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Virtual Learning in Higher Education: Students' Perspectives from Mid-West University

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Abstract

This study explores the strengths, weaknesses, opportunities, and challenges of virtual learning experienced by students in the stream of Humanities and Social Sciences at a University during the COVID-19 pandemic. Employing a cross-sectional research design, data were collected through a self-administered questionnaire. The study population includes students enrolled in compulsory English courses across four campuses, with 159 participants selected via purposive sampling. SPSS was used for statistical analysis. Key strengths identified include flexibility, technological engagement, and adaptability, while challenges encompass confusion, lack of concentration, distractions, and technical skill deficiencies. Opportunities involve digital literacy development, innovative learning methods, and enhanced collaboration. However, technological barriers such as poor network connectivity, inadequate ICT infrastructure, lack of digital competency, and unclear policies significantly hinder learning effectiveness. The findings emphasize the need for comprehensive strategies to optimize virtual learning by addressing its multifaceted aspects at Mid-West University during and beyond the pandemic.

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Introduction

COVID-19 emerged from Wuhan China in December 2019 (Zhang et al., 2020). COVID-19 has extremely disrupted all aspects, including education around the world (Ali, 2020), brought difficulty to the education sector (Baral, 2020), and caused coercing educational institutions to shut down (Dawadi et al., 2020). The government of Nepal also announced the closing of schools and universities in response to the COVID-19 crisis on March 18, 2020 and now it is slowly coming into

operation with various healthier practices. As a consequence of the persistent lockdowns, educational institutions in Nepal had been temporarily closed (UNESCO, 2020) and the institutions switched alternative classes on digital platforms to continue learning (Dawadi et al., 2020). Due to pandemic, the government is seriously consider online learning as a possible option (Thapa, 2020).

In the same context, the Nepal government decided to introduce a digital education system for educational institutions to continue the teaching and learning process during lockdown. Similarly, the University Grants Commission introduced the virtual learning framework and organized alternative learning in higher education institutions at university level, recommending the provision of e-learning tools and techniques for higher education (UGC, 2020). Mid-West University too cannot be untouched by the pandemic. MU had switched to virtual classes and launched the e-examination.

It is very difficult to make an immediate shift to virtual classes during pandemic. Almost universities were not capable to conduct online classes (Dawadi et al., 2020). Some institutions started online classes using Moodle, Google Meet, Microsoft Teams, and Zoom. Lack of willingness of teachers and the learners, supporting and facilitating infrastructure, technology and affordability (Lamichhane, 2020), coordination, expertise and commitment from academic institutions as well as regulatory bodies (Thapa, 2020) trained and skillful, preparation of online delivery (Mohamedbhai, 2020) were experienced the main threats. Giving rightful access of the Internet for all in Nepal is a massive challenge for virtual education and a huge number of students behind (Dawadi et al., 2020) including affordability is comparatively low among low- or middle-income backgrounds students (Baral, June 9, 2020). Just around 72% people have access to the Internet, most of them are from urban areas (Sharma, 2020).

Nepal's higher education institutions, including Mid-West University, implemented online learning options following the pandemic crisis. The university's Digital, Virtual, and Alternative Teaching Learning and Operating System Policy Guidelines, 2020 outlines the university's virtual teaching-learning system, including e-admission, classes, assessments, examinations, and certification (MU, 2020). However, transitioning to online classes proved challenging.

Aforementioned information reflects that there are a vast threats and opportunities to ensure virtual learning in Mid-West University. Despite the extensive research on COVID-19 in Nepal, research studies were focused on digital learning practice during the pandemic (Sharma, 2024), preventive behavior and risk perception of COVID-19 among the general population (Khanal et al., 2021), migrant (Khanal et al., 2024), adult people (Khanal et al., 2022), students (Pasa et al., 2024), and vaccine acceptance (Acharya et al., 2022). But there is a significant gap in understanding the strengths, weaknesses, challenges, and opportunities of virtual learning in the Faculty of Humanities and Social Sciences of the University.

