The education sector has been one of the primary victims of the COVID-19 pandemic. In India, more than 276 million children have been out of school for extended periods since March 2020 due to school closures in response to COVID-19. The structure of the schooling, teaching and learning process was the first to be impacted by the continual lockdowns. The educational institutes have tried to adopt the digital medium to replace the traditional classroom teaching model. Moreover, many school-going children in the country did not have access to high-speed internet or smartphones. Only a few well-to-do private urban schools could adopt an online teaching pedagogy; others couldn’t because of non-access to e-learning solutions.

A digital divide framework for online learning was adapted from Pachler et al (2010) for the exploratory case study involving five schools in the state of West Bengal. Students of these schools, their parents and the school teachers were the primary participants in the case study. The analysis found that three of the factors (geographical disparities, technology deployment cost, and socioeconomic factors) played a role in widening the digital divide. This study demonstrates that the digital divide is not exclusively a technological divide, but can also be addressed from the socio-cultural perspective. This structural reality perpetuates the social exclusion of marginalized groups and calls for measures by the policymakers to address equity gaps in learning opportunities.

Keywords: Digital Divide, School Education, Covid-19, Social inequities, Online Education, Virtual learning, Teaching and Assessment

Introduction

According to the report of the International Telecommunication Union (ITU, 2019, an agency of the United Nations), almost half of the earth’s inhabitants (around 3.6 billion people) did not even have access to the internet in 2019. As of March 2020, the Internet Penetration Rate (IPR) in Asia is the second last (55.10%) after Africa (39.30%), while the IPR in India is just 40.40 per cent compared to China (62.80%). Although about 78 per cent of Indians have mobile phones, it is around 57 per cent in rural areas (Jahangeer, 2020).
Larry Irving Jr. coined the term ‘Digital Divide’ (Dragulanescu, 2002) and referred to the unequal and disproportionate pace of development in societies with access to digital infrastructure and services (Bansode & Patil, 2014). It indicates the gap among people regarding access to digital tools and techniques and information technology (Pachler, 2007). The concept of the digital divide may vary from time to time and from one space to another. The digital divide may exist in different areas or the dimensions of the education process (Dutta, 2018). Some of the influences could be service availability, awareness about the digital devices, their extent of use, opportunity to learn and use new media, experience, skills, support, disability, linguistic area, gender, etc. Computer and internet access have also been related to socio-economic status (SES) factors such as family income, parental level of schooling, and parental job category (Harris, Straker & Pollock, 2017). Therefore, children who live in areas with higher SES factors (such as household income and parental education) are more likely to be frequent, longer-term users of information technology than children from low SES areas. Similarly, students from well-to-do schools have significantly greater access and use of computers and the internet than students from ordinary schools (Valadez & Duran, 2007). This type of disparity in access to information and education violates the human right of the right of access to information and education (Article 26 (1) of UDHR). The disruption in the education sector following the worldwide pandemic further exposed this divide. India was no exception as classes and exams across all educational institutes were halted in March 2020 and are yet to recover from the setback. The prolonged shutdown due to the outbreak of Covid-19 transformed the conventional classrooms in physical spaces into online or virtual classes due to the disease’s contagious nature. Using ICT medium, teaching and evaluating students were done primarily to reduce the learning gap due to the lockdown (Mahajan, 2020). Inequities in the school education system were all the more evident during the period of Covid-19 and is the motivation for this study. According to a UNICEF report, many children in South Asia have been severely hit by poverty, health issues and deficiency of education in the wake of the pandemic. The effect of long, stringent lockdowns has severely hurt the earnings of many daily wage workers and marginalized sections, resulting in avoidable dropouts. The pandemic has also dented the efforts towards “Ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations Sustainable Development Goal-4).

Review of Literature

There is renewed interest on the utility of digital learning following the outbreak of the Covid-19 pandemic across the whole world. Whenever
a society faces a crisis like war, pandemic, or natural disaster, it offers opportunities to innovate and new ideas emerge. Baytiyeh (2018) discussed the crucial role of information and communications technology (ICT) in delivering education during seismic events like earthquakes on educational services. Daniel (2020) describes Covid-19 as the most formidable challenge faced by education systems globally and how several governments ordered institutions to switch, almost overnight, from face-to-face (F2F) to online teaching and virtual education for the learners.

