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5. Digital Disconnect: An Analysis of Equity and Social Justice in Nepal's Higher Education

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Abstract

The COVID-19 pandemic brought a colossal challenge around the world, affecting all sectors of human affairs, including higher education. Due to a prolonged health crisis, colleges and universities in Nepal adopted online/remote teaching as an emergency response mechanism. Against this backdrop, this study examines remote teaching and learning practice and its efficacy and impacts on disadvantaged students in Nepal. Adopting semi-structured phone/online interviews with university students, we highlight the challenges of disadvantaged students' unequal participation in higher education. It is argued that disadvantaged students in Nepali higher education have been profoundly impacted by the lack of digital preparedness and the dearth of proper student support and motivation mechanisms. If unprepared for effective responses, this can adversely affect students' participation in higher education, engagement in learning, and completion of the university course cycle. Implications of the research findings are discussed concerning higher education systems' justice and democratic values.

Keywords

Access; COVID-19; disadvantaged students; higher education; inequalities; remote learning

Introduction

The COVID-19 pandemic has continuously imposed a colossal challenge on education systems around the globe (Bajaba et al., 2021), as millions of students in higher education could not access formal learning due to the closures of educational institutions (UNESCO-IESALC, 2020). As an emergency response, colleges and universities worldwide adopted distance teaching and learning strategies adopting digital tools, radio, and television to continue students' learning (Suleri, 2020). Although online/remote learning is expected to have a positive disruption in higher education, it has largely failed to solve the iron triangle—access, quality, and cost—owing to the failure of education systems to close the widening socio-economic

and regional disparities (Garrett, 2019; Hill & Lawton, 2018). As in many countries across the world, the COVID-19 pandemic has had a more significant impact on the higher education systems of South Asian nations (Sahoo et al., 2021), including Nepal (Paudel, 2021). More importantly, studies (Aristovnik et al., 2020; Blundell et al., 2020; Kose et al., 2022; Muñiz & Borg, 2022) indicate that the pandemic has had uneven impacts on disadvantaged students' participation in higher education throughout the world. Since ensuring inclusive and equitable education at all levels is central to Goal 4 of Sustainable Development Goals 2030 (UNICEF, 2015), students' inequitable participation questions during the pandemic require even more serious attention. In Nepal, disadvantaged students, including students from low-income families and remote areas, were under-represented in higher education even before the pandemic (Upadhyay et al., 2018; Witenstein & Palmer, 2013). Therefore, a detailed investigation into the learning experience of disadvantaged students during the pandemic is even more necessary to have a broader view of equity issues in Nepal's higher education.

In this chapter, we discuss the migration process of Nepal's colleges and universities to remote teaching and learning through the employment of learning technologies during the COVID-19 crisis. The study mainly explores how the lack of digital preparedness and dearth of student support mechanisms affected the disadvantaged students in low-income families and remote and rural communities in their efforts to achieve higher education. More importantly, we relate the existing literature with the findings to show what factors need to be considered to close the preexisting education inequity and enhance the disadvantaged students' participation in higher education. We hope the study will add value to the existing body of literature, particularly relating to equity issues across several vital domains of educational processes amidst the pandemic.

Country Context

The government of Nepal imposed a nationwide lockdown from 24 March 2020 until the end of May 2020 during the first wave of COVID-19 (Chalise, 2020) and from 29 April 2021 until now (September 2021) with intelligent lockdowns in effect. With the imposition of lockdown measures stalling on-campus learning activities, colleges and universities started functioning virtually, despite most students' lack of access to ICT resources and skills (Rai, 2021). Consequently, remote learning programs largely remained concentrated in urban areas despite some initiatives taken by colleges and constituent campuses in more remote areas (Devkota, 2021).

Nepal has long devised several plans and policies to deploy ICT-mediated pedagogy to enhance learning outcomes. *ICT in Education Master Plan 2013-2017* suggests four significant components, such as ICT infrastructure, connectivity, teaching-learning materials, and human resource, to implement ICT in school effectively and higher education (Ministry of

Education, 2013). The policy intends to expand equitable access to education, promote quality education, reduce the digital divide, and improve the service delivery system in education. Similarly, *IT Policy 2010* focuses on internet access to all educational institutions to strengthen human resources for continuous, relevant, and quality education (Ministry of Education, 2010). Similarly, the 15th Five-Year Development Plan (2019–2024) has envisaged an expansion of the Open and Distance Education System to ensure students' equitable access in remote areas of Nepal (National Planning Commission, 2020).

