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# EFFECTIVENESS OF ONLINE LEARNING DURING THE COVID-19 PANDEMIC

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## Abstract

*The study investigates the perspectives of students on the effectiveness of online learning during the COVID-19 pandemic. 120 higher education students: 80 male and 40 female participantswere randomly selected to participate in the study to express their perspectives on online learning during the outbreak of COVID-19 pandemic in the context of Nepal. Descriptive statistics was used to analyze the questionnaire data. The findings revealed that online learningis ineffective as it failed to produce expected outcomes in underdeveloped countries like Nepal, where the uptake of technology is at the initial stage consequently access to the Internet, adequate infrastructure, preparedness of teachers are unsatisfactory. The study contributes for the better understanding of students' perspectives of online learning that will be highly significant for academicians, researchers, curriculum designers, policy makers and so on.*

## Keywords:

*COVID-19; online learning; technology uptake; higher education*

## Introduction

COVID-19 was declared as a global health emergency of international concernon January 31, 2020 and as a pandemic on 11th March 2020 by the World Health Organization (WHO, 2020). The global locked down with social distancing, mask, sanitation made people live in the state of fight for survival first. Similarly, the locked down has closed all activities such as business, sports, banking, academic and so on. Since almost all schools colleges and universities were closed, more than 1.5 billion children and youth across

the 188 countries were deprived of the teaching-learning processby May 11th 2020 (UNESCO, 2020).The uncertain period of locked down forced academic institutionsgo for an alternative mode of teaching and learning. Due to the fear of infection of COVID -19, the measures of social distancing, sanitation, isolation, and mask were made compulsory to protect life. In this sense, schools, colleges and universities around the globe were shut down to stop the spread of the pandemic (Mailizar, Almanthari, Maulina, & Bruce, 2020; Toquero, 2020).

Similarly, after observing some cases of COVID-19 in Nepal, the government made the country shut down from March 23rd, 2020 for taking preventive measures along with social distancing. Due to the prolonged locked down and social distancing, the educational authorities issued directives to go for online learning through distance learning (DL) mode. In Nepal, more than 1.3 million students of different levels (UGC, 2016) got disconnected from their regular activities as the schools and universities were bound to postpone their scheduled activities. It was March 23rd 2020, when the high level COVID-19 was declared by the government of Nepal and physical class was suspended with increasing locked down. It was a sudden uptake of the government to declare total locked without any preparation as the primary goal was to protect life which was to some extent praiseworthy however, change does not happen overnight from the mode of conventional education to distance and virtual learning. Such change brings various instant challenges to tackle effectively (Crawford, Butler-Henderson, Rudolph, & Glowatz, 2020). Thus, at the face of crisis, it was compulsion for the educational institutions around the globe to exploit the available technical resources for virtual and distance learning (Kaur, 2020).

## Setting the Scene

The regular mode of instruction was not suspended for the first time as the outbreak of SARS COV, and H1N1 flu in 2009 were also caused academic activities closed in many countries (Cauchemez et al., 2014). After more than a decade, the outbreak of COVID-19 in 2020 forced the academic experts around the globe to revise the conventional face to face mode of learning with the option of virtual and distance learning. However, McPherson and Bacow (2015) assure dual problems it; first, from a micro viewpoint that refers to the effect and efficacy of online education and the second is the capacity to successfully teach technological ly with the wide range of learning goals, and instructional and educational priorities (Liguori & Winkler, 2020). Evidently online learning is effective in developed countries but in the case of developing countries like Nepal a great deal of administrative and academic activities are still done manually in the lack of skilled human resources and technological infrastructure (Rana & Rana, 2020). Though the fast, affordable

and reliable internet service is available in urban areas, rural areas lack such facilities. Similarly, majority of students who have access of the internet use their smart phones for getting online class that make them deprived of the contentswhich are not accessible from smartphones. Similarly,during the pandemic, almost all Nepalese academic institutions did not have any specific online learning platform, i.e. learning management system (LMS) that has been specifically designed including maximum features of on-class pedagogy such as to meet, interact, assign, material distribution and grading students technological ly. However, the designs of the online learning environment at the HEIs in Nepal are based on the open source Learning Management System (LMS) and have a lack of high-tech human resources in HEIs to customize or develop own learning platforms (Pangeni, 2019). In the lack of institutional LMS, mostly academic institutions used commercial platforms like Google Meet, Microsoft teams, Zoom, Skype etc. with two basic online teaching modes 'synchronous' (live broadcasting) and 'asynchronous'(recorded videos). In case of former, teachers and students can interact and communicate being online like physical class whereas in case of latter, students get and watch the recorded materials online that promotes self-study of shared materials but lacks real time interaction.