Mossberger, Tolbert and Stansbury (2003) conceptualize the digital divide to consist of multidimensional aspects of technological inclusion: “an access divide, a skill divide, an economic divide, and a democratic divide”. A goal for using ICT becomes the promotion of social inclusion among marginalized groups. During the recent pandemic, it has become increasingly clear that access to ICT and infrastructure to support it is an essential human right to function in today’s society (Sanders & Scanlon, 2021). Kasinathan and Ranganathan (2020) state that the virus has exposed many social issues related to access, inclusion, and gender equity. The gap in access to ICTs between the privileged class (the haves) and the underprivileged class (have-nots) in developing countries is rather wide (Venkatesh & Sykes 2013). In such countries, societal set-ups are based upon complex socio-economic levels and geographical spread. The majority of the population does not have access to basic capabilities such as healthcare and education (Srivastava & Shainesh, 2015), thus making access to ICTs low priority.

A National Education Policy (NEP) document formulated by the Indian government recognizes digital exclusionary practices prevalent among economically backward, tribal, caste and religion-based groups (Kasturirangan et al., 2019). The NEP document highlights digital technology diffusion to be an ongoing social divide problem requiring policymakers to facilitate equitable development activities in basic infrastructural issues and technology. Some other Indian researchers lately have also highlighted the “Digital divide in education.”

Das Gupta and Haridas’s (2012) study gave some inputs to the education component of ICT policy and school education policy of Government of Bihar on possible ways to create and improve the learning environment in schools in Bihar. Kumar, Basavaraja and Gagendra (2014) studied computer literacy competencies among Indian students and found stark differences between students residing in urban areas from their rural counterparts. Sharma, Mansotra and Sambyal (2009) observed that most private schools in Jammu and
Kashmir were providing computer education with ICT tools whereas this number was less than half in government schools. Khan, Kamal, Illiyan and Asif (2021) state that students from lower socio-economic strata faced problems in access to devices along with connectivity issues and did not accept that online classes can replace traditional face-to-face classes. Joshi and Vinay (2020) state that teachers’ perspective on online classes is a challenge for practical courses, primarily due to unsatisfactory infrastructure facilities and lack of emotional connection. However, researchers are unanimous that integrating ICT tools into the curriculum and tailoring pedagogy according to the social environment are necessary for achieving qualitative improvements in learning (Holla & Kremer, 2009; Sreekumar & Rivera-Sánchez, 2008; Barrett, 2009; Gurumurthy & Vishwanath, 2010). Policymakers need to find ways to bridge the prevailing divides between urban and rural areas by installing network infrastructure and scaling internet access wherever possible (Tadesse & Muluye 2020).

Research Objectives

“Secondary Education provides the foundation for nation-building, it helps in building attitudes, interests and qualities of children to enable them to take an active part in national development activities. Secondary education serves as a link between elementary and higher education and plays a vital role in this aspect” (retrieved from West Bengal Board of Secondary Education Website).

“Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all” is one of the goals prescribed by the United Nations for sustainable development of the world (Goal 4 | Department of Economic and Social Affairs (un.org)). Since the education sector was one among several sectors hit by Covid-19, one of the motivations for the research work was to identify gaps in the secondary education system in India. West Bengal, one of the eastern states of India with a literacy rate of 76.26 per cent (higher than the national average of 74.04 per cent as per 2011 Census) was chosen for the study.

The research objectives of the study can be enumerated as follows:

1. Understand the impact of Covid-19 on the students and teachers of secondary schools;
2. Determine students’ perception towards ICT usage for imparting education during the pandemic;
3. Determine teachers’ perception towards ICT usage for imparting education during the pandemic;
4. Analyze the issues and challenges in secondary education through an explorative case study.
Research Methodology

This study explores the challenges towards the secondary school students and teachers faced during the pandemic period. A representation of the methodology adopted for the study is provided in Fig-1. The Department of School Education and Literacy under Ministry of Education (Govt. of India) has formulated the “Samagra Shiksha Scheme” aligned with the recommendations of the National Education Policy 2020 (NEP 2020) to ensure that all children have access to quality education with an equitable and inclusive classroom environment.

