Digital Learning and Digital Divide: Scaling the Gap of Access and Equity among Schedule Tribe Students during Covid-19 Pandemic: A Case Study Approach

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Abstract

The study is grounded on a qualitative research approach conducted in rural Kashmir to emphasize the challenges of the digital divide among scheduled tribe students. It offers a critical examination of the prevailing techno-strategic debates and parental perspectives on digital learning. This study briefly explores the digital divide in virtual learning by analysing the ground situation among scheduled tribe students to identify and quantify the pattern and severity of the pandemic effect. It examines digital access, digital inclusion, and digital equity among the scheduled tribe students during a period when educational institutes were forced to stop on-campus classes and move to online classes owing to the spreading pandemic. Furthermore, investigating strategies to provide educational content virtually in situations where technology accessibility is limited or non-existent is a top research priority. The results revealed that the majority of presently enrolled ST learners lacked access to basic digital infrastructure, they were academically stagnant, and the marginalisation among them was further worsened during the Covid-19 pandemic. Finally, the study recommends some simple policy directions toward the resolution.

Keywords: Digital– Divide, Pandemic, Schedule Caste, Equity, Access.

Introduction

What the pandemic brings to light, is the tight relationship between education and technology access. Nonetheless, remote learning has become permanent in the field of teaching and learning and it will always be an important part of our educational landscape. While digitization is reshaping societies and powering the majority of digital economic growth of the world, some elements of society continue to lag. Economic, societal, regional, and generational barriers frequently underpin digital disparity or unfair distribution and acceptance of digital goods and services (Maceviciute and Wilson 2018; Van Dijk 2012). This unequal access to technology and internet has dismal effects not only on quality education but also on the mental health and social well-being of students.

The Digital Divide, also referred as the digital split, is a social issue that refers to the disparity that prevails among those who have access to contemporary information and communication technologies and those who do not. As the pandemic of Covid 19 spreads, there has been a major shift towards online classes because of the closing down of

educational institutions for an uncertain period of time (Martinez, 2020). Education institutions have abandoned conventional in-class teaching in favour of remote teaching, which involves computers and the internet to connect students to teachers and educational sources. This unique and quick reconfiguration significantly altered the role of technology. As a result, a paradigm shift has emerged, with major ramifications for underprivileged students.

There is a prevalent belief that there is a technological answer to every problem. This technical solutionism is ludicrous because it misses the most fundamental question: can technology solve the educational difficulties caused by lockdown? Our recent experience with COVID-19 demonstrates that technology-based schooling caused by the pandemic has increased academic complications. It has had a negative impact and is exacerbating already existing educational gaps of susceptible students. People who do not have access to ICTs are much more disadvantaged than previously. These digital technical gaps have far-reaching consequences for educational access. They point to new hurdles in achieving the ideal of equal educational opportunity set in fundamental law over decades ago. Concerns have also been expressed about how people who are already marginalized in terms of access to ICTs, notably SCs, STs and girls, may suffer even more as a result of the current scenario. As a result, attempting to make online education a viable option in the aftermath of the COVID-19 issue runs the risk of further lagging many students, particularly the socioeconomically disadvantaged (UNESCO 2020). Therefore, when pupils were suddenly obliged to study from their homes, this disparity would have had a greater impact on the have-nots.

Literature review

A widely discussed phenomenon, the digital divide, was unequivocally exposed by the COVID-19 pandemic. As the Covid 19 pandemic spreads, online services were among the earliest and simplest distance solutions brought out in South Asia in reaction to the shutdown of educational institutes. UNESCO (2021) reported that the duration of closure of educational institutions in India has been amongst the lengthiest around the globe. However, estimates imply that only about 45 per cent of India's population uses the Internet. (Hootsuite and We Are Social, 2021). No doubt, these disparities existed previously, the COVID-19 contagion has highlighted this digital gap (Jæger & Blaabæk, 2020).

The Indian Constitution lists tribal people as Schedule Tribes with a view to providing them basic support to overcome the issues of equity from the general population. According to the 2011 Census, 10.43 corer people in the country belong to the tribal category, which means 8.6% of the total population. Questions persist about whether online learning is successful, engaging, and sustainable, as well as if and how it can reach all students equally, particularly the most vulnerable populations. (UNICEF ROSA, 2020a; Biswas et al., 2020). Low-income households in India, mainly in rural or semi-urban areas, are significantly affected by digital disparity (Maceviciute and Wilson 2018). Furthermore, there are major disparities in ICT adoption and utilization in India. The urban teledensity (about 160 per cent) is roughly three times that of the rural teledensity (approx. 59 per cent), despite the fact that around 70 per cent of India's population lives in rural areas (Census, 2011; TRAI, 2020).

