

## Continuation of Learning During COVID-19 Situation in Nepal

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### Abstract

*This study explored the obstacles and ways of continuation for learning faced by school teachers during and after the COVID-19 situation. The quantitative cross-sectional survey research design was adopted. All the school teachers of Nepal were the population for this study and the sample size was 226. The online survey method was adopted for the data collection tools. A set of closed and open-ended questionnaires were distributed to respondents and data was collected using Google Forms. The study seeks the relationship between the independent variables (age, experience of teaching, school location, teacher's residence, access to the internet, access to digital devices, knowledge about ICTs interest in online teaching) and dependent variables (continuation of online teaching). It was found that the community teaching and homework/ assignment methods were applicable to the rural areas. Continuing online teaching would be inconvenient for the students who had no internet access. According to the teacher's response, it was found that about 90% of students had no access to the internet. Although online teaching was suitable for the COVID-19 situation, it was biased for the maximum number of students. The teacher's interest and the obstacles in the online class and continuation of learning are significantly co-related (0.003 and 0.000 respectively). There was no significant difference between male and female teachers in continuation for online learning but a greater percentage of males are involved in online classes than females. The experienced teachers equally continued their learning of digital skills. There was a problem with the internet/ wifi/ 3G/ 4G network in rural areas. Teacher adjusted their teaching and learning activities even if they had no access to a laptop. The study concludes that teachers are ready for online classes and they regularly update their digital skills with changing times but digital divides created a serious problem with conducting online classes. So, the Government of Nepal should pay attention to teacher training, integration of digital skills in the curriculum, and proper allocation of budget for infrastructure development.*

*Keywords:* teacher, school, COVID, ICT

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### **Introduction**

The wide spreading of diseases throughout the specific area or the world which is extremely unaccepted is the pandemic situation (Mahapatra & Nikhade, 2020). There were numerous pandemic situations in the world this date, for instance, Plague of Justinian, the Third Cholera pandemic, the Black Death (Second Plague Pandemic), the Third Plague pandemic, the Russian Flu pandemic, the Sixth Cholera pandemic, the Spanish Flu pandemic, the Asian Flu pandemic, Hong Kong Flu pandemic, HIV/AIDS pandemic and COVID 19 pandemic from the date 541 to 2024 (Mahapatra & Nikhade, 2020; Shrestha & Baral, 2024). The COVID-19 pandemic was spread due to coronavirus starting from China and affected more than 760 million people and 6.9 million deaths are recorded till the date 9 August 2023 (World Health Organization, 2023). More than 10 lakhs people were infected and twelve thousand death cases were seen in Nepal. This virus does not transmit through airborne transmission which means it is not transmitted through the air. Airborne droplet particles less than 5µm in diameter can transmit over the length of 1m but respiratory droplets can also transmit over the length of 1m (World Health Organization, 2020), which makes the problem of the physical classes. So, in COVID-19 pandemic, there was a need of an alternative way of teaching.

There is a high risk of transmission of the COVID-19 virus through personal contact and distance between persons less than 1m length (nearly equal to the two hands of a younger person). So, the Government of Nepal locked all places during the pandemic. Schools are the most crowded areas where the students and teachers are very close. There was a trend of conducting learning activities being close to the students and individual teaching was preferable for better achievement. However, it was found that the corona virus was transmitted through personal contact and distancing lower than 1m. Different countries continued their teaching-learning processes through online mediums. For this, high speed internet facility and relatively high speed in mobile data is required. The internet distributor company of Nepal distributes up to 60 Mbps speed costs ranging from RS18,000 to NRs. 19,600 per year and NRs. 800 to Rs.1600 per month with speed ranging from 1 Mbps to 60 Mbps. This rate was quite expensive (Shrestha, 2020). “As a result, the latest survey from the A4AI (Alliance 4 Affordable Internet) places Nepal in the 39<sup>th</sup> position (among 61 low and middle-income countries); which is not that great” (Shrestha, 2020, p. 1). During COVID-19 situation, the internet companies failed to provide internet throughout the village area. Even, the connectivity problem was in urban areas. Mobile internet speed and availability of the network also seemed very slow which is not favorable for conducting online classes. The government of Nepal has also prepared the learning continuation modality for school-level students. The government published the students’ learning facilitation directory 2021. This directory has provisioned the strategies to categorize the students in different five groups i.e. having no access to technological equipment, access to

radio, television, frequency modulation (F.M.), access to television, having access of television but no access to internet facility, and having the access of internet and ICTs.

