions of children unable to access online education owing to a lack of digital infrastructure, the pandemic further exposed these disparities in education (Alvi, 2020; Deka, 2021). Numerous research organisations discovered that during the lockdown, children's education was often discontinued, with a higher percentage occurring in rural areas which was close to 67%, than in urban areas which was approximately 55%. Other research studies highlighted the lack of internet access and computing devices in many Indian homes (Azim Premji Foundation, 2021, ASER, 2021 and Oxfam, 2020), and that those who might have them, may not necessarily know the adequate use of these devices to be able to benefit from it (Mukhopadhyay, 2020). Moreover, children frequently are prevented from

completing their education due to financial difficulties, especially in rural areas (NSSO, 2015). The unwarranted push towards a virtual education model has severely undercut the importance of the institutional environment (Dhankar, 2020). The tragic effects of the pandemic on the economy alone have made girls and young women more susceptible to early marriage, early pregnancy, and gender-based violence at home. A major correspondence report (2020) published in The Hindu, one of India's leading newspapers, explains how these events have negatively affected the future of these women. The closure of schools and the switch to online education have only made matters worse. There have also been reporting of psychological stresses due to academic pressures (Singh, 2022). While virtual learning has been implemented in response to the pandemic, it has been criticized for intensifying existing inequalities.

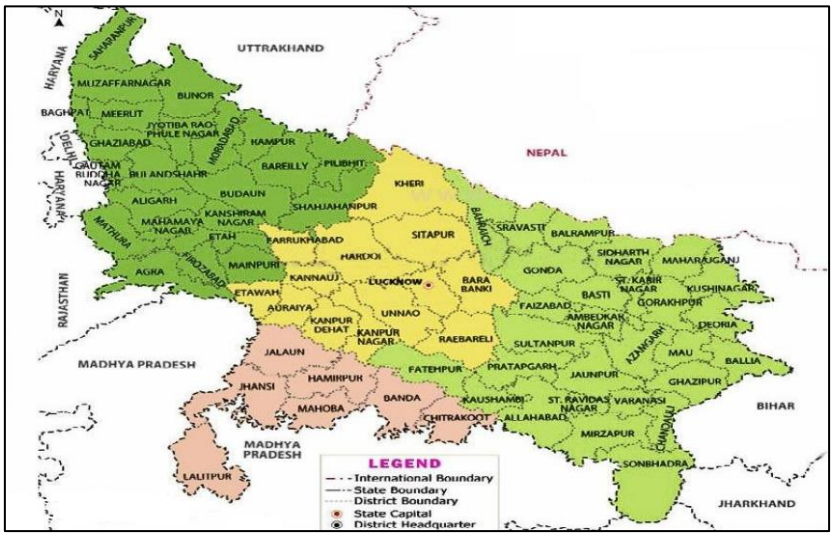
The shift to virtual education in response to the pandemic has highlighted the lack of preparedness and inclusivity in India's education system, yet a statement in the Parliament in month of February 2021 by education minister claimed that no one was deprived of education due to its shift to online mode during the lockdown period. Alongside the findings of the reports and publications we discussed above which evidence the lack of inclusivity, Wadia (2020) in ORF Hindi argues that shift to virtual learning was fraught with umpteen challenges in India and lacked in basic preparedness. She underlines the fault lines in digital policies adopted by the Indian government that failed to deliver, viz. the Bharat Net scheme launched in 2011 which intended to provide internet services to approximately 0.25 million village panchayats or, the more recent Digital India Campaign, a flagship program of Indian government launched in 2015 with an aim to improve India's online infrastructure and digitally empower its citizens. Notwithstanding these incessant articles and research studies bringing out the ruthless realities from different parts of the country, the Union Minister of Finance and Corporate Affairs released a statement (PIB, 2021), that there has been a jump in number of smart phones being owned by students across rural India which has increased majorly from 36.5% in 2018 to 61.8% in 2020 and this would result in filling up the digital divide between urban and rural areas and, would ultimately lead to the end of gender based discrimination in education. In fact, with the virtual education, we have left the idea of inclusivity far behind and the worst part is that no one is considering an assessment of the number of adolescents who will be out of the education system if dependence on online classes increases with time, given the amount of uncertainty looming around (Jansatta, 2020).

