



Teachers' Perception of Online Teaching and Factors Influencing Intention to Use Online Platforms during COVID-19

Santosh Kumar Gurung¹, Ramkrishna Chapagain², Sunil Datta Baral³,
Jeevan Bhandari⁴

^{1,2} School of Business, Pokhara University, Lekhnath, Nepal

^{3,4} Triveni International College, Pokhara, Nepal

Article History: Submitted 4 January 2022; Reviewed 8 April 2022; Accepted 17 April 2022

Corresponding Author: Santosh Kumar Gurung, Email: f18santoshg@iima.ac.in

DOI: <https://doi.org/10.3126/paj.v5i1.45042>

Copyright 2022 © The author(s). The publisher may reuse all published articles with prior permission of the concerned authors. This work is licensed under a [Creative Commons Attribution 4.0 International \(CC BY 4.0\) License](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

Since the outbreak of COVID-19 and the sudden closure of all educational institutions, teachers have been forced to adapt to online teaching through various online platforms as the only feasible option. In this regard, the study investigates the factors and perceptions that influence teachers' intention to use online classroom applications in teaching online. Using the descriptive cross-sectional online survey of 227 teachers teaching online during the pandemic, the findings revealed a positive perception of teaching online using online platforms. Further, the study results found that training and administrative support, trust, digital literacy, online teaching ability and perceived security are the major factors affecting the intention to use online classroom applications. These factors have a favorable influence on the choice to use. The study results have some practical implications and limitations of the study have been discussed, which are potential future research areas.

KEYWORDS: COVID-19 Pandemic, Higher Education, Online Classroom Applications

INTRODUCTION

Teachers all around the world, whether in schools, colleges, or universities, are seeing a rapid behavioral change since the World Health Organization (WHO) designated COVID-19 a global public health emergency and then a pandemic at the start of 2020. For the delivery of education to students, almost all educational institutions are required to embrace online teaching technologies and platforms. As offline instruction is no longer an option, online instruction is gradually becoming the standard (Carrillo & Flores, 2020). Teachers have found it challenging to deliver learning to homes in most under-resourced environments where the access, availability, familiarity and technology

usage in education are not ubiquitous (Khan et al., 2012). Furthermore, teachers' lack of digital skills makes it challenging to provide effective instruction (Laudari & Maher, 2019). While higher education institutions worldwide have successfully implemented online teaching and learning activities, resources in developing countries like Nepal are insufficient (Dawadi et al., 2020; Uddin, 2020). As a result, the adoption of online teaching and learning in developing countries has become a challenge (Saeed, 2020). However, as virtual education becomes more common in Nepali schools, teachers, students and parents become more conscious of online teaching and learning. Despite digital platforms gaining popularity among teachers and students, their intention to use them has hardly been examined in Nepal. Therefore, this study investigates the factors and perceptions that influence teachers' intention to use online classroom applications (OCAs) in Nepal's higher education institutions (HEIs).

A bulk of research claims that digital technology not only fulfils the changing needs of higher education students, but it also improves learning (Alzahrani & Seth, 2021; Becker, 2017; Du Toit & Verhoef, 2018; Lai, 2011; Laudari & Maher, 2019; Waghid & Waghid, 2016). The significance of instructors in promoting communication and learning with students was highlighted in research on faculty members' opinions and attitudes regarding online learning. Instructors cited material competence and instructional design as important elements in online learning's success. Similarly, for online learning to succeed, staff and student training is required (Cheng & Chau, 2016). Student-centered education has become the norm, with pupils becoming self-directed learners. Face-to-face instruction was teacher-centered education where students received their education from their professors; hence, this is seen as a benefit. Students' role in using additional resources to discover their abilities as independent learners was initiated by online learning (Roach & Lemasters, 2006). Although digital technology such as the OCAs has been introduced worldwide for some time now, its use in and impact on learning in higher education has largely remained unexplored. According to Lai (2011), little is known about how university teachers use digital technology in teaching and learning, and how it is embedded in pedagogy, along with its potential impact on students.

Technology, workload, digital competency and compatibility were all issues that faculty and students had to deal with. They came to the conclusion that education would become a combination of face-to-face and online learning (Adedoyin & Soykan, 2020). A study was done to verify the use of online learning platforms in the teaching of clinical medical courses. They discovered a 26 percent satisfaction percentage among students (Al-Balas et al., 2020). There are several benefits and drawbacks to online learning. Efficiency, cost-effectiveness and 24-hour access are among the advantages whereas technical challenges, a lack of engagement and