For the online class, students should have the ICT skills and teachers should have too. So, there is a challenge to the continuation of learning in the COVID-19 situation. This study mainly explores the ways of continuation of learning activities and seeks the problems of conducting online classes too. And also analyze the ICT skills and internet facility of the teachers.

Nepal has made the strategies of ICT integration in learning and prepares the ICT master plan (2013- 2017) and IT policy 2016. The master plan focuses on expanding equitable access to education; enhancing the quality of education; reducing the digital divide; and improving the service delivery system in education. IT policy focuses on making ICT affordable and accessible; infrastructure development, ensuring e-governance; and use of ICT to solve the contemporary issues related to social, environmental, and economic development. The major goals of the ICT master plan and IT policy are to provide equitable access, reduce the digital divide, and integrate ICT to enhance quality education (Government of Nepal, 2013, 2016). Despite these IT master plans and IT policy implementation by the Government of Nepal, access to the Internet and ICT tools is limited in rural areas of Nepal. At these conditions of government practices and the pandemic situation; the researcher explores the digital skills of teachers, how they practice the alternative way of learning in the pandemic situation, and the obstacles faced by the teachers for continuing the learning.

### **Methodology**

This study adopted the survey design of quantitative research design. All the school-level teachers of Nepal are the population of the study. An online survey method was adopted for the data collection. A set of open and close-ended questionnaires were sent and exposed on social media with the informed consent message and the responses were collected through Google Forms. The Google form link was shared in Facebook Messenger, Facebook posts, and emails; and shared with the teachers and the help of teachers' friends. The validity of the questionnaire was checked by a sample survey of 10 respondents and the Google form was updated. In this study, there are respondents from 126 municipalities and 64 districts; a total of 226 teachers responded to the questionnaire. Age, school locations, teacher's residence, access to digital devices, access to internet, interest in online teaching, obstacles to online teaching, and knowledge about Microsoft office Word/Excel/Power point were independent variables and dependent variable was continuation of online teaching. This study also descriptively analyzed the knowledge about the online sites and applications of the different apps for continuing online learning as Zoom, Google Meet, Microsoft Teams, messenger, and other sites for referencing materials and offline videos. Data were analyzed with descriptive, and bivariate analysis using SPSS 20. The conclusion was drawn based on

the result of the analyzed data. The study time was 2021 to 2022 at a time when COVID-19 is highly spreading in Nepal.

### Result and Discussion

Online learning was the most used for this COVID-19 pandemic situation. Online teaching manages the physical distancing among teachers, students, and parents which was the key technique to controlling the spreading of coronavirus (COVID-19 diseases). About 60.4% of teachers continued their learning through online teaching. The relation between the different independent variables and the continuation of online teaching is shown in Table 1.

**Table 1:**

*Bivariate analysis of independent variables and continuation of online teaching.*

independent variables	Categories	online teaching	sig.	phi value
sex of the respondent	female	62.70%	0.617	-0.330
	Male	59.20%		
experience of teaching	1 -10 years	59.00%	0.268	0.108
	11-20 years	56.50%		
	above 20 years	72.20%		
age of the teachers	20-40 years	57.10%	0.229	0.114
	41-50 years	69.50%		
	above 50 years	53.80%		
access to laptop/tablet	Yes	64.50%	0.710	0.120
	No	52%		
access to Android mobile	Yes	57.20%	0.234	-0.790
	No	65.20%		
access of WIFI	Yes	62.20%	0.238	0.111
	No	51.50%		
access of 3G/4G network	Yes	62.30%	0.218	0.116
	No	52%		
skills of MS Word/Excel/Power Point	sufficient	65.70%	0.234	0.113
	Considerable	52%		
	limited/no	50%		
school's location	Urban	75.50%	0.000	0.286
	Rural	47.50%		
teacher's residence	same as school location	60.50%	0.784	0.018
	different from school location	39.50%		
continue learning	Yes	78.90%	0.000	0.541
	No	22.70%		
interest of online class	Yes	63.20%	0.003	0.195
	No	27.80%		
obstacles on online class	Yes	29.50%	0.000	6.230
	No	90.40%		

*Source:* Field survey.