Objectives

The main objective of the study is to examine the strengths, weakness, opportunities and challenges of the virtual learning perceived by the graduate level students enrolled in the stream of humanities and social sciences at the university during COVID-19 pandemic.

Literature Review

Virtual learning is defined as learning that can functionally and effectively occur in the absence of traditional classroom environments (Schlosser & Simonson, 2006). Virtual Learning Environment is a scheduled, online, teacher-led training session in which teachers and students engaged in learning via the Internet connected through electronic devices. It allows the learners actively participate in online platform with highly interactive activities. It reduces the travel-time, and cost of on-site teaching learning programs. It serves as an effective solution for live delivery and interaction,

encompassing the entire process of designing and managing the teaching-learning experience. It supports both instructors and students in various educational activities, such as seminars, online discussions, or live training sessions for employees within an organization. Most of the terms (online learning, open learning, web-based learning, computer-mediated learning, blended learning, m-learning, virtual learning) have in common the ability to use a computer connected to a network, that offers the possibility to learn from anywhere, anytime, in any rhythm, with any means (Cojocariu et al., 2014). Online learning can be termed as a tool that can make the teaching–learning process more student-centered, more innovative, and even more flexible. Virtual learning is defined as learning experiences in synchronous or asynchronous environments using different electronic devices (e.g., mobile phones, laptops, desktop etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students (Singh & Thurman, 2019). Many universities around the world have fully digitalized their operations understanding the dire need of this current situation. Online learning is emerging as a victor ludorum amidst this chaos (Dhawan, 2020). Online learning is beneficial in accelerating learning and reinforces students and teachers at the comfort of home during this time of global crisis (Surkhali & Garbuja, 2020).

A central strength identified by students is the flexibility afforded by remote teaching and learning. In their study, Hodges et al. (2020), Vielma and Brey (2020), and Crawford et al. (2020) emphasize the benefits of online education in terms of flexibility and convenience. Online teaching allows students to access lectures and materials asynchronously, eliminating the need for commuting and enabling them to manage other commitments such as part-time employment and family care. The study by Mohmmed et al. (2020) also underscores that the flexibility of virtual learning is particularly advantageous for non-traditional students who must balance academic responsibilities with work and caregiving. This flexibility is seen as an opportunity for these students to engage in their studies while maintaining a more balanced and personalized lifestyle.

A significant weakness discussed by Hodges et al. (2020) is the perception that online education is of lower quality compared to face-to-face learning. The articles noted that the rapid shift to remote learning during the pandemic led to inconsistencies in course delivery, creating confusion and anxiety among students (Regher & Goel, 2020; Johnson et al., 2020). In particular, the lack of a standardized model for online teaching led to varied learning experiences, further intensifying concerns over the quality and effectiveness of remote education.

Vielma and Brey (2020) identified that key opportunity is the potential for Emergency Remote Teaching Learning (Hodges et al., 2020) to support non-traditional students, particularly those with work and family responsibilities. These students can benefit from the ability to craft their own study schedules, as emphasized by. It offers the flexibility to engage in education without sacrificing personal and professional commitments, thus democratizing access to higher education. Furthermore, the development of sustainable online learning models represents an opportunity for institutions to broaden their educational offerings, reach a wider audience, and provide more diverse learning experiences (Aucejo et al., 2020).

One major threat is the disproportionate impact of the pandemic on lower-income students. According to Aucejo et al. (2020), these students were 55% more likely than their higher-income peers to experience delays in graduation due to the pandemic, which has profound economic consequences. Delayed graduation can result in extended time in school, increased financial burdens, and a longer time to enter the workforce, ultimately affecting their long-term earning potential. Gallagher et al. (2020) report that many students felt isolated coupled with increased stress and anxiety has become a major concern for institutions as they navigate the challenges of remote learning.

The aforementioned evidence shows that online learning during COVID-19, although largely relying in developed countries in comparison to developing countries like Nepal. Studies have focused on barriers encountered by the institutions at Nepal, particularly based on the institutions of urban area, remaining multilevel barriers. Similarly, earlier studies have focused on exploring the effectiveness of online learning rather than students' perspectives on SWOC of virtual learning. So, this study addresses the gap by using students' perspectives to online learning at Mid-West University located in rural Nepal.