2.1. Analysis of Challenges in Uttar Pradesh

As per the annual report (ASER, 2021) released by Pratham, a leading non-profit organization in education sector in India, a sharp increase has been reported in the number of children who were not enrolled in a school from 1.8% in 2018 to 5.3% in 2020. Along with this, the survey recorded a spike in smartphone ownership among rural households, from 37% in 2018 to 62% in 2020. However, it also recorded that, states like Uttar Pradesh, Rajasthan and Bihar, where digital access has anyway been poor, less than a quarter of the enrolled children received any educational-learning material, during the pandemic ensued lockdown and subsequent school closures.

An exemplary initiative carried out by ActionAid India, in collaboration with UNICEF and ABCL, known as '*Nai Pahal*' (literally translating as New Initiative) was launched in 2018 and is working in 20 districts across Uttar Pradesh. Under the initiative, out-of-school children are identified and the army of ActionAid education volunteers actively work towards sensitizing the local communities on the significance of

education and also address issues of child marriage and child labour which is quite prevalent in the state (ActionAid, 2020). Towards the end of the year 2020, this network of community-based education volunteers working with *Nai Pahal* were able to reach out to more than 45,000 children, across 3,822 villages of Uttar Pradesh. Amongst these, 22,098 were girls. The volunteers also identified 3,761 out-of-school children, including several from migrant families as well as children from daily wage-earning families and other low-income families. The volunteers engage with these children by motivating them to learn and teaching them through means of informal education accompanied by some fun-learning activities.



Picture 1: Map of Uttar Pradesh showcasing all districts.

Particularly in Varanasi district, surveys conducted across selected schools in both urban and rural areas, shows overall administrative frustrations related to the school closures and the sudden shift to virtual platforms. The pitiful condition of education in India (Suman, 2020) goes back to times even before covid-19 and with the onslaught of the pandemic achieving the global goal of providing quality education to children by 2030 seems like a distant dream, which still seems to be decades away. Field work conducted within the district, stamp marks the fact that access to education has only been widened by the onslaught of pandemic which slipped further due to a number of factors such as prevalent digital divide in urban and rural areas as well as, amongst the children going to private and government schools, within urban areas; financial distress due to loss of jobs; even if there was access to education via digital medium, there was found a pattern of lack of availability to devices given the incapacity to get frequent internet data packs; along with all this, there was a prevalent lack of motivation found amongst students which was fraught with a general deficiency of e-readiness.

3. Digital Provisions undertaken in Uttar Pradesh

With the pandemic affecting millions belonging to the informal and unorganized sector, the emphasis being laid on technology-driven digital mode of education has withheld many children from continuing their school. In the tussle of the ‘haves’ (digitally equipped population) and ‘have-nots’ (digitally deprived population), private players like ‘BYJUS’, well-known for their online learning platforms, have generated triple the amount of revenue during the corona times and its user base has expanded to 2.8 million paid

consumers in India- such instances could be justified given the fact that 11% of families in rural India were left with no other choice but to buy new mobile phones during the lockdown to support their children's online education and mere 2% of students in rural India studied online where their teachers would send study material via WhatsApp (Seth, 2021).