The male and female teacher respondents had no any percentile difference (59.2% and 62.7%). Since the chi-square value (0.617) is greater than our chosen significance level (0.005) so we do not reject the null hypothesis that there is no relationship between the sex of the respondents and the continuation of the online class. That means no association was found between gender and continued online classes in the COVID-19 situation. The presence

of women teachers were equally engage in online classes supported by (Cantú-Ballesteros et al., 2017; McSporrán & Young, 2011).

Experienced teachers are more likely to teach through online teaching. The teacher who has more than 20 years of experience and uses online teaching was found 72.2%. However, teachers having 1 to 10 years and 11 to 20 years of experience used 59% and 56% respectively. The result was found that there is no relationship between these variables and the relationship was weak ( $\chi^2(0.268 *) \geq 0.05$  and phi (.108) (Table 1).

The researcher questioned, "Does the age of the teacher affect the continuation of online teaching?" and it was found that only 53.80 percent of teachers above 50 age used online teaching. It was found that the highest percentage i.e. 69.5% teachers aged 41 to 50 years used online methods to teach. However, the chi-square test displays there is no relationship between the age of the teacher and the continuation of online classes and the result was weak ( $\chi^2(0.229 *) \geq 0.05$  and phi (.114) (Table 1). The age and experience of teachers and the age of teachers are not co-related to the continuation of online learning.

64.5 % of teachers continued online classes who had access to the laptop and 52% of teachers continued their classes even though they had no access to the laptop. They continued their learning using Android mobile phones. There is no association between access to the laptop/ tablet and the continuation of online classes. The association was weak ( $\chi^2(0.71 *) \geq 0.05$  and phi (0.12). Similarly, 57.2% of teachers who continued their teaching online had Android phones. So, laptops and Android phones are supplements to each other to continue online classes. However, there is no association between access to Android phones and the continuation of online classes ( $\chi^2(0.234 *) \geq 0.05$  (Table 1).

Access to the internet is essential for online learning. The access to WIFI or mobile data 3G/ 4G speed provides internet access. It was revealed that 62.2% of teachers conducted online classes who had WIFI access and 62.3 % of teachers continued online classes using 3G and 4G networks. 39.6% of teachers did not start online classes and had no access to both WIFI and 3G/4G networks. There was no association between access to WIFI and access to 3G/4G network and continuation of online classes (access to WIFI,  $\chi^2(0.238 *) \geq 0.05$  and phi 0.112 and access to 3G/4G,  $\chi^2(0.218 *) \geq 0.05$  and phi (0.118) (Table 1). Hence it is necessary to have access to WIFI or 3G/4G networks to continue online classes. But, the mobile networks (3G/4G) should be smooth, consistent, and easily accessible.

It was easier to conduct online classes if he/she had the skills of using MS Word, MS Excel, and MS PowerPoint. The independent variables were sufficient skills, considerable skills, and limited or no skills. It was found that 65.7 % of teachers who had sufficient skills continued online classes and 50% of teachers who had limited or no skills in MS Word, MS Excel, and MS PowerPoint did not continue online classes. It was found that there was no

association between the continuation of online classes and computer skills like MS Word, MS Excel, and PowerPoint  $\chi^2(0.234 *) \geq 0.05$  and phi (0.113) (Table 1). The digital skills help the teachers to use different interactive applications like Mentimeter, Slido, Quizzi, break-out rooms in the MS Teams, group discussions and it had positive impact on learning as evaluation and feedback (Perifanou et al., 2021). However, this result shows that the teacher continued the online classes even though they had no sufficient computer skills to prepare slides and notes. It indicated that teachers used lecture methods and digital tools only to communicate verbally. This indicated that the teachers didn't use interactive applications in online learning.

The researcher hypothesized that teachers from urban areas are more likely to teach through online classes than those from rural areas. And, it was found that there were significant differences between the school location and the continuation of online classes. Further, the relationship was modest  $\chi^2(0.000 *) \leq 0.05$  and phi (.286) (Table 1).