The pandemic period is an apt period to measure the impact of ICT dissemination efforts by the Central and State Governments at the grassroots level, where the secondary schools have a crucial role to play. The primary education in India consists of Lower Primary (Class I-IV) and Upper Primary (Middle school, Class V-VIII) comprising children aged 6 to 14 years old. Secondary education covers children of Class IX-XII (aged 14 to 18), the final two years of which is often called Higher Secondary (HS), or simply the “+2” stage. Secondary education in India is examination-oriented and not course-based: students register for and take classes primarily to prepare for one of the centrally-administered examinations, CBSE, ICSE or respective state board exam. The scope of this exploratory case study is centred around schools in West Bengal and limited to students of class IX and X (Madhyamik...
or secondary level). The choice of schools is limited to government schools and government-aided schools spread across urban and rural regions of the state. The reason is that most private schools in the state are not affordable for the majority of the student population.

In 2020, 53 per cent of India’s total population accessed the internet from their mobile phones. This is expected to grow to 96 per cent by 2040, indicating a significant rise in the country’s mobile internet user base (Statista Key Market Indicators, July 2021). Pachler et al (2010) framework has been adopted for this study to investigate teaching and learning practices with ICTs concerning the three perspectives-structure, cultural practices and agency (Figure-2). The ubiquitous nature of mobile phones used as social and learning tools by the vast majority of the population was also a key influence in the choice of the framework.

Structure relates to physical spaces or locations, infrastructural contexts and communication modes individuals engage with their learning. In the present context, learner-owned devices are necessary for a fruitful engagement in knowledge transfer between teacher and students. Structural factors resonating with the current research are satisfaction with online classes, availability of device (mobile) as a learning tool, prior knowledge/comfort level with the device (mobile), the problem encountered in the device during an engagement, internet quality issues, electricity outages/load shedding and the learning platform used.

Cultural practices signify the routines users engage in their everyday lives, particularly the socio-cultural and technological structures that influence their learning. Mobile devices are increasingly
used for social interaction, communication, and sharing and learning is viewed as culturally situated meaning-making inside and outside of educational institutions. Cultural factors chosen for research purpose are students possessing their own device, number of rooms at home, parental demographic profile and classroom timings.

Agency refers to an individual’s ability to form relationships with others (mediated by technology) in which their expertise is individually appropriated in relation to personal definitions of relevance. Young people (students in this case) can be seen increasingly displaying a new habitus of learning where they engage with ICT in formal and informal spaces to achieve desired learning outcomes. Agency factors aligning with the current research work are new habits of learning (e-book/online exam), increased expertise in mobile use, ease in submission of assignments, avoiding disengagement in the learning space (temptations to divert elsewhere) and socialising experience.

Schools are traditionally viewed as formal centres of collective learning. Lately, ICTs have changed learning to a more individualised and private context. Also, cultural practices dictate how ICTs are positioned in formal and informal learning spaces. Hence, learning is a function of both the context and the culture in which it occurs and the interrelationship of these three components manifests itself in the form of an emerging cultural transformation.

The West Bengal Board of Secondary Education has divided its schools into four geographical spheres for better coordination: Kolkata, Burdwan, Midnapore, and North Bengal. There are 3584 government sponsored and government aided secondary schools in West Bengal, out of which an overwhelming 2642 are in the vernacular (Bengali) medium, while the next largest category is Hindi medium with 112 schools (WBSE website). For the case study, one school from each of the four geographical sub-divisions has been chosen, two in the urban setting and two in the rural setting. Two of these schools are government sponsored, while two are government aided schools. For comparison sake, a top private school of Kolkata city (referred to as BM) under CBSE board is earmarked for benchmarking purposes. The secondary study purported that the ICT maturity of the school chosen for benchmarking is very high, considering demographics of student/parent mix, teacher profile/qualifications, school infrastructure, and website richness of features and information. Almost all students and teachers of this school-owned their own device (laptop/tab/smartphone) and used the digital medium even in the pre-Covid 19 period, although classes were held offline during pre-Covid 19 period. The students came from affluent families as the fees charged by this English Medium
School were beyond the reach of the lower middle class and economically weaker society. However, familiarity of students and teachers of this school with ICT applications in education was very high. For the sake of confidentiality and privacy, the characteristics of the government/government-aided schools (names masked) are summarized in Table-1.