However, in Uttar Pradesh, DIKSHA platform (an online digital education initiative by Government of India) was adopted by all government schools to ensure continuity of students' education via digital educational content. Along with the DIKSHA platform, there was another initiative by the Government of Uttar Pradesh i.e., PRERNA application which especially targeted students from class 1 to class 8. PRERNA collaborated with non-profit educational platforms like Khan Academy, Pratham, Central Square Foundation, Sesame Workshop India to help generate enriching educational content that could make learning at home easy for students. Apart from these, the state education department of Uttar Pradesh government used its existing network of more than 1,000 WhatsApp groups with Basic Shiksha Adhikaris (BSAs), Block Education Officers (BEOs) and Head Teachers, and more than 9,000 groups with teachers to enable the reach of educational content to all teachers, who can then forward it to their respective students' groups. Apart from this, television and radio channel mediums were also deployed for reaching out to children, especially in rural areas where internet connectivity might have been an issue. As per the Digital Education in India report (2020), from end of April to mid-June, 2020, a 1.5-hour slot on Doordarshan UP (DD-UP) had been exclusively dedicated to provide self-learning content to children. From mid of June, 2020 onwards, UP's education department bought a 4-hour slot on DD-UP to increase learning through this channel. On radio platforms, 15–30-minutes of slots on All India Radio channel 'Aakashwani' was allotted to provide audio-based learning to children in remote areas.

In Varanasi, our field visits highlighted that digital divide existed at multiple levels, and is not just propelled by the financial gaps. It is hugely influenced by urban-rural cleave, gender biasness and a general lack of awareness in many parents, regardless of their position in social hierarchy. The divide exists not just at the learner's level but also at the teacher's level, where many teachers reported their struggle in navigating the technology to create educational videos, or 'teaching to a screen', making power point presentations and so on. Teachers in high-poverty schools (or school catering to low-income groups) found it overwhelming to continue with the virtual education which they strongly believed had only aggravated the inequalities amongst students. Insights drawn from interviews with educators emphasizes that students coming from decent socio-economic family backdrop had faced no apparent challenges in learning virtually, nevertheless, they might have become slightly more dependent on gadgets as apart from school education on virtual platforms, many students are also referring to other online educational platforms to learn more and perform better. This increased screen-time is resulting in serious health problems not just physically but also psychologically. Unfortunately, though, the teachers also acknowledge that unavailability of smartphone and lack of internet facilities were the two most prominent factors coming into play for students from poor and backward strata of the society, regardless of their area of locality- whether urban or rural- which brutally excluded them from receiving education and thus the sudden push for digital learning actually failed students belonging marginalized category.

4. Methodology

As part of the Uttar Pradesh regional study, Varanasi district was chosen as the universe of the research

conducted on the basis of purposive sampling. Varanasi gained prominence at the national political platform after Prime Minister Narendra Modi historically contested and won election from Varanasi constituency both in 2014 and again in 2019. Table 1 below presents a brief demographic profile of the district. Total of 105 schools located in the district, inclusive of both government and private schools, were identified from the database of Ministry of Education. Out of these 105 schools, six schools were selected using random sampling technique. Out of the selected six schools, three were government schools and three private schools. Balance was also attempted at selecting girls', boys' or co-educational schools. Hence, there is one girls', one boys' and one co-educational school selected from both government and privately-run schools. These are also representative of urban and rural Varanasi.

S. No.	Heading	Details
1	Geographical Area	1535 per sq. km.
2	Population	36,76,841
3	Male Population	19,21,857
4	Female Population	17,54,984
5	Rural	20,79,790
6	Urban	15,97,051
7	Sex Ratio	913
8	Population Density	2395 per sq. km.
9	Literacy	75.60%
10	Male Literacy	83.77%
11	Female Literacy	66.69%

Table 1: Varanasi Demographic Profile. Source: Varanasi Municipal Corporation

Once the selection was done, Principals from each school were telephonically contacted for an appointment. During the meetings they were briefed about the research project and its purpose and, were handed over the Participant Information Sheet for further understanding. On the basis of this, a Consent Form was also acquired for their signed approval for conducting research in their school's premises. Dates were fixed accordingly for further visits.