While the pandemic not only highlighted the significance of the digital economy but also revealed many types of digital

inequalities that exist between people in developed and underdeveloped nations. (Tadesse and Muluye 2020). Lembani, Gunter, Breines, & Dalu (2020) found that the digital divide existed on the basis of locale; rural students often do not have adequate facilities for ICTS. Grishchenko (2020) also conveyed that the economically underprivileged often have insufficient access to digital technology. Beaunoyer, Dupéré, and Guitton (2020) viewed that the digital divide existed before, but the Covid-19 pandemic has aggravated it. Since online and distant learning is considerably less successful than teacher-led, physical classroom learning, pre-existing learning inequities were amplified when students were forced to adjust to the "new normal" of online instruction. Pandey, N., & Pal, A. (2020) & Calonge, D & M, Aman (2016), the instant transformation to an online forum or virtual mode was possible and accessible to a sizeable population of students, however with many glitches. Urban India swiftly acclimatized to this approach, but there are harrowing reports about how rural India's digital divide has become a bottleneck in its passage towards virtual learning.

Research Context

The present study was carried out in the district Kulgam of Jammu & Kashmir Union Territory. The northernmost part of India, Jammu and Kashmir, is known throughout South Asia for its scenic beauty and charismatic nature. The state is mainly occupied by Kashmiri-speaking people. However, the influence of other ethnic minority groups on the variegated total cannot be neglected. According to the census 2011, about 15 lakh STs were recorded in the State's overall population of 1.25 crores, thus constituting 11.9 % of the total population. But as far as district Kulgam is concerned, STs only comprised 1.78 per cent of the population (Census, 2011).

Methodological Framework

Phenomenological Approach:

Qualitative in nature. The present study adopted a phenomenological approach. The phenomenological research approach aims to better understand people's views, perspectives, and knowledge of a phenomenon. As Wertz (2005) puts it: "phenomenology is a low hovering, in-dwelling, meditative philosophy that glories in the concreteness of person world relations and accords lived experience, with all its indeterminacy and ambiguity, primacy over the known".

Sample

The sample for the present study consisted of 40 students, 20 of whom were from Schedule Tribe (ST) category and 20 from the general category of rural students, in order to analyse the extent of accessibility of ICT-based facilities. In addition, 20 interviews were conducted, which included a sample of 10 parents belonging to the Schedule Tribe and 10 teachers residing in the foothills of the Pir Panjal range in the Kulgam district.

Tools / Instrumentation

The investigators used a checklist for quantitative assessment, and interviews were conducted to get in-depth descriptions and interpretations of the variables under investigation. A checklist comprising a total of 10 items was developed by the investigators to assess the fundamental facilities utilized in online teaching and learning. The items, such as the availability of smartphones, laptops, or television sets, served as the foundation of the checklist. Qualitative data was obtained through in-depth and unstructured interviews, which were recorded using recording devices and transcribed verbatim. The interviewees' answers were mostly presented as direct quotes.

As interviews were unstructured in nature questions like, mentioned below were posed to the respondents.

What specific challenges Schedule tribe Students might have faced in maintaining their academic progress since the onset of the COVID-19 pandemic, particularly in the transition to digital learning?

How has the lack of basic facilities contributed to any academic setbacks they may have experienced?"

How has the combination of poverty and familial illiteracy among tribal students increased the risk of academic disengagement, particularly with the transition to online classes?

How has the role of ICT gadgets been crucial in accessing and equalizing e-learning opportunities in the context of the transition to digital learning during COVID-19?

Research Questions

This study intends to address two major research questions. Firstly, it is intended to analyse the basic ICT facilities available to the Scheduled tribe students of district Kulgam, and secondly, it aims to study the efficacy of digital learning transactions among Scheduled Tribes students. Thus we propose the following research questions:

(i) To what extent are the ICT-based facilities available to the children of Scheduled tribes?

(ii) To what extent have the digital learning transactions been successful among Scheduled tribes' students during COVID-19?

Analysis

The interviews were transcribed into English from Urdu language. Furthermore descriptive statistics were used to find out the gap of access between general and scheduled tribe students.