### Table-1. Characteristics of sample schools in West Bengal
(Source: https://www.icbse.com and own study)

<table>
<thead>
<tr>
<th>Name</th>
<th>SS-A</th>
<th>SA-B</th>
<th>SS-C</th>
<th>SS-D</th>
<th>BM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt/Aided/Pvt</td>
<td>Govt</td>
<td>Aided</td>
<td>Govt</td>
<td>Govt</td>
<td>Pvt</td>
</tr>
<tr>
<td>Board</td>
<td>WBSE</td>
<td>WBSE</td>
<td>WBSE</td>
<td>WBSE</td>
<td>CBSE</td>
</tr>
<tr>
<td>Urban/Rural</td>
<td>Rural</td>
<td>Rural</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
</tr>
<tr>
<td>Boys/Girls/Co-ed</td>
<td>Boys</td>
<td>Girls</td>
<td>Girls</td>
<td>Co-ed</td>
<td>Co-ed</td>
</tr>
<tr>
<td>District</td>
<td>Burdwan</td>
<td>Midnapore</td>
<td>Cooch Behar</td>
<td>Hooghly</td>
<td>Kolkata</td>
</tr>
<tr>
<td>Approachable by All-Weather Roads</td>
<td>Yes</td>
<td>Partial</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Record Maintained as per RTE</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>Text Books Received</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Mid Day Meal</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Computer Aided Learning</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Electricity Connection in School</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>School Building Boundary Wall</td>
<td>Partial</td>
<td>Partial</td>
<td>Pucca</td>
<td>Pucca</td>
<td>Yes</td>
</tr>
<tr>
<td>Books Library</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Playground</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Drinking Water Type</td>
<td>Tap water</td>
<td>NA</td>
<td>Tap</td>
<td>Tap</td>
<td>Filtered water</td>
</tr>
<tr>
<td>Medical Check-Up</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Disabled Friendly Ramps</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Medium of Instruction</td>
<td>Bengali</td>
<td>Bengali</td>
<td>Bengali</td>
<td>Hindi</td>
<td>English</td>
</tr>
<tr>
<td>Classes</td>
<td>V-XII</td>
<td>V-XII</td>
<td>III-XII</td>
<td>V-XII</td>
<td>LKG-XII</td>
</tr>
</tbody>
</table>

Although the research commenced in March 2021, exactly a year after the pandemic outbreak, it was punctuated in between due to communication constraints and most notably the second wave, which was pretty devastating. The principal/headmistress of the respective schools provided above were contacted initially and apprised of the research objectives. For all the schools, a senior class teacher of Class IX or X was earmarked as the resource person who would act as the intermediary with students, their parents, other teachers and the school management. The only school where a physical visit was made between March and November 2021 was the model or benchmarked school, BM, Kolkata. For all the other schools, the mode of communication was through mobile voice/video calls/messages and Google Mail/Meet.

One of the primary respondents of this study were the school students (class IX-X) who were administered a survey questionnaire through their class teachers. The questionnaires were administered
in vernacular medium (except for students of benchmarked school) with the help of the respective school representatives. Since the study was exploratory in nature and reaching out directly to the young students was a challenge during the pandemic, the questions were predominantly simple Agree/Disagree category questions (Table-2). A sample of 381 students (164 males and 217 females) out of nearly 700 students responded from the sample set of school students in West Bengal during the months of April-May, 2021. The reasons for a lukewarm response despite follow-ups were students’ mental anxiety during this tumultuous period and the remote nature of the study with multiple dependencies. There were five specific sections included in the questionnaire (Table-2). Section-1 gathered information related to the demographic profile of the students. Section-2 of the questionnaire covered structural aspects like device access and ICT capability. Section-3 highlighted the cultural aspects of the framework and family education/income while Section-4 provided a glimpse of the agency aspects of respondents. There were many missing values against some sensitive information sought like religion or parental income; hence, these were omitted from the analysis. The information gathered from the questionnaire has been summarized in the “Findings and Analysis” section.