In the first round of field visit, Principals were interviewed and their views and opinion on the research theme were recorded. The first round was undertaken between 12 January 2021 to 30 January 2021. Total number of responses collected were six. In the second round of field visit, Focussed Group Discussion was conducted with teachers from each school. The number of participants in the FGD ranged between 07 – 11 and the total number of respondents were 52 combining the six FGDs conducted across selected schools. The second visit was undertaken between 13 February 2021 to 25 February 2021. In the final round of field visit, FGD was conducted with groups of students. The total number of respondents for the FGD were 110, however the numbers differ in each school for each FGD conducted and ranged between 14- 22 number of respondents. The group of students from each school included a mix of students from various classes. The final visit was undertaken between 13 February 2021 to 27 February 2021. Please refer to annexures for all details relating to FGDs.

The study focussed on gathering qualitative data through interviews and FGDs. The data collated was processed using NVivo software which is a data analysis tool used to develop in-depth comprehension from qualitative field works consisting of interviews, FGDs, written documents etc. The major challenge encountered in the course of field work was a palpable anxiousness found in all the educators who largely remained reluctant in sharing information. Apart from this, in the FGDs conducted with students, majority of the respondents belonged to the category of high school and senior school because as per the government regulations, only students from higher secondary sections, i.e. standard 9th to standard 12th were allowed to physically visit the schools. Also since, students were visiting in small batches, the number of respondents differed in each FGD conducted.

5. Findings

As discussed before, the situation outlined in Varanasi highlights the existence of a digital divide at various levels, indicating that financial disparities alone do not drive it. There are various factors driving it and this disparity is evident not only among learners but also among teachers, with many struggling to navigate technology for creating educational content or adapting to virtual teaching methods. Insights from interviews with educators underscore that, students from more affluent backgrounds faced minimal challenges in adapting to virtual learning. However, they may have become more dependent on digital devices, engaging not only in school education but also utilizing online platforms for additional learning. Teachers acknowledge that the lack of smartphones and internet facilities are the primary obstacles for students from economically disadvantaged backgrounds, irrespective of their urban or rural location. This exclusion has resulted in the failure of the sudden push for digital learning, particularly impacting marginalized students. Despite digital technology serving as an alternative during the pandemic, its implementation was not without challenges and disruptions, widening the gap between the rich and the poor, the urban and the rural, and male and female students.

5.1. Focused Group Discussion with Teachers

The major theme that carved out of after the analysis of FGDs with teachers was an overall consensus amongst the educators regarding the havoc that digital education has created. All teachers, across the schools visited for the study, concluded that the virtual mode of education could definitely be an aid to regular physical classroom teaching but not a substitute for it, in any case. Along with this, it was also uniformly acknowledged that online teaching remains mostly unidirectional and it is difficult to impart education in such a setting, sans the “eye-contact” that plays the critical role in didactic pedagogy. School education is a crucial phase where a child develops not just intellectually but also cognitively, emotionally and socially. Such holistic development takes place in an environment where learning is facilitated by adults and children engage with their peer groups to cultivate relationships of their own. Even if we could have interactive sessions in online classes, number of students attending online classes is extremely limited, exception being the students from high-end private schools. Those who did attend the online classes, their assessment was another tricky part. Teachers from government schools and other private schools located in rural areas shared their foremost concern that, “technology is essentially depriving children from their constitutional right of getting educated”. Digital education is not much of a trouble for those who belong to well-to-do families, but, as for students going to government/ semi-government/ composite schools located in urban arears or urban periphery, some teachers noted “it was disturbing to come across students struggling for food, with all sources of income being shut down”. Teachers from

government girls' schools shared that some of the class-teachers paid the school fees of a few students who were good in studies but, their parents couldn't afford education during pandemic and wanted them to discontinue. The scary thought of such good students who stand a fair chance to achieve independence in their life might just be married off, forced the teachers to also individually counsel parents by visiting them personally, on a regular basis. The vortex of poverty pushes several children towards taking menial jobs, or perhaps forced labour, early marriages and trafficking as well. It has been petrifying to imagine what young children had to go through during these difficult times, who otherwise would have been simply finishing their studies and school education. Somewhere, this also redirects us to consider that schools are not merely the institutions that educate but, also serve as a safety-net for many adolescents, from the burden of social malice that Indian society still struggles with.