All the teachers do not take classes from the same location or from around school. So, researcher sought to check if there was any relationship between teachers' residence (location) and continue of online classes. The continuation of online classes by the teachers whose resided nearby school location was found 61.5% and 59.5% of teachers were from different location. It was found that there was no any association between the teachers' residence (location) and the continuation of online classes ( $\chi^2(0.784 *) \geq 0.05$  and phi (0.18) (Table 1).

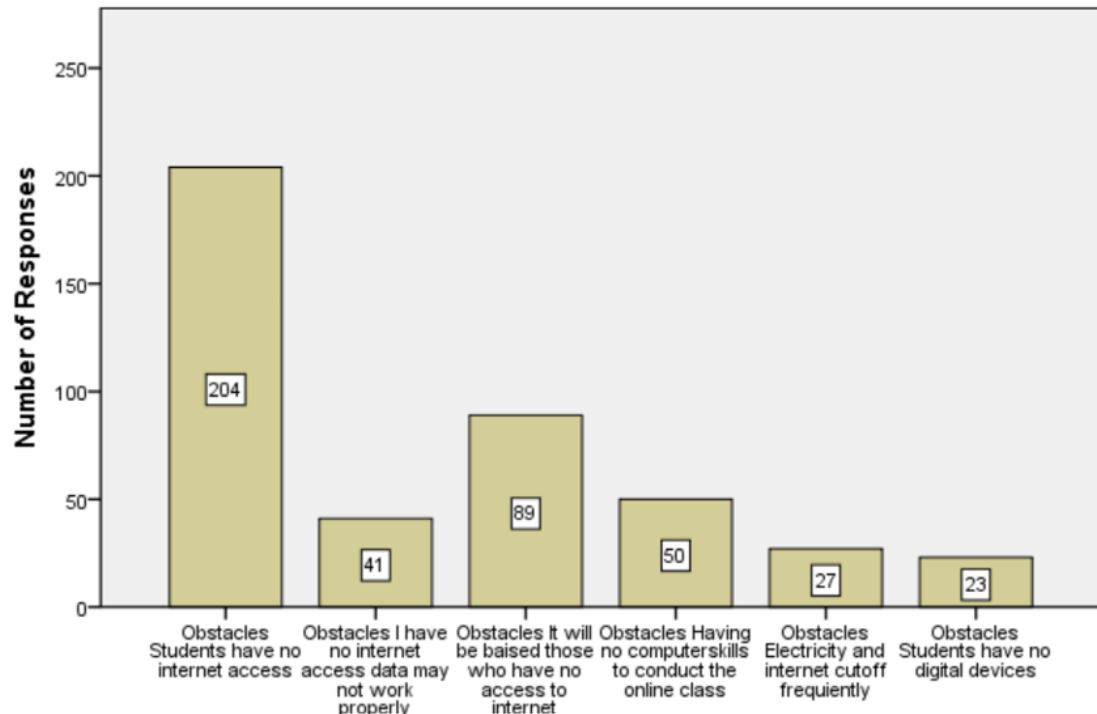
During the period of the pandemic, those students who learned in offline teaching modes like through radio and television had problems asking questions that they were confused of. So, the researcher investigated if there was any relation between the continuation of classes and online classes. 78.9 % of teachers took online classes and the rest of the teachers taught using other modes of teaching. It was found that there was strong association between the continuation of classes and the conduction of online classes ( $\chi^2(0.00 *) \geq 0.05$  and phi (0.541) (table 1). This means, the teachers chose online classes as the alternative way of teaching.

Interest was the positive power for the continuation of teaching. The researcher hypothesized the interest of teachers leads to the continuation of online classes. 63.7 % of interested teachers continued online classes and had the modest association between the interest and the continuation of online classes, ( $\chi^2(0.003 *) \geq 0.05$  and phi (0.195) (Table 1). The research conducted on the teachers' perceptions of online learning in the COVID-19 situation is also supportive of the results that the teachers perceived 6.3 mean score on the 7 Likert scale (Gurung et al., 2022). It depicted that the interest of teachers has supported and promoted online learning with the alternative way of teaching.