SWOC Analysis as a Theoretical Framework

This study applied Strengths, Weaknesses, Opportunities, and Challenges (SWOC) analysis as a theoretical guideline (Aithal, 2015), which is a modified variant of traditional strengths, 'weaknesses, opportunities and 'threats (SWOT) analysis (Gurel & Tat, 2017), by replacing threats with challenges (Naik & Sinde, 2021). SWOT Analysis is a significant tool for situation analysis that helps the managers to identify organizational and environmental factors. SWOT Analysis has two dimensions: Internal and external. Internal dimension includes organizational factors, also strengths and weaknesses; external dimension includes environmental factors, also opportunities and threats (Gurel & Tat, 2017). The SWOC framework was based on literature analysis (Naik & Sinde, 2021). It assesses the internal strengths, limitations, opportunities, and threats within an organization, considering both positive and negative factors that affect its success (Aithal, 2015). This framework incorporates a systematic understanding of the internal (strengths and weaknesses) and external (opportunities and challenges) factors that influence the analysis of virtual learning experiences. In this study, strength included to the essential qualities within a university that enable it to achieve virtual teaching goals, such as human capacity, financial resources, outcomes etc. Weaknesses included obstacles which constraint the success of virtual learning, however, can be reduced through various alternatives. Opportunities encompass the benefits and outcomes that universities can achieve through virtual teaching. Challenges include external environmental factors that impact the reliability of virtual teaching, such as lack of digital skills, lack of facilities, staff shortages, etc. (Naik & Sinde, 2021).

Methodology

This study used a cross-sectional research design to explore the Strengths, Weaknesses, Opportunities, and Challenges (SWOC) of virtual learning during the COVID-19 pandemic based on the quantitative approach. The data were collected at a single point in time to give a current picture of the experiences of the students on virtual learning. The study was conducted in a Central Campus of Humanities and Social Sciences and other three constituent campuses of the Mid-West University; Bageshwari Campus, Babai Campus, and Narayan Campus. Altogether 159 students, pursuing compulsory English classes during the pandemic, participated in the study. Participants were purposively selected based on their engagement in the virtual learning to ensure the inclusion of those who could provide accurate information. Of these, 57 students were part of Central Campus, 52 of Babai Campus, 29 of Bageshwari Campus, and 21 of Narayan Campus. This purposive sampling ensured that the sampled participants had first-hand experience with the virtual learning, hence, offering a rich and wide scope of experiences that would become invaluable in determining how virtual learning influenced the academic engagements and learning realities of the study participants during the period of the pandemic.

To collect data, a structured questionnaire with binary and multiple-response items were given to the participants. The questionnaire included two parts: the first part involved the demographic profile of the participants, and the second part involved the four dimensions of SWOC. The strength dimension (20 items) examined the issues like institutional support, flexibility, and technological integration; the

weakness dimension (10 items) involved issues such as distraction, isolation, and technological limitations; the opportunity dimension (10 items) focused on the benefits of digital literacy, collaborative learning, and the development of alternative modes of education and the challenge dimension (24 items) consisted of personal, institutional, technological, socioeconomic, and policy-related barriers faced by the participants. The questionnaire was circulated in the classroom, under the supervision of the researcher for an independent completion and voluntary participation. The collected data were carefully coded and analyzed applying descriptive statistics techniques such as frequency, percentages, and cross-tabulations. The University Grants Commission (UGC) and the respective campus administrations provided ethical approval for the study and verbal consent was taken from all the participants. During the study, confidentiality was maintained by anonymity.

Results

This section includes demographic information, strengths, weakness, opportunities and challenges in virtual learning that the respondents had experienced during the crisis (table 1-5).

Demographic information of the participants

This section includes the demographic information of the respondents including sex, campus and area.