Table-2. Survey Questionnaire for students

<table>
<thead>
<tr>
<th>School Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class and Section (e.g. IX-A):</td>
</tr>
<tr>
<td>Gender (M/F):</td>
</tr>
<tr>
<td>Age (optional):</td>
</tr>
</tbody>
</table>

**SECTION-2**

Online Classes are a good substitute for offline classes during the pandemic period (Agree/Disagree):
I have access to a device/mobile to attend online classes (Agree/Disagree)
I have prior knowledge of the device/mobile used for online classes (Agree/Disagree)
I have encountered device problem during engagement with my teacher (Agree/Disagree)
I face internet quality issues in my locality (Agree/Disagree)
I face electricity outage/load shedding in my locality (Agree/Disagree)
What is your favourite platform for engaging with fellow students/teachers? ______________

**SECTION-3**

You possess personal device/mobile for engagement any time (Agree/Disagree)
How many rooms you have at home? (1/2>2)_________
What time do you prefer to attend online classes? (Morning/Evening/Flexitime)___________
What is the highest level of education for either parent? (No education/X pass/XII pass/Graduate/Others)
What is your parent’s occupation? (Business/Govt.job/Daily wage earner/Unemployed/Private/Others)

**SECTION-4**

Online engagement has enabled me to cultivate new habits of learning e.g. e-book and online exam(Agree/Disagree)
Online engagement has enabled me to increase familiarity/expertise with my device/mobile (Agree/Disagree)
I can easily personalize my work like submitting assignments (Agree/Disagree)
I can avoid distractions or temptations to divert elsewhere while engaged online (Agree/Disagree)
I use my device/mobile to socialize virtually (Agree/Disagree)

The other prominent category were the teachers and the parents of the students studying in the schools. Focus group discussion is frequently used as a qualitative approach to understand perceptions, insights, and attitudes related to research work. In this case, “purposive” or “convenience” sampling was used to identify potential participants for conducting an online focus group discussion considering pandemic times. Three teachers of each secondary school and one parent was targeted for all the five schools. The online focus group discussion was conducted on the Google Meet platform over a period between 1.5-2 hours between April 2021-October 2021. The participants were briefed about the context beforehand (research objectives) and the online focus group meeting was scheduled at a mutually convenient time for all the participants from each school. The group members were given adequate time to express their views, and the whole discussion was recorded with their permission, although some of the teachers expressed their desire to keep the conversation confidential and within the group. An analysis of the conversations yielded an output shared in Table-3. The focus group validated most of the concerns expressed by the students through the questionnaire and provided additional insights mentioned thereof.

Table-3. Summary of Focus-Group Discussion

| What has been the impact of Covid-19 on the education of students at the secondary level in your school? | • Impact mild to severe depending on type of school.
|                                                                                                           | • Hard to adapt for all stakeholders.
|                                                                                                           | • Dropouts due to economic distress or lack of motivation.
|                                                                                                           | • Increased absenteeism among students (less absenteeism with schools reopening in November).
|                                                                                                           | • Students disinterested or not comfortable with online classes.
|                                                                                                           | • “Utkarsh Bangla” (skill development scheme) affected.
|                                                                                                           | • Although situation is better with reopening of schools in the offline mode, there is fear lurking in the background.
|                                                                                                           | • Quick turnaround time from offline to online classes have caught most schools unaware and exposed the lacunae.
|                                                                                                           | • Inadequate training in ICT and hence teachers took time to adjust to the new mode mainly through self-study.
|                                                                                                           | • Learning through Activity Tasks due to lack of better methods of assessment.
|                                                                                                           | • Keeping fixed schedule of classes became a challenge. |
| What are the issues and challenges in education confronting you during the pandemic period?               |
Digital Divide and Inequities in School Education during Covid-19

Mental stress leading to behavioral and psychological issues among certain students
Many teachers preferred to hold classes in the evening due to availability of more students compared to daytime
Distribution of textbooks/exercise books and midday meals were disrupted during the early period
Covid-19 has provided valuable lessons to all stakeholders for identifying the shortcomings in imparting education for all

What is your perception towards ICT usage for sustaining learning during the pandemic period?