Figure-1: Comparison between ST students and General category rural students on ICT-based facilities (20 each)
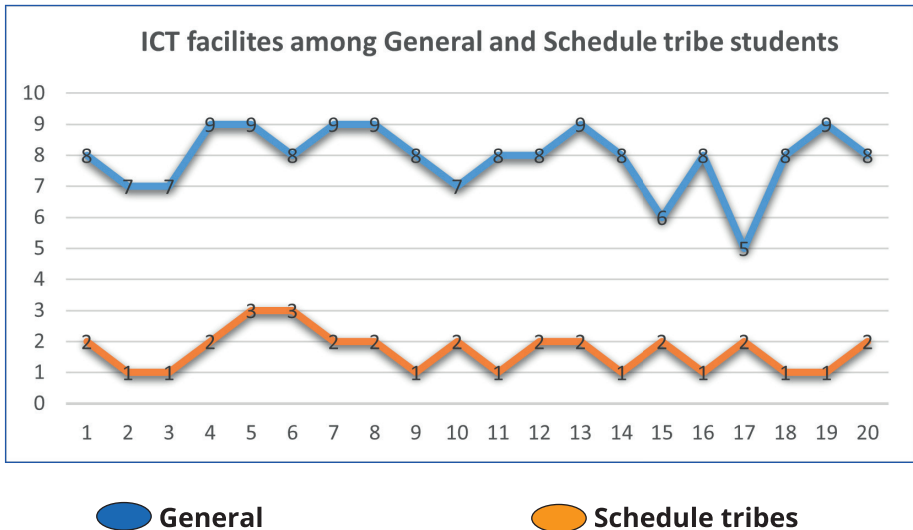
As depicted by the figure, (10 item information blank regarding the ICT facilities, 'Yes' counts for '1' & 'No' for '0') a total of 40 information schedules

were filled comprised of general and scheduled tribe students, their scores were summed up to find out the gape of access of ICT facilities among the groups. It is indicated that there exists a wider gap between the general students and scheduled tribe students regarding the ICT facilities. So it is obvious that ST students were facing a lot of difficulty, and even most of the time they, were unable to learn anything during the Covid-19 pandemic.

Based on the thematic analysis of interviews, some of the themes which emerged out, are as follows

The themes emerging from the data were clustered under two categories: Academic stagnation. The first theme, Academic stagnation, highlights the underlying narratives gleaned from the interviews of parents. The second theme Exacerbated Marginalisation highlights the perspectives of secondary and senior secondary school teachers on what constitutes good e-learning experiences.

I). Academic Stagnation

Following the COVID-19 outbreak, educational systems switched to new learning techniques facilitated by the Internet, but students in rural and underprivileged regions in India were left behind. Our results indicated that during the COVID-19 pandemic, respondents had a significant variation in their accessibility to remote learning possibilities. The major challenges found were the unavailability of phone credit and internet data; additional challenges cited by students include electricity and gadget access. This is not surprising considering the fact that internet penetration in India is only 45 per cent (Hootsuite and We Are Social, 2021), reflecting that more than half of the population does not have access to the internet. In this manner, one of the parents viewed that

> "Mobile phones play a critical part in accessing and equating e-learning opportunities around the system....."

This tacit separation of children from distressed households has resulted in academic stagnation among the majority of the students. People with higher incomes have a greater chance of embracing ICT. Income is a metric for determining one's ability to buy ICT devices (Asrani, 2020). As reported by another parent

> "The major reason of educational stagnation among pupils is poverty; we cannot afford to have a separate mobile phone for every child....."

In addition, as compared to students from unreserved regions, students from scheduled tribal areas were less likely to be academically engaged. The majority of their children are enrolled into government-run institutions. Moreover, not all students have equal access to and expertise in digital technologies. Even those who did have access to gadgets were unfamiliar with online platforms, which hampered their education. One of the parents reported that ....

> "Lack of awareness of smartphones and the internet is a major concern. Additionally, the dearth of digital expertise of parents has made it more difficult for them to attend online education......"

So therefore inequitable use and dissemination of Information and communication technologies have created new disparities and exclusion by replicating existing inequalities and social classes. This may result in a "Matthew Effect" in digital inclusion in India, with those who "have" broadening their opportunity set whereas those

who "don't" become increasingly emasculated and omitted from the mainstream.

II). Exacerbated Marginalisation

It is not new for the educational system in India to have marginalisation, and it does not appear to be slowing down (Dar, 2021). The Remote Learning Reachability Report (2020) by UNICEF concluded that: "The learning gap is likely to widen across high, middle and low-income families, as children from economically disadvantaged families cannot access remote learning". Inequity in accessibility to ICT-based education exacerbates existing learning inequities along socioeconomic and geographic lines. Children from poor families have less access to ICTs, one of the teachers reported that,

> "Our children received formal education until the novel coronavirus (COVID-19) pandemic interrupted schools and required classes to be delivered digitally; they have fallen behind academically due to lack of basic facilities……"

Without careful consideration of how, by, and for whom technology is utilised, it has the potential to worsen existing disparities. This implies that, while pupils from better-off families can easily make the transition to virtual learning, students from less-affluent backgrounds are more likely to succumb to ineffectiveness and a lack of adaptation, either due to the unavailability of technology or the inability of their parents to steer them through tech-savvy applications. The majority of learners from underprivileged families have been deprived of online classes due to the digital disparity. Another teacher reported that...