Table 1: *Demographic profile of respondents*

Details		Respondents	
		N	Percent
Sex	Male	55	34.6%
	Female	104	65.4%
Total		159	100%
Campus	Central Campus	57	35.8%
	Babai Campus	52	32.7%
	Bageshwari Campus	29	18.2%
	Narayan Campus	21	13.2%
Total		159	100%
Area	Urban	61	38.4%
	Rural	98	61.6%
Total		159	100%

Table 1 shows the demographic profile of the respondents that 65.4% are female, while 34.6% are male. In terms of campus distribution, Central Campus has the highest representation with 35.8%, followed by Babai Campus (32.7%), Bageshwari Campus (18.2%), and Narayan Campus (13.2%). Regarding geographical location, 61.6% of respondents are from rural areas, while 38.4% are from urban areas.

Strengths

This section includes the information about how much of the respondents found the strengths of virtual learning under the categories student related, teacher related, institution related, teaching learning related categories.

Table 2: *Strengths of virtual learning*

Details		Responses	
		N	Percent
Strengths	Student related Strength	66	41.5%
	Teacher related	50	31.4%
	Institution	33	20.7%
	Teaching Learning	37	23.2%
	All of above	78	49.0%
	None	29	18.2%
Students Related	Time flexibility	100	62.9%
	Place Flexibility	98	61.6%
	Availability of reading materials/contents	76	47.8%
	Immediate Feedback	46	28.9%
	Regular engagement in learning process	53	33.3%
	None	12	7.5%
Teacher Related	Time Flexibility	120	75.5%
	Place Flexibility	92	57.9%
	Efficient to deliver lesson	42	26.4%
	None	19	11.9%
Teaching Learning	Increased inclusivity	49	30.8%
	Opportunity for accessibility	47	29.6%
	Provide immediate feedback on learning	45	28.3%
	Use of technology in teaching learning	108	67.9%
	None	14	8.8%
Institution related	Carry over the academic calendar	56	35.2%
	Increase interactivities among stakeholders	101	63.5%
	None	35	22.6%

The data from Table 2 highlights multilevel strengths of virtual learning, categorized into student-related, teacher-related, institutional, and teaching-learning aspects. The most prominent strength was seen in the "All of the above" category, with 49% of respondents identifying multiple benefits across the categories. For student-related strengths, the key advantages were time flexibility (62.9%) and place flexibility (61.6%), showing that virtual learning offers students the freedom to learn at their own pace and from any location. Availability of reading materials and immediate feedback were also noted, though to a lesser extent (47.8% and 28.9%, respectively).

In terms of teacher-related strengths, time flexibility was the most significant factor, mentioned by 75.5% of respondents, followed by place flexibility (57.9%). These findings suggest that teachers appreciate the convenience and adaptability offered by virtual learning environments. As for teaching-learning strengths, the use of technology in the learning process stood out, with 67.9% of respondents noting its positive impact, while increased inclusivity and the opportunity for accessibility were also recognized, though less frequently.

Institutionally, virtual learning allows for the continuation of the academic calendar (35.2%) and enhances interactivity among stakeholders (63.5%). These strengths reflect how virtual learning can help maintain academic schedules and foster communication within educational communities. The

data demonstrates that flexibility, technological integration, and enhanced interactivity are key strengths of virtual learning, benefiting both students and teachers. The findings indicate that while virtual learning offers several advantages, its greatest strengths lie in providing flexibility and promoting the use of technology.

Weakness

This subsection clarifies the information about how many respondents found what kinds of weaknesses during their practice of virtual learning under the categories of lack of concentration, distraction, lack of technical skill, confusion, inability to focus on screen, isolated feeling, unmanaged screen time and none.