With the compulsion of teaching online, several academic institutions were primarily focused on transfer of teaching contents being unaware of specific ways of teaching online. That reflected the lack of teachers' technological knowledge and skills, resources i.e. sufficient access and availabilityof the internet along with students' capacity to participate in online learning (Zhong, 2020). Similarly, another major problem of online learning is lack of interaction that is the main goal of student-centered pedagogical practices. The teachers responded their students' assignments/problems through emails (Zhong, 2020). Additionally, online class seems to be interesting in the beginning but gradually students start lacking interest and motivation for the same due to their various styles of learning, missing socialization, and sharing ideas, knowledge and information in person. It can be argued that such unfavorable circumstances are unexpected that can be taken as crisis management in terms of learning (Pace, Pettit, & Barker, 2020). However, academic institutions need to be ready to cope up with such circumstances (Toquero, 2020). Additionally, the negative impact of long term closure of academic institutions can bring psychological imbalance among students (McCarthy, 2020).

## Review of Related Literature

Though there is lack of enough research studies in this area, some of the related studies carried out are reviewed to gain the insight of online learning practiced during the pandemic and to

locate the gap. A study conducted by Mailizar, Almanthari, Maulina, and Bruce (2020) in Indonesia investigated the views of secondary school mathematics teachers on E-learning implementation barriers during the COVID-19 pandemic addressing four levels of barrier: teacher, school, curriculum and student. The study was designed under a quantitative approach using a cross-sectional questionnaire.Total 159 teachers (83 male and 76 female)from lower and upper secondary schools in Indonesia were randomly selected to participate in the study. Their views were collected through an online questionnaire. Before collecting the data, the relationship between the teachers' demographic information and levels of barriers were accessed. The descriptive and inferential statistical analysis of the findings suggested that among all the barriers, the student level barrier had the highest impact on e-learning use. Additionally, the student level barrier showed strong positive correlation with the school level barrier and curriculum level barrier. The study did not find any impact of teachers' backgrounds on any level of barriers. Basilaia and Kvavadze (2020) conducted a case study using the Google Meet platform for online education in a private school with 950 students in Georgia. The findings assured that the quick transition to the online form of education was successful. It can be useful for other countries that have not found the ways of transition yet. Moreover, studies around the world have revealed that the impact of uncertain social distancing has unexpectedly created violence, racial and ethnical prejudice, environmental and technological complexities that are also attached to the psychological aspect of students. Additionally, such prolonged social distancing may bring loneliness, anxiety, depression and even mental disorder (Leite et al., 2020; Lerner et al., 2020; Karen & Cathy, 2020).

### Objectives of the study

The study had the following objectives:

- To investigate the effectiveness of online learning in Nepal from the perspectives of higher education students and
- to find out the challenges faced by them

## Methodology

The research study was aimed at exploring the perspectives of higher education students towards online learning during COVID-19 pandemic. The sample of the study included 120 undergraduate higher education students: 80 male and 40 female participants. All the students participated in the survey attended online courses during the COVID-19 pandemic in Nepal. The data were collected through an online survey technique about the perspectives of the students towards online learning. A 38-item questionnaire was used to assess the effectiveness of online learning. A

pilot test of the survey was administered online to the students of Science faculty to check the validity and reliability of the questionnaire. Some modifications were done on the basis of the pilot test and were also discussed with some experts. The data were analyzed on the basis of frequency of common students' responses that were stated in percentages. Additionally, the demographic data were obtained using the Likert Scale and is reported in percentage of students' responses.

## Discussion and Results

Undergraduate students were between the ages of 16-20.As stated in the table 1 below, out of 120 students, 17.5% (n = 22) reported that they have proper access to the internet, 9.5% reported no proper access, while 73% (n = 92) reported that they have limited access to the internet through a smartphone.It was found that the majority of students (48%) had the experience of poor or instable network, 35% found network access very expensive for attending online classes regularly and 17% students were found to have other reasons for internet access. In response of students' confidence level in using technology, 70.4% students were found well confident in using technological devices such as computer, laptop and smart phone, 62.3% students found to have the feeling of comfort communicating online whereas 14.3% students were uncomfortable in online mode of communication. In response to the question whether traditional and online modes of learning are similar, 75.3% students found to have reported very different, 10% students reported a little different whereas 14.7% found to have the feeling that online learning was more motivating than traditional mode of learning. While the students were asked about the completion of the course through online learning without any problem, 65.4% students responded that it was not possible to complete the entire course through online mode, 19.2% students felt problem in doing assignments whereas 15.4% students were found positive for doing assignments through online mode. Similarly, in response to the effectiveness of face-to-face interaction, 70.6% students found it necessary to have face-to-face contact with teachers for learning.