Moreover, through open and distance education, the University Grants Commission (2015) promises inclusive and equitable access to higher education to socio-economically, geographically, physically, and culturally disadvantaged populations, including women, Dalits, and differently-abled citizens. However, the *2019 Digital Nepal Framework* has identified the lack of ICT-trained teachers and infrastructures as significant barriers to adopting remote teaching and learning as an alternative mode of pedagogy (Ministry of Communication and Information Technology, 2019). Regarding the implementation and success of these plans and policies, various scholars have indicated that the use of ICT tools in education has helped to bring transformations to a certain extent in the conventional teaching methods in the context of Nepal (Rana et al., 2019). For example, Shakya et al. (2017) reported that using ICT in the major universities of Nepal, like Tribhuvan University and Kathmandu University, has made the knowledge acquisition process more flexible and accessible through open and distance learning, particularly for Bachelor's and Master's Degree programs. Similarly, Paudyal and Rana (2021) also reported that online learning programs in Nepal Open University and Kathmandu University, even before the pandemic, created opportunities for disadvantaged and working students from rural areas. Nonetheless, all of these studies have identified a lack of ICT tools and tech-savvy human resources, cost issues, and lack of enough government funding as the key barriers to effectively implementing online learning.

Literature Review

Higher education during the COVID-19 pandemic

In the wake of the COVID-19 pandemic, universities and colleges witnessed emerging challenges associated with the university course cycle and teaching and research activities. In response to these challenges, they developed new policy initiatives to adopt flexible and resilient education systems (Ali, 2020). Remote teaching and learning gained renewed momentum in this context, both to contain the spread of the virus and keep the learning activities intact (Lloyd-Jones, 2021). However, Adedoyin and Soykan (2020) argued that such a sudden and dramatic shift, which is brought as an emergency remedy, lacks adequate preparation, strategy,

and instructional amplification, thus making the emergency teaching and learning remedies questionable and chaotic. Several studies (Bączek et al., 2021; Yates et al., 2021) have indicated that students suspected the efficacy of remote teaching and learning activities due to the dearth of critical components of e-learning, such as e-readiness, interaction, cooperation, motivation, and lack of curiosity and devotion among teachers and students. A survey by Adnan and Anwar (2020) reported that, in developing countries like Pakistan, infrastructural limitations impacted the university students' communication with their tutors, feedback time, and peer socialization, making remote teaching and learning less effective than face-to-face education. Other sets of studies (Auger et al., 2020; Gazmararian et al., 2021; Labrague et al., 2020) have indicated the presence of a greater level of seclusion, anxiety, strain, and dejection among college students during the COVID-19 crisis, although remote teaching became only the widely accepted viable alternative during the COVID-19 crisis. These studies suggest that online education has become a necessity in the pandemic situation, but the unplanned and haphazardly brought emergency remote teaching and learning approaches have wavered the efficacy of the education system, adding challenges to expansion.

Barriers to equal participation in higher education

Studies (Bowers-Brown, 2006; Forsyth & Furlong, 2003) note that the education system needs to be more inclusive and equitable since higher education is central to better career opportunities, social justice, and socio-economic development. Nonetheless, participation inequity in higher education continues to exist. This is often associated with economic disparities (Ilie et al., 2021; Thiele et al., 2017) and digital inequality, exacerbated by the COVID-19 pandemic (Austin, 2021). When the COVID-19 pandemic disrupted economic activities worldwide, economically disadvantaged societies were profoundly affected, given the loss of jobs and earning opportunities (Song & Zhou, 2020). With exacerbating economic downturns, questions of who can participate in higher education have become even more crucial (Dennis, 2020). For example, in a study (Tsurugano et al., 2021), working-class university students in Japan reported that the financial hardship amidst the pandemic prevented them from effectively taking part in their university courses and research activities. The students even expressed their fear of discontinuing the system as they faced livelihood challenges. Traditional research has positioned that the students in low economic families are among the most disadvantaged populations who are less likely to access and retain all the phases of higher education courses than their wealthier counterparts (Crawford et al., 2016).