The researcher hypothesized that there is no problem with online teaching if teachers continue it. 90.5% of teachers continued online classes as they had no obstacles and 29.5% of teachers continued online classes even though they had some obstacles in online teaching. So, there was a strong relationship between obstacles to online teaching and the continuation of online classes,  $\chi^2(0.000 *) \geq 0.05$  and phi (0.623) (Table 1).

**Figure 1**

*Obstacles in Online Learning*



The researcher sought the obstacles of online teaching and found that a higher number of teachers faced the problems of not having internet access, and students couldn't engage themselves in online classes. The teachers felt conducting online classes would be biased toward the students with no internet access. 41 teachers faced the internet problem. From this, it could be concluded that online classes were suitable during the COVID-19 pandemic situation but the teacher faced problems with accessing of internet, and digital devices, and the teacher thought that the continuing online classes were biased to those students who have no internet access. 50 teachers have problems with computer skills too. The result was similar to the situation faced by Chinese universities (Xia et al., 2022).



**Table 2:***Knowledge about internet sites and reference materials and experience of teachers*

Knowledge about the internet sites	Experience of teachers			Total	Percentage
	1 to 10	11 to 20	above 20		
olenepal.org	29.80%	37.70%	44.40%	78	34.51 %
moecdc.gov.np	47.10%	55.10%	55.60%	115	50.88 %
Zoom Meeting	85.10%	84.10%	88.90%	193	85.40 %
Google Meet	48.80%	63.80%	61.10%	125	55.31%
Microsoft Teams	32.20%	31.90%	36.10%	74	32.74%
Messenger	66.90%	76.80%	75.00%	161	71.24%
NCED virtual	43.80%	56.50%	66.70%	116	51.33%
e-learning portal	24.80%	29.00%	36.10%	63	27.88%
non-profit learning platform	14.90%	15.90%	22.20%	37	16.37%
deerwalk.com	24.80%	36.20%	30.60%	66	29.20%
Khulla Kitab.com	5.80%	7.20%	2.80%	13	5.75%
Khan Academy	2.50%	7.20%	2.80%	9	3.98%
Peardeckmentimeter	1.70%	5.80%	2.80%	7	3.10%
Total	121	69	36	226	

The researcher looked for the differences in knowledge about the different search sites and applications for online learning based on the experience of teachers. It was found that teachers with more years of experience had more knowledge of these learning sites. It meant age and experience do not affect the learning of the teachers. Teachers are updated about the different electronic media. However, it was found that relatively fewer i.e. 78 out of 226 teachers know about the official sites for free learning materials and reference books ([www.olenepal.org](http://www.olenepal.org)). It showed that 85.1 % of teachers knew about the Zoom meeting (Table 2).

The researcher also sought the teachers' responses about suitable alternative methods for learning during the pandemic situation. The result shown in Table 3 pointed out that 58.7 % of teachers suggested online teaching was the suitable alternative method, and others pointed out that community teaching, using TV, FM radio, homework books, and alternative classes were other alternatives.



**Table 3***Ways of Alternative Learning at COVID-19*

alternative ways of learning	Percentage
Online teaching using internet	58.7%
community teaching	35.0%
Using TV	41.7%
Using FM Radio	35.9%
Homework Book	40.8%
Alternative classes	31.4%

*Note.* Multiple response table

### Conclusion

Online mode of teaching was much more complicated than classroom teaching or face-to-face teaching. In the face-to-face mode of teaching students actively engage themselves in teaching and learning. And, the way of learning is based on hands-on experiences. However, in the COVID-19 pandemic situation, face-to-face teaching became impossible. In such a situation, online classes became the best alternative for students and teachers as well. The majority of teachers were interested in online teaching and they continued it. Majority of teachers (204) out of 226 responded that online classes were inconvenience to students as they had no internet access. From this, it can be concluded that very few students were engaged in online learning. The teachers have a positive attitude toward the conduction of online classes and the digital skills they have support them to conduct online classes. But, the problem with online teaching was that the students had no access to digital devices. In urban areas, online methods would be suitable but in rural areas, there was no access to the internet and digital devices for online learning. So, in rural areas, community teaching and home assignments were more practical and applicable. Therefore, the government should promote students for online teaching by facilitating internet access and providing easy loans for buying Android phones and laptops.

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