> "Majority of the tribal students are always at a greater risk of abandoning their studies due to their poverty and familial illiteracy. Furthermore, when classes were shifted online, the majority of the parents were not able to provide a separate smartphone to their children to follow online classes…."

As a result, establishing an online education programme without attempting to address both the vast access gap and inequities in digital infrastructure will result in socioeconomically disadvantaged students being excluded from learning opportunities. Most significantly, such exclusion may worsen the large and systematic socioeconomic inequities in learning opportunities and outcomes, which affects their education, wellness, and capacity to have their views heard.

Discussion

The study employs a phenomenological approach to emphasize the challenges of the digital divide among scheduled tribe students. It offers a critical examination of the prevailing techno-pedagogical debates and parental perspectives on digital learning. It was observed the prevailing context of social and educational marginalisation is exploited by both organization's structure and policy framework. The analysis reveals some vital information, a vast majority of presently enrolled ST Learners lacked access to basic digital infrastructure, such as a laptop or tablet with internet access. Access to key e-learning is incredibly limited among pupils from the poorest socioeconomic backgrounds. Only pupils from the richest socioeconomic groups and those from privileged social groups have better access. What kind of learning and inclusiveness can online

education promote when only a few students from STs and Scheduled castes have access? A vast number of learners may be unable to fully participate in and benefit from virtual classrooms due to the twin whammy of limited access and a deep digital disparity. Unfortunately, there is no magic potion that will set things right, and it is a well-known fact that one-size-fits-all thinking no longer works (Bozkurt & Sharma, 2020). Before implementing strategies, we must consider a variety of factors, including the target population, age range, technology infrastructure, and social and economic backdrop. Although it has been argued that developed nations have an edge when it comes to launching emergency remote teaching (Saavedra, 2020), this is not true for all nations, it has been observed that the digital divide remains a problem, and many learners continue to be denied educational opportunities (Bozkurt & Sharma, 2020).

Recommendations

The study recommends some of the policy directions toward the resolution to ensure that everyone has access to and uses information and communication technology, especially the most disadvantaged and marginalised groups.

1. Specific consideration must be given to most disadvantaged populations, including STs, SCs & girls. Adopting an inclusive strategy must serve as the driving concept in bridging the gap of acess and equity among them.

2. Education stakeholders and policy experts need to constantly liaise with governments and large corporations to increase funding to make it easier for schools, students, and teachers to utilise digital learning tools.

3. Efforts are needed to put an emphasis on policies that lower the digital gap and bring the nation closer to reaching the goal of digital equity.

4. The "right to education" must be implemented in such a way that meets every student's requirements for access to, mastery of, and use of technology as an effective instrument for participating fully in society.

Conclusion

Tribal education cannot be delegated to short-term Plan tactics. E-learning will keep dominating the field of teaching and learning because of its potential benefits. Therefore, it is critical that planners have a long-term perspective that is grounded in a sound policy framework. Guaranteeing all-inclusive and equitable quality education for all should have paramount importance in our policy decisions.

Case Report

India has the world's second-largest educational system after China. During the COVID-19 crisis, closing schools to preserve social distance was the most rational way to avoid community transmission. This extended shutdown has adversely impacted the most underprivileged pupils and has widened the educational opportunities among them. Maldar area is a socio-economically backward area of the Devsar constituency of Kulgam District. The hamlet is an averagely low economic status region. There are near about 220 students including secondary and senior secondary students. Before the Pandemic, the teaching-learning system was purely based on face to face traditional teaching system. During the pandemic of Covid-19, when entire educational was shifted towards the

e-learning platforms, ST students were facing a lot of difficulties to continue their education. On surveying, it was found that all the students were lacking basic ICT facilities except the portable radio set. Their low income forced them not to avail smartphones to their students, which resulted in academic stagnation among students.

No doubt, the Jammu and Kashmir school education board had upgraded all the students through the process of Mass promotion. But the matter of concern is that the gap of educational backwardness has widened enough, that if the pandemic continues for some more time, the widened educational gap is impossible to fill. The digital gap is so vast that many learners have never taken a single online class. Even though the State Government had intended to broadcast lessons and educational activities on Doordarshan for students, what about those who do not have even a television set, or an electricity connection, as a result, the majority of tribal learners were not addressed by either initiative

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