Further, the digital divide or digital inequality (Torres-Albero et al., 2014) has been another critical barrier for disadvantaged students to access learning resources when educational activities are solely operated online (Cullinan et al., 2021). In a learning context, Soomro et al. (2020)

equate such a divide with a range of gap factors: access to information and communication technologies (ICTs), such as computers, mobile devices; distribution and access to broadband internet; and motivational factors and technological skills to operate in the online environment effectively. Education Scholars (Di Pietro, 2021; Hill & Lawton, 2018) have argued that one who cannot afford the access cost of technologies, such as computers, mobile devices, and broadband internet, and cannot function may eventually face digital exclusion, which will aggravate inequalities in higher. During the pandemic, empirical studies in Nepal (Devkota, 2021; Gautam & Gautam, 2021) have produced similar findings. Given the unequal access to education, students in higher education might suffer the new forms of educational injustices during and after the COVID-19 pandemic (Van den Berg, 2021) and face deprivation in career pathways in the future.

These examples illustrate that digital inequalities can have untoward impacts on the global values of democracy in education (Tierney, 2021). Such inequalities can hugely curtail the disadvantaged students' rights to equal participation in higher education. Therefore, such inequity can further accentuate the preexisting disparities across societies.

Research Method

Research design

We adopted an interpretive research design (Cohen et al., 2011) due to the nature of the study and its primary aim to investigate the impacts of the COVID-19 crisis on university students and their experience of remote learning during the emergency period. Given the health threats of the ongoing pandemic, the data for the study were collected using online and telephone-based semi-structured interviews with the participants, as suggested by Cohen et al. (2011), although we faced multiple disconnection issues.

Participants, data collection, and analysis

Our study is primarily concerned with disadvantaged university/college students' remote learning experience during the COVID-19 crisis. We purposively selected economically vulnerable students from remote areas of Nepal's plains, hills, and mountainous regions (Rooney & Evans, 2018). The study involved 12 students from the first year to the fourth year of their bachelor's degree. Informed consent was obtained from the participants before the interviews, as suggested by (Cohen et al., 2017). We also gained support from all the participants to audio-record the conversations during the interviews. The majority of the participants (8) were interviewed using a cell phone or landline phone, while other participants (4) were interviewed online. The phone interviews lasted between 10-and 20 minutes, whereas online interviews lasted about half an hour. Interviews with

the students investigated their access to electricity, the internet, compatible devices, and required skills to function in remote learning platforms. Besides, interviewees were asked to share their experiences and perception of remote learning, usage of available ICT resources, participation, opportunities, challenges, support, and motivation for learning activities during the pandemic.

After transcribing audio recordings, we employed an inductive coding scheme (Braun & Clarke, 2006) to organize the data and identify different themes systematically, and then analyzed them by adopting the overarching lens of 'interpretative phenomenological analysis (IPA)' (Smith et al., 2009). We adopted IPA primarily for two primary reasons—the phenomenological requirement to explore the concerns of the participants' voices and the interpretative requirement to contextualize and make sense of their voices (Larkin et al., 2006). In particular, IPA would allow us to dig into the participants' lived experiences and personal insights. To strengthen the analysis of the research results, we also employed content analysis of journal articles and policy documents related to the integration of ICTs in higher education both during and before the pandemic in terms of equity and justice in higher education.

Results

Students' digital preparedness

At the time of data collection, all the students indicated that although their campuses were conducting online classes, there was a low presence

Table 1: *Participant Students*

College/Campus	*District*	*Participant*	*Gender*	*Age*	*Major Subject*
Saptakoshi College	Dhankuta	Rakesh	Male	21	BCA
	Jhapa	Namuma	Female	22	BBS
Arun Multiple Campus	Sankhuwasava	Binu	Female	22	B.Ed
		Riya	Female	19	BA
Jaleswar Multiple Campus	Rolpa	Anisa	Female	19	BA
		Bikash	Male	20	BA
Malanga Multiple Campus	West Rukum	Homraj	Male	21	BA
Safalta College	Bara	Sarita	Female	18	BBS
Ashrit College	Sindhupalchowk	Monika	Female	19	BBM
	Lamjung	Sushma	Female	22	BBS
	Baglung	Babin	Male	20	BBM
Devkota Campus	Dolpa	Jiban	Male	21	BA

of students in such classes. It became evident from the interviews that the majority of the students were digitally unprepared, which significantly impacted their participation in remote learning activities throughout the pandemic. They discussed the lack of appropriate internet access, unstable power supply, and incompatible devices as the key barriers to accessing online classes in rural areas of Nepal. Nearly half of the students shared that they relied on mobile data, which lacked proper coverage, causing frequent disruptions in their learning and acquiring the content their tutors presented through online learning platforms. For example,