Table 3: *Weakness of virtual learning*

	Details	N	Percent
Weaknesses	Lack of concentration in learning	73	45.9%
	Distraction	69	43.4%
	Lack of technical skills	56	35.2%
	Confusion	96	60.4%
	Inability to focus on screen	57	35.8%
	Felling of isolation	57	35.8%
	Unmanaged screen time	36	22.6%
	None	20	12.6%

Table 3 highlights several key weaknesses inherent in virtual learning. The most common issue was confusion, reported by 60.4% of participants, suggesting that a lack of clarity or understanding is a significant barrier. Lack of concentration in learning (45.9%) and distraction (43.4%) were also prominent weaknesses, indicating difficulties in maintaining focus and staying engaged. Issues with technical skills (35.2%) suggest that respondents struggle with the necessary proficiency to navigate digital environments effectively. Additionally, 35.8% of participants reported an inability to focus on screen and feeling of isolation, pointing to challenges with screen engagement and a sense of social disconnection. Unmanaged screen time (22.6%) reflects concerns about overexposure to screens, while 12.6% of respondents indicated they faced no issues at all. These results underscore the need for improved focus strategies, better technical training, and solutions to reduce confusion and isolation in digital settings.

Opportunities

This sub-section deals with the information about how many respondents found what kinds of opportunities during virtual learning under the categories of develops digital literacy in learning, practice of innovative learning method, increase teacher and students' awareness, increase collaborative and active learning and none.

Table 4. *Opportunities of virtual learning*

Details		Responses	
		Number	Percent of Cases
opportunities	Develops digital literacy in learning	118	74.7%
	Practice of innovative learning methods	95	60.1%
	Increase teacher and students' awareness	66	41.8%
	Increase collaborative and active learning	56	35.4%
	Transition from traditional to Virtual class	55	34.8%
	ICT friendly educational institutions	43	27.2%
	None	5	3.2%

The data presented in Table 4 highlights key opportunities associated with virtual learning. The most significant is the development of digital literacy, recognized by 74.7% of respondents. Additionally, 60.1% emphasized the adoption of innovative learning methods, indicating that virtual learning fosters creativity in education. Increased awareness among teachers and students was noted by 41.8%, while 35.4% and 34.8% acknowledged improvements in collaborative learning and the transition from traditional to virtual classrooms, respectively. ICT-friendly institutions were seen as beneficial by 27.2%, whereas 3.2% found no opportunities. Overall, virtual learning enhances digital skills, innovation, and collaboration in education.

Challenges

This sub-section provides the information about how many of the respondents found what kinds of challenges during virtual learning under the categories of personal barriers, institutional, socio-economical, policy related, technology related challenges with their sub-categories as given.

Table 5: *Challenges of virtual learning*

Details		**Responses**	
		N	**Percent**
Types of challenges	Personal	81	50.9%
	Institutional	48	30.2%
	Technological	102	64.2%
	Socio-economic	38	23.9%
	Policy related	31	19.5%
	All of the above	49	30.8%
	None	7	4.4%
Personal challenges	Lack of digital competency and skills	100	64.1%
	Lack of motivation/interest	70	44.9%
	Unfamiliarity with Online/e-resources	62	39.7%
	Conditioned on traditional classes & Printed notes	50	32.1%
	None	9	5.8%
Institutional challenges	Lack of practical learning schedule	94	59.5%
	Lack of monitoring & supervision	84	53.2%
	Lack of coordination between university, faculty, teachers and students	82	51.9%
	Lack of institutional support to teachers & students	61	38.6%

Details		Responses	
		N	Percent
	Lack of IT support staff	50	31.6%
	None	19	12.0%
Socio economic challenge	Expensive financial cost to afford technology & data	84	53.5%
	Poor digital literacy among teachers & students	85	54.1%
	Lack of digital equipment with internet among students	64	40.8%
	Digital divide	62	39.5%
	Unfavorable attitude of parents & society to virtual learning	53	33.8%
	None	15	9.6%
Technology related challenges	Poor network connectivity	127	80.4%
	Non-congenial working space	60	38.0%
	Lack of teachers contact	53	33.5%
	Hardware &software problem	61	38.6%
	Poor ICT infrastructure	67	42.4%
	None	8	5.1%
Policy related challenges	Lack of clear policy and guidelines	105	66.0%
	Poor implementation of the policy	56	35.2%
	Lack of policy motivating students to virtual learning	84	52.8%
	Lack of policy to address digital divide among students	67	42.1%
	Uncertainty of the quality of virtual learning	64	40.3%
	None	13	8.2%