Apart from this, the teachers shared their own plight where the school administration and state apparatus were unsuccessful throughout the lockdown to provide them with necessary infrastructure in order to facilitate digital learning. Support was absent in all forms, whether it was in regard to the provision of computer systems/laptops, necessary training for smooth implementation of online education, compensation for internet/ Wi-Fi arrangements. Teachers were left to manage the pandemonium entirely at the cost of their own resources. Some senior teachers had to buy smartphones and learn how to use them because, they had never used one before. On top of it, there was reported a huge salary cut of teachers from all schools, selected for the purpose of study. In one of the private schools, the administration forced the teachers to buy their own laptops and gave out loans for necessary gadget purchases so as to ensure continuous and effective online classes. Also, teachers from government schools are engaged in activities that go beyond the teaching-learning cycles, such as assignment of duties during panchayat elections, collection of census data, door-to-door supply of food rations to school children (under the mid-day meal scheme which came to standstill during pandemic).

Largely, lack of infrastructural support and a general apathy from administration made it difficult for the teachers to put up with the encumbrance of lockdown. Some opinions shared by teachers in their own words is illustrated below:

"Online classes have been a boon in these times of distress however, we (as a nation) are lagging far behind. We (Indian school systems) were not prepared for this- neither the administration, nor the teachers, or the students. Hence, it is now a futile exercise to focus on what could have been done or what did not happen. We should rather focus on how can we compensate for the loss that students incurred, not necessarily in literature subjects but, in subjects that require aptitude like mathematics and science."

A male teacher from government boys' school located in urban area of Varanasi.

"Students coming to this school are mostly from a very low-income, financially backward families. We have tried our best to educate their parents and convince them that education could also be imparted online (beyond classroom walls) but, it's been difficult. Some did come round but others would consider this (online classes on smartphone) a waste of time. 'The girls would rather work at home full-time and polish their household skills which would make it easier to get them married sooner. The boys could help in contributing to the family finances by taking up jobs that would pay. Ultimately this is what they have to

do, in the longer run.' It is unfortunate to witness the hopeless situation of these children. What is their fault, after all?"

A male teacher from government co-ed school located in rural Varanasi.

"The state administration could have at least shown some empathy and perhaps waved off the tuition fees or exam fees (for students appearing in board exams) of these students. This can't be said for private schools but, for government institutions it was expected from the administration. They are still in the reverie that just because platforms such as e-Gyankosh, Gyanganga, Gyanpravah, DIKSHA, PRERNA etc. have been provided by the government's education department, studies have not suffered. An honest audit of the outreach and benefits of these platform would perhaps bring out the truth."

A female teacher from government girls' school in urban Varanasi.

"Our work has manifolded now. Apart from putting up with the chaos of online classes, we are also constantly in touch with parents to keep them motivated as far as the education of their wards are concerned. In doing so, one of the parents told me that they do not want to handover the one smartphone in their family to their daughter because what if she starts chatting or video-calling some boy and gets 'out-of-hands'? They said that technology is a dangerous thing and girls cannot be trusted to handle this. If the school reopens and regular classroom teaching begins, they would send their daughters to school else, it is better that they stay at home and learn some culinary skills which, too is important for girls to master. Such logics are challenging to deal with."

A female teacher from private school for girls' located in urban Varanasi.

Thus, a pattern that comes out of the FGDs with the educators, is more focused on the challenges of execution. A lot of repetitive terms have occurred like unavailability of devices, poor internet connection, lack of basic facilities and infrastructure, financial backwardness, low awareness etc. The facts sighted and the instances shared draws our attention towards the gaps that exist within the system like the infrastructural gaps, limitations of resources, lack of e-readiness etc.