> It is tough to get connected to the class. As I get disconnected multiple times, even in the class of 45 minutes, it is tough to understand what teachers teach in online classes (Homraj, a BA second-year student).
>
> This is a rainy season, and power cut is frequent even in little rain and storm. The electricity poles break and fall, causing power cuts for several days. And to continue study via online in my village is the most challenging thing ever (Rakesh, a BCA third semester student)
>
> No Wi-Fi connection either in my village, so I have to purchase data, but the sad thing is my phone does not have enough RAM to support learning apps. (Monika, a BBM first semester student)

These examples illustrate how the unavailability of basic ICT infrastructures and resources in rural areas of Nepal disproportionately affected students' learning opportunities and failed them to acquire the knowledge and skills that higher education often promises, despite initiatives taken by the campuses. Moreover, other students reported that the lack of technological skills was another significant hurdle for efficiently functioning in online learning platforms, such as Zoom and Teams. On the other hand, many students who lived in hilly areas and lacked ICT resources reported being cut off from formal learning throughout the pandemic. For example:

> I have not taken a single class since they started teaching online. We can hardly see network signals here. We need to climb another hill to access the mobile tower, even for phone calls. What can I do when online class is beyond my reach, and we cannot afford to stay in Bazar? (Anisha, a B. Ed first-year student)
>
> I can only buy a phone after finding a job and collecting some money. Moreover, it is awkward to ask for others' mobile for the classes. It is not just for a day. You need it every day. So, I have not been able to take even a single class yet. (Babin, a BA first-year student)

Both Anisha and Babin's expressions represented a familiar voice of many students residing in geographically remote areas of Nepal's plains, hills, and mountains that how students' lack of digital preparedness and

low-income family status could create inequalities in their access to education. However, the students, who were technologically skillful and were from suburban areas with relatively better ICT resources, reported that the online classes had been more flexible and beneficial than the face-to-face classes in terms of time and financial burden.

> There is a unique data package for students like us, and I buy it every month. I can connect to Zoom and download the information required. The network is not that poor for video calls either. Spending 300 rupees on data in a month is enough and advantageous. Otherwise, I would have to stay at the headquarter and pay the rent to attend classes. (Riya, a BA first-year student)

It shows that although the online classes have been inaccessible for the majority of the students, it has become a lifeline to those who can use the available resources. In many respects, remote teaching and learning opportunities may have been beneficial for digitally resourceful and capable students. However, most of the students' voices indicated that they are likely to fall behind due to their inability to access remote learning and failures to acquire the skills and knowledge required for their career pathways.

Student support and motivation

This study found that most of the students remained partially engaged, whereas others were disengaged entirely, given the unavailability of basic ICT infrastructures and skills. Nonetheless, all the participants primarily associated disengagement with an absence of additional support, lack of motivation, and financial precarity during the lockdowns. Many students asserted that their campuses did not provide them with any financial and emotional support, although they were aware of students' economic instabilities. For example, Rakesh, a BCA student, reported how his college demanded tuition fees while his family witnessed a financial challenge following the lockdowns. He added:

> In the middle of the lockdown, the college informed me to join online classes using the email ID they created for us. However, the thing was that I had to clear all my fees to enable my ID. How could a person like me deposit the fees in such a situation? Isn't that a trap? I frequently told the CEO: I could not pay and access the classes. He bluntly replied: That is your problem, not mine!

Namuna, a BBS third-year student-facing livelihood challenges, echoed Rakesh that receiving support from their campuses was a far cry. Instead, she expressed her fear of being excluded from the university courses. She added:

> You can understand why other students have not been able to join the online classes. When we lost our jobs in the pandemic, we were forced

> to sell a plot of land to pay the college fees. The college did nothing but always asked me to clear the fees if I wanted to continue the study.

Both Rakesh and Namuna indicated that economically vulnerable students in remote areas of Nepal were deprived of education opportunities when universities lacked student support initiatives during the unprecedented times.

Further, many students reported that lack of learning resources, such as course books and students materials, was another challenge that severely impacted their learning experiences. However, other students who had relatively better access to the internet expressed that although remote learning was not as effective as they had expected, the use of educational technologies helped them locate learning materials on the internet. Regarding motivation, partially engaged students reported that rare interaction between teacher and students made remote learning less enjoyable than face-to-face classes. They described that they would often lose concentration due to a lack of comments, assignments, and feedback in online classes. In their view, remote teaching was entirely teacher-centered, which failed to activate students, while they would often remain muted and engaged in their household chores. Moreover, other students commented that learning online was tedious because of teachers' punctuality issues and lack of technical skills to utilize affordances available on the platforms. For example, Jiban, a BA first-year student, said:

> Even when there are classes, there are many distractions. At times I use my FB page to watch TikTok videos. It is never sure whether you would have classes. Teachers often remain absent and make excuses. They do not know how to control the noises. Isn't that disgusting when your teachers are not serious?