The data from the Table 5 outlines multifaceted challenges of virtual learning, categorized into personal, institutional, technological, socio-economic, and policy-related factors. Technological challenges were the most commonly identified, with 64.2% of respondents citing issues like poor network connectivity (80.4%) and inadequate ICT infrastructure (42.4%). Personal challenges followed closely, with 50.9% of participants identifying difficulties, including a lack of digital competency (64.1%) and motivation (44.9%). Institutional challenges, such as the lack of a practical learning schedule (59.5%) and insufficient monitoring (53.2%), were also significant concerns, affecting 30.2% of respondents.

Socio-economic challenges were highlighted by 23.9% of respondents, with high financial costs for technology and poor digital literacy among teachers and students being the most notable. Policy-related challenges were less prominent but still significant, with 19.5% mentioning issues like the absence of clear policies and guidelines (66%). Finally, 4.4% of respondents indicated that they faced no challenges related to virtual learning.

Technological and personal challenges were the most prevalent, reflecting issues with digital access and skills. Institutional and socio-economic challenges also played a role, while policy-related challenges were seen as a barrier for a smaller proportion of respondents. These results suggest that addressing digital infrastructure, improving digital literacy, and formulating clear policies are key areas to focus on to improve the virtual learning experience.

Discussion

The study examines the strengths, weaknesses, opportunities and challenges of virtual learning during the COVID-19 pandemic as perceived by the students in Mid-West University. The study indicates that there are multiple factors (Khanal, 2019) determine the aspects of virtual learning.

Virtual teaching has various strengths when efficiently implemented. Results align with Lakhey and Shakya (2022) on the need for thorough preparations in the entire technical, administrative, and managerial sphere for e-learning success. Similarly, Pedraja-Rejas and Rodriguez-Ponce (2023) highlight the importance of communication as well as active communication to sustain students' learning. This study supports these findings indicating the need for strategic planning, clear communication, and strong learning communities.

The revealing strengths as summarized by learners involved time and place freedom, access to learning material, technology adoption, and better interaction. Consistent with that of Gautam and Gautam (2021), who surveyed 61% of students concerning flexible scheduling plus having access to teaching materials being the mint that at least 54% of them indicated effective stress reduction borne on them. Naseer and Perveen (2023) add that such student-centered learning, collaboration, cost-cutting, and skills development are further benefits. While Gautam and Gautam (2021) focused mainly on the stress reduction Naseer and Perveen (2023) pointed out other aspects the collaboration and creation of skills, which show a broader perspective of virtual learning.

The study highlights important weaknesses, such as concentration issues, distractions, isolation, and unregulated screen time. These findings correspond with those of Naseerand Perveen (2023), and obviously, this study does not exactly cover health issues associated with prolonged screen exposure, thus creating a void in the literature. In addition, students mentioned experiencing difficulties in the operation of virtual platforms due to inadequate technical skills, which are aligned with Koja and Abazaj (2024) and Diyal and Pandey (2024). Reduced responsivity and heightened anxiety were also indicated, which aligns with Gautam and Gautam (2021); further exploration regarding the psychological impact of anxiety is needed.

Teachers faced difficulties in maintaining interactivity and tracking student progress, which confirms Lakhe and Shakya (2022). Communication barriers and technical issues such as poor audio and unreadable content further hindered learning (Koza & Abajaj, 2024). While this study is consistent with existing research, additional challenges such as the health effects of screen exposure and the emotional impact of virtual learning require further research. Addressing these challenges will require improved technology, enhanced communication strategies, and more interactive teaching methods.

The shift to virtual learning presents major opportunities, particularly in digital literacy. This study is consistent with Gautam and Gautam (2022), who found that 68% of students believe that online learning advances learning by improving technological proficiency. Likewise, the study reveals that the students perceive innovative learning methods as a significant opportunity in virtual education. As Diyal and Pandey (2024) indicate, educators' and students' increasing familiarity with online tools facilitates innovative pedagogical approaches, including many digital tools and platforms, to enhance the learning experience.