**Table 1 Students' Perspectives of Online Learning**

| S.N. | Students' perspectives on online learning | Students' response in % |
|---|---|---|
| 1 | Reason for limited internet access<br>• Very expensive<br>• Instable service<br>• Don't know how to use it<br>• Other | <br>35%<br>9.5%<br>17.5%<br>17% |

| S.N. | Students' perspectives on online learning | Students' response in % |
|---|---|---|
| 2 | Good knowledge and skills of using technology<br>• Agree<br>• Somewhat agree<br>• Disagree | 70.4%<br>20.6%<br>9.0% |
| 3 | Feeling comfortable communicating online<br>• Agree<br>• Somewhat agree<br>• Disagree | 62.3%<br>23.4%<br>14.3% |
| 4 | Difference between traditional and online learning mode<br>• Agree<br>• Somewhat agree<br>• Disagree | 75.3%<br>17.5%<br>7.2% |
| 5 | Online learning more motivating than traditional learning<br>• Agree<br>• Somewhat agree<br>• Disagree | 14.7%<br>25.3%<br>60.0% |
| 6 | Courses can be effectively completed on online learning<br>• Agree<br>• Somewhat agree<br>• Disagree | 23.3%<br>65.4%<br>11.3% |
| 7 | Easy to complete assignments/group work using technology<br>• Agree<br>• Somewhat agree<br>• Disagree | 15.4%<br>65.4%<br>19.2% |
| 8 | Real-time interaction necessary for learning<br>• Agree<br>• Somewhat agree<br>• Disagree | 70.6%<br>19.2%<br>10.2% |

*Percentages based on the number of respondents answered the question.

## Discussion

The research findings reveal that a majority of students did not have the access to stable internet; lack of interaction with teachers and peers and lack of proper technological devices were the essential causes of ineffective online learning in Nepal during the pandemic. Students' experienceof imposed online

learning was highly different from traditional classroom learning. Though some of the students are highly motivated for the online learning, maximum students lack access to internet service and technological devices in rural areas of the Parsa district. Additionally, due to the lack of sufficient resources and trained teachers, very few institutions could provide effective online classes during the period of locked down. The study also reveals the fact that some additional challenges like missing in-person- socialization, interaction through group study, and limited time for online class created restriction from getting teachers' response. Similarly, in comparison to online class, traditional mode of learning was reported as more effective for the students. Evidently, it is concluded that online learning from the perspectives of undergraduate students is not effective in developing countries like Nepalas majority of students are deprived of the technological devices and internet access. One of the most important findings is the mindset of students as for majority of them traditional classroom learning was more motivating and effective than online learning. This reflects that the academic institutions are not well resourced and limited access to the internet, and technological devices undoubtedly discourage students from being motivated for online learning (Crowford et al., 2020). Similarly, they forwarded the reason that the completion of course in online mode was difficult though they had regular online class and could complete project work/assignments in time. Finally, for the effective online learning, students need to have sound knowledge and skills of technology that was found weak in majority of students. The innovativetechnology has all the potentialities to replace traditional mode of learning with online or virtual learning provided with the required resources; human and technological (Cao et al., 2020; Crowford et al., 2020).

## Conclusion

The outbreak of COVID-19 affected almost every sphere of human life and development around the globe and Nepal cannot remain away from this reality. However, the prolonged locked down along with social distancing has transformed the way of living life, dealing with social requirements, getting information and education, and so on. In this sense, COVID-19 has made academic institutions to revise the mode of knowledge delivery in terms of online teaching and learning. This alternative mode of teaching and learning essentially requires high uptake of technological infrastructure, expertize in pedagogical integration of technology, well designed curriculum, and supportive administration. During the period of crisis, academic institutions tried to resume their academic activities through virtual/online mode. In this context of Nepal, the study investigated the effectiveness of online learning from the perspectives of undergraduate students. The findings revealed that though online learning was introduced as an alternative mode of learning, it is not as effective in Nepal as it is in developed countries where high uptake of technological

set up has brought expected outcomes. Additionally, the major findings of the study show that majority of students are deprived of access to the stable internet, technological devises like laptop, computer, smartphone. Their perspectives of online learning were interpreted in terms ofReason for limited internet access, Good knowledge and skills of using technology, Feeling comfortable communicating technologically, Difference between traditional and online learning mode, Online learning more motivating than traditional learning, Courses can be effectively completed on online learning, Easy to complete assignments/group work using technology, and Real-time interaction necessary for learning. Evidently, majority of students opined that online learning was not as effective as traditional mode of learning whereas most of them had good access to internet, availability of technological devices, and good knowledge and skills of technology. Moreover, they expressed major triad difficulties; lack of interaction with teachers and peers, time constraints and lack of socialization. They did not report regarding their teachers' expertize in teaching online. However, the study recommends for revision ofcurriculum, designing interactive online content materials, and developing the sense of socialization in virtual environment.

The study is highly significant as it has filled the research gap that was quite visible in the context of Nepal. It also contributes bringing the understanding of the undergraduate students' perspectives of online learning to academicians, researchers, policy makers and curriculum designers for improved practices of online teaching and learning.

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