These students, however, suggested that they had created alternative discussion forums, such as Messenger group, where students could share their problems, college notices, and learning materials and avail them whenever they had internet access. Surprisingly, Monica, a BBM first semester student, had a different experience with the discussion forum. She shared:

> I felt terrible when I could not communicate with friends in the Messenger group when they would discuss things in that forum. I would be deeply sad. If only physical classes had begun soon […]

In many ways, these examples illustrate that remote education could limit the learning opportunities of economically disadvantaged populations when educational practices adopt exclusionary policies and dislocate them during a crisis. Further, partially engaged students' expressions suggested how motivational factors, interactive opportunities, and classroom techniques are more important in emergency learning situations to prevent students from falling behind.

Discussion

The study results showed that the COVID-19 crisis exposed disadvantaged students to multifaceted challenges and limited their opportunities to participate and retain in higher education in Nepal effectively. The findings indicated that although colleges and universities widely adopted online learning during the crisis, a lack of digital preparedness among disadvantaged university students either led to the partial engagement of students or forced them to remain outside the education systems completely. Devkota (2021) noted that remote learning exacerbated preexisting educational inequalities and injustices of higher education. Moreover, our findings suggested that educational inequities are more likely to continue in communities where socio-economic disparities, geographical constraints, unavailability of technological resources, and financial precarity create hurdles for learners' fairer participation and acquisition of knowledge and skills promised by higher education is gravely challenged. In this regard, we agree with the results the prior studies have produced in Nepal, both before (Regmi, 2021; Upadhyay et al., 2018; Witenstein & Palmer, 2013) and during the COVID-19 crisis (Dawadi et al., 2020; Devkota, 2021) that students in low-income families and remote areas are structurally the least benefitted population given the profit-oriented nature of higher education providers.

Further, we noted that the lack of both robust student support mechanisms and motivational factors resulted in either partial or complete disengagement of the students from formal learning, thus giving way to undemocratic, unjustifiable, and exclusionary practices in higher education during the crisis. Online education adopted during emergency times has dramatically failed to address the needs and challenges of socio-economically disadvantaged students in Nepal. However, emergency learning opportunities for relatively advantaged students proved to be advantageous (Bacos & Grove, 2019). Instead, students' reported experiences indicated that online education led to dislocation and low self-esteem, which might have more significant impacts on students' participation, engagement, and completion of the university course cycle when learning opportunities are mostly limited to advantaged populations. Our findings also add to empirical works (Bączek et al., 2021; Mishra et al., 2020; Selvanathan et al., 2020; Yates et al., 2021), which highlight that when both teachers and students lack devotion, interactive classroom climate, collaboration, comments, and feedback, students are unlikely to effectively participate, engage, and complete the university course cycle.

Conclusion

In conclusion, the present study has shown that the COVID-19 effects on students and their experiences and perception of remote learning significantly vary based on their socio-economic status, access to ICT resources,

motivation, skills, and available ICTs. While equitable access to remote knowledge for all higher education students is a significant challenge, the disadvantaged students have been in precarious positions. Overlooking the needs of disadvantaged students could further seclude them from formal education both during and post-pandemic situations. As the pandemic and its effects are unlikely to alleviate anytime soon, the poor students are also likely to face inequalities and injustice in higher education. Therefore, the government, universities, colleges, and other educational stakeholders need to devise emergency student support plans, implement them, and adopt alternative approaches. Our findings have future implications for promoting educational equity so that students in disadvantaged families and communities can gain higher education opportunities that are more enabling, participatory, equitable, resilient, and socially justifiable for all.

Implications

Overall, the present study suggests that disadvantaged students in Nepal's higher education have been unevenly impacted by the COVID-19 pandemic, while remote learning remained largely inaccessible. The study also addressed some key challenges of university students' socio-economic and geographical constraints, which limited their educational opportunities. Our findings invite policymakers to reconsider the ICT policies, implementation aspects, alternative approaches and allocate proper funding to improve ICT infrastructures and teacher training. Finally, we suggest that universities and educators need to devote more efforts to making available the resources and enable students' skills to effectively respond to future disasters or crises and 21st century higher education challenges.

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