5.2. Focused Group Discussion with Students

There was observed a prevalent dissatisfaction among students, both boys and girls alike, with regard to online classes. Interestingly, the dissatisfaction wasn't really directed towards the particular process adopted for online teaching or the challenges that came along in the execution of that process; it was in fact the disappointment of not being able to meet their peers, face-to-face interaction with teachers, the thrill of conducting lab experiments and the sheer joy of participating in activities including sports, music and dance.

Some responses from the field that would highlight the tragic experiences faced by students:

"We had to return to our village during lockdown. There I had to help my parents in fields and then back at home with some routine household chores. I couldn't get time for studies and whenever I would want

to sit and study, I couldn't focus properly because we lived with our uncles and their families. I would still call my friends whenever I had hold of the phone. My father doesn't own a smartphone, so I would ask my friends about what study material the teachers had sent or which topic did they cover. However, it was all very limited and I couldn't even cover the half of the syllabus."

A girl student of 9th standard from a government girls' school located in urban Varanasi.

"It was the kindness of my school teachers that allowed me to continue my education through the lockdown. My parents haven't been able to pay the school fees for past 10 months. It was difficult to make my father understand that study could be done at home also. As both my parents are uneducated, they thought that it is impossible for us to study from home. My father wanted me to help out with his puncture repair business when the lockdown was relaxed because we desperately needed money. I had to sit all day under a tree taking care of the puncture business while my father would go out to meet people and look out for other daily wage jobs. I would return home extremely tired and hence couldn't really study well."

A boy student of 7th standard from privately run boys' school located in rural Varanasi.

"My father lost his job as a shop helper during the lockdown. We couldn't afford to pay our house rent, electricity bills, manage for food and also pay school fees for all three of us (the girl and two of her siblings). Amidst all this I could not ask my father for frequent phone tariff recharges. I would sneakily call my friends and ask them to send me notes and similarly both my younger siblings would also do the same. We could obviously not study. I don't know if I will be able to go to continue school, once everything is back to normal because I'm supposed to be married soon. My father doesn't have enough money to marry me now but, now that things have started to return to normalcy, I believe I would be married soon."

A girl student of 11th standard from a co-ed government school in rural Varanasi.

"The biggest challenge for me was to maintain my focus and motivation to study with the same consistency as I used to before corona happened. No matter how much I want, I just can't study thoroughly at my home. There always is a lot of disturbance as everyone is home all the time. In fact, it gets chaotic sometimes. We live in a 2BHK house and we are a total of 5 members- my parents, my sibling and my grandmother. My father bought us (me and my brother) a tablet when the studies were announced to be held online. But, there is always connectivity issue, it is a challenge to understand what the teachers are exactly trying to explain, there are so many students who keep asking questions, and it becomes difficult to actually 'connect' with our teachers whom we could otherwise have approached easily in the staff rooms during lunch time or any other free class and talked to them about our problems with regard to any particular topic or chapter."

A boy student of 9th standard from private co-ed school located in urban Varanasi.

"My father worked as a daily wage earner at construction sites. He could never return to work even after the lockdown was relaxed because he now suffers from chronic illness. My mother works as a helper with a really good household. I consider myself privileged in comparison to my fellow classmates as my studies

were never hampered because of the lockdown. We received all necessary support from the family where my mother works. Not only did they bought me a smartphone but, also internet data packs so that I could easily access all educational materials whether on YouTube or on DIKSHA app or on WhatsApp. My friends lacked such digital support and hence their studies were hindered."

A girl student of 8th standard from government co-ed school located in rural Varanasi.