Online classes have a positive impact on technological capability of teachers
Training programs in ICT could be organized for teachers as digital education becomes the norm during uncertain times
Increased time allocation for preparation of electronic notes or videos for students and posting it on social media (Facebook, Youtube, Gmail, Whatsapp or school repository)
E-learning materials (including model question papers) on “BanglarShiksha Portal”, also accessible through Youtube
“Banglar Shiksha Online classroom”, Live telecast of classes carried out in two popular Bengali news channels ABP Ananda and Zee 24 Ghanta
Learning/Doubt clearing through Tele Mode (Banglar Shiksha Durabhashe), Toll-free dedicated telephone numbers
Online education cannot replicate offline education completely and this can only act as a substitute in times of distress

How do you assess your student’s perception towards ICT usage for sustaining learning during the pandemic period?

Difficult to sustain online education during initial stage of pandemic due to lack of device among students
Connectivity issues in certain geographical areas
Home environment not conducive for learning
Lack of interaction with teachers
Female students were by far more serious about education than their male counterparts
Some female students have to additional attend chores at home affecting presence in online classes
Some male students from economically backward sections had to join work due to parental pressure or uncertainty ahead

Findings and Analysis

The responses to the survey questionnaire were compiled and documented in a structured manner before being analyzed in MS Excel. Also, the focus group discussions among teachers/parents are summarized in this section and analyzed.

Fig-3 provides a snapshot of the gender-wise breakup of the number of students from each class (IX/X) of the respective schools responding to the survey. The total no. of female respondents (217) is
higher than males (164) as two of the schools are exclusively girls’ schools, but the sample was quite representative of the population. Fig-4 shows the responses (relative no. of students) about basic readiness of students (Structure) for online classes. The graph indicates that schools in the rural part of the state (SS-A, SA-B) could not adapt to online classes compared to their urban counterparts (SS-C, BM). Even in the case of an urban school (SS-D), lack of device access among students proved to be a big hindrance. Internet Quality was also a concern area for most of the schools (except BM). Survey responses also observed that Whatsapp and Google (Mail) were the most popular platforms among the schools surveyed. Fig-5 demonstrates the demographics of parents and provides a socio-economic perspective, while Fig-6 offers additional information on the socio-cultural aspect. It is pertinent to mention that income and religion /caste aspects was deliberately omitted from the questionnaire. Fig-5 shows that most of the respondents from schools’ SS-A, SA-B and SS-D are from the lower strata of society. Again, the home environment of most of the rural schools seems to be a thing of concern. Since many of the students did not own their own devices, some teachers preferred to take their classes in the evening and adopted flexible class schedule. The responses pertaining to the agency part of the questionnaire is depicted in Fig-7 and the rural schoolchildren (SS-A, SA-B) are also laggards in this aspect. The interrelationship of these three components: agency, structure and cultural practices, the routines users engage in and the socio-cultural/technological structures that govern their everyday lives, manifests itself in the form of an emerging cultural transformation for the better.

Salient points of the multiple online focus group meetings on the research objectives have been consolidated and presented in Table-3. The meetings with the teachers and parents provided insights into the digital and socio-cultural divides across schools in West Bengal, which are discussed in the next section.