A significant proportion of students' view virtual learning as a means of increasing awareness and understanding of digital tools, supporting Upadhyay et al. (2021), who reported that 59.1% of respondents became more familiar with technology through online learning. Online learning becomes easier to develop collaboration along the geographical boundaries, thereby encouraging the interaction among varied groups of students, which truly characterize the current age of education.

The research further points out that the change in pedagogical setting from class to virtual classroom serves as an angle of transformation in the education system of Nepal. While the change was catalyzed by necessity, transition bodes of infinite flexibility. It also raises questions about accessibility, infrastructure, and the digital divide. As being increasingly acknowledged, the very fact that this mode of teaching is more engaging for students and more flexible for working professionals is supported by Basnet et al. (2021) in their report of online education as an avenue for lifelong learning and skill enhancement.

Another opportunity highlighted by the study is the potential for increased collaborative and active learning of the respondents indicating that online education encourages such learning environments. This reflects a key advantage of digital education: its ability to facilitate collaboration across geographical boundaries and foster interaction among diverse student groups, which is a key element of the modern educational paradigm. In addition, the rise of virtual classrooms and ICT-friendly educational institutions, as noted by respondents, indicates a growing recognition of the need for institutions to embrace technology to remain relevant and provide effective learning opportunities.

This study identifies multi-dimensional challenges mostly personal, institutional, socio-economic, technological, and policy-related. Lack of digital competence is a major challenge that coincides with Xia et al. (2022) and Basnet et al. (2022), who have exposed challenges of difficult navigation of online platforms. The limitations heightened unequally access to quality internet access and limited interaction furthered by Basnet et al. (2021). While these challenges somewhat feature in this study, discomfort in using voice or screen-sharing tools (Xia et al., 2022), including problems in group projects, would still require investigation.

Institutional weaknesses include inadequate learning schedules, inadequate monitoring, and lack of IT support, which echoes Faza et al. (2024). While stakeholder coordination issues are well documented (Basnet, 2021; Faza et al., 2024), this study does not address the broader need for institutional socialization and training.

Technological constraints remain the greatest of challenges; most students cite poor internet connectivity, consistent with Gautam and Gautam (2021), where 79% of students faced connectivity issues. Other concerns include hardware limitations and poor ICT infrastructure, consistent with Basnet (2021) and Tartari and Kashanu (2022). This study covers little in regard to privacy issues and technology integration as in (Xia et al., 2022; Faza et al., 2024).

Socio-economic constraints, on the other hand, concern high costs of technology and low digital literacy, support recent observations from Lakhey and Shakya (2022) and Upadhyaya (2021) about the digital divide and societal attitude toward virtual learning. However, the psychological toll and disruption to family life caused by online education, as explained by Diyal and Pandey (2021), are not discussed in detail. Policy challenges, including ambiguous guidelines along with poor implementation, find resonance in Basnet (2021) and Faza et al. (2024). However, it proposes some gaps with regard to student motivation in virtual learning for potential future policy innovation.

Limitations

This study is limited by its cross-sectional design, which captures a snapshot of SWOC experiences and perceptions of students on virtual learning practices. Additionally, the sample may not fully represent all students' experiences and perception due to the limited access of students across different campuses.

Conclusion

The present study demonstrates that virtual learning provides the strengths like flexibility, technological interaction and interactive opportunities but the problem of concentration, distraction and

lack of digital skills obstructs it. The challenges are identified as being limited connectivity, weak institutional support and vague policy guidance. The findings show that effective virtual learning, in the developing countries like Nepal, requires better infrastructure, increased digital competence, and institutional guidelines. Reflecting on the findings, the study identifies that without adequate preparation and support, availability of technology only would not ensure meaningful learning. The present study suggests universities need to follow holistic approach to enhance preparedness and equity in the future crisis.

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