"Lockdown poorly impacted my studies because, I would never get access to the tablet computer (which is shared between the siblings) as much as my brother would as, he is elder and his studies are perhaps more critical than mine. The internet connectivity is also a major issue and, sometimes, we have to request our neighbours to share their Wi-Fi with us. This online education is a lot of work. Both my brother and I experience frequent headaches and sore eyes. We don't have our private tutor coming home to support us with our studies and there are some topics which are really difficult to comprehend. Virtual mode makes it difficult to talk freely with our teachers and telephonic conversations are not of much help either."

A girl student of class 9th standard from private co-ed school located in urban Varanasi.

The field narratives holistically sum up the entire picture, where the challenges and gaps could be seen from the beneficiary's point of view. It was surprising to note that even though, the students were facing a lot of challenges, for most part they largely seemed unaware of it. For instance, when the students talked about the work burden that they had to share at their respective homes, it was all said in an extremely casual tone.

6. The Way Forward

In the year 2019, India stood amongst the top countries around the world that have the greatest number of internet users with approximately 630 million users, majority of whom lived in urban areas. Telecom Regulatory Authority of India released the data (2019) as per which India had an internet density of 48.4%, with 97.9% in urban areas and 25.3% in rural areas, which represents the number of internet users per 100 people. However, the report also subtly acknowledged that there does exists a digital gender divide where, out of the total mobile phones' user population, 67% account for men and only 29% accounts for women. As per UDISE+ report, merely 18% of schools in Uttar Pradesh, including both government and private, have the facility of working computers and, out of this just 5% of government schools have such facility.

Instances from field investigation highlights that e-connectivity has been superimposed without any concern for e-readiness. There exists severe lack of resources along with the digital divide that is widely prevalent. Also noteworthy is the fact that there was no training conducted to apprise the teachers of digital education or to provide them a handholding support in form of infrastructural arrangements. The incapability of teachers to handle digital pedagogy resulted in a pitiful translation of what was being done in classroom teaching, and it poorly impacted the online teaching-learning process - which is really a shortcoming of administrative machinery. Furthermore, lack of stable evaluation and assessment procedures connectivity completely jeopardized wherein the loss of internet connection, for couple of

minutes to several minutes during the times of examination, was reported by students of private co-ed school.

Considering the scenario in Uttar Pradesh region with special reference to Varanasi, our findings recommend that there must be devised a sturdy training platform to strengthen the teacher to better adopt to the new normal. In this light, the state education department could perhaps come up with a repository of knowledge which should be in alignment with digital pedagogy and not just a mere translation of classroom teaching. It is high time that it is now realized that digital education needs a new outlook towards the core syllabus as well, which should be flexible to adapt to new methods of teaching-learning process. School teachers who are frequently engaged in activities not related to education, like such as assignment of duties during panchayat elections, collection of census data, door-to-door supply of food rations to school children (under the mid-day meal scheme which came to standstill during pandemic), door-to-door distribution of medicines to students, etc. should be all relooked with more compassion. Taking cue from international practices, university/college graduates could be encouraged to take up one-to-one education for school going children, in turn of which they could be awarded with some stipend and state recognition. Along with this, active community-level engagement with civil society is needed which would not just be limited to the state level. Bridge courses could be introduced to fill up the learning gap caused during the lockdown. Libraries of smart devices would be another source to empower the deprived students.

Embracing the core philosophy of the 'Sarva Shiksha Abhiyan' introduced by the late Prime Minister Atal Bihari Vajpayee, the Uttar Pradesh state government is encouraged by a recent ACER report indicating a positive trend in student enrollment, particularly in rural areas. According to the report, the enrollment ratio for girls increased from 51.9% to 58.1% in 2021, while boys' enrollment rose from 47.8% to 54.8% in the same year. The state's education initiatives have contributed to an improvement in literacy rates, reaching 81.8% overall, with 73.0% for both males and females in 2022, compared to 67.68% in 2011. It is crucial to note, however, that this data relies on the 2011 census, and the full impact of the pandemic and its repercussions on these figures are yet to be reflected. Consequently, addressing learning poverty is an urgent matter that demands serious consideration.

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