![STUDENT DEMOGRAPHICS](image)

Fig-3: Student Sample respondents
Discussion

The prolonged spell of the pandemic in the country caught the policymakers in the education sector unawares and the indecisiveness percolated down to the school management. When Covid-19 struck in March 2020, Madhyamik exams (Class X exams) were interrupted and the schools closed as per Govt directive. There was virtually no clarity moving forward until June 2020, when the school management realized that they have to live with Covid and couldn’t let students’ education suffer. Teachers were advised to overcome technology phobia and prepare to impart virtual education to the students, while the management had to plan for digital transformation overnight. While schools in the urban regions (SS-C, BM) adapted to online education better than rural regions (SS-A, SA-B), there were exceptions too (SS-D), mainly due to lack of device accessibility and unfamiliarity with ICT (Fig-4) and socio-economic parameters (Fig-5). While some progressive schools like SS-C took the lead in aligning technology and pedagogy in tune with students’ interests and learning preferences, others with limited resources and capabilities like SS-A and SA-B had to wait for WBSE’s directives. The State Department of School Education took cognizance of students’ problems from the economically weaker section and residing in relatively remote areas. The pandemic affected these students the most as most of them could not join online classes (Fig-4) and they also believed that online classes were not sufficient for them. Online education disturbed teachers’ and students’ relationships in rural schools like SS-A and SA-B as teachers could not give extra attention to students who needed more care and empathy. Unfortunately, a large section of the school students could not be a part of this digital transformation journey (Fig-6). Covid-19 created a new crisis in the education system due to a huge digital divide, leading
to a loss of learning in the short run, while simultaneously increasing the chances of dropping out from education. In fact, WBSE announced in December 2020 that all students from Class VI-IX would get promoted to the next class without appearing in any examination/evaluation.

Fig-5: Socio-Economic Aspects

Fig-6: Socio-Cultural Aspects

Fig-7: Self-Transformation Aspects
Subsequently, WBSE took innovative steps to enable education to reach the underprivileged and needy ones who were “digitally handicapped”. Live telecast of classes (“Banglar Shiksha Online classroom”) were carried out in two popular Bengali news channels ABP Ananda and Zee 24 Ghanta. Learning/Doubt clearing through Tele Mode (“Banglar Shiksha Durabhashe”) via Toll-free dedicated telephone numbers were implemented. Teachers were instructed to share notes and lessons with students on the platform acceptable to the majority (WhatsApp, Google Meet/Mail, Zoom, Facebook, You Tube) and on the respective school website. While urban schools continued with synchronized classes from 2021, rural schools banked mainly on a synchronized classes and activity tasks for assessment purposes. Class IX and X students attended school physically for a brief period in February-March 2021 and the teachers reported their enthusiasm and excitement returning to school after a hiatus. Madhyamik exams of 2021 scheduled for June 2021 had to be called off in June 2021 due to the second wave of Covid-19 and a unique website (wbbsedata.com) was created to upload marks of each candidate by the respective schools based on certain criteria prescribed by WBSE. The result thus assimilated was published by WBSE in July 2021, resulting in a record pass percentage of students in 2021. Moreover, there were complaints from a large section of the students and their parents in the absence of objective indicators in evaluation.

Currently, class IX and X students have resumed physical classes from November 16, 2021, as per Govt. directive and a quick telephonic feedback from some of the teachers from the schools surveyed is very positive. Students’ attendance is pretty high, although there were a few casualties to the long closure in the form of dropouts, mainly due to sustainability issues among the economically downtrodden. The female population reported more enthusiasm in resuming their education, which is very heartening.

Conclusion

The outcome of the exploratory case study points towards lack of digital access and digital capability, socio-economic status of parents of the students, and geographical location for inequity in school education during Covid-19. The benefits of ICT-based knowledge and skills could not percolate down to most learners (students) and even teachers during the pandemic. However, further studies in this regard taking more schools from different parts of India need to be done by researchers. The pandemic has also taught policymakers and administrators how to scale up the ICT infrastructure and think of innovative solutions in education. The Department of Education, Govt. of India needs to adopt a contextualized ICT policy approach by
considering the social context of digital inequalities within the national ICT policy to ensure a more inclusive society. It is only then that digital technologies will reach out to the citizens at the grassroots level and break the digital divide, which seems to have been exacerbated due to the pandemic. It is envisaged that there may no longer be a need for differentiation between media for learning inside and outside formal educational settings in the foreseeable future.

Endnotes

1 Government schools are completely owned and controlled by the government. The government is in charge of the curriculum, study materials, fee structure, syllabus, examinations, etc.

2 Government-aided school is owned by a private management but gets aid from the government.

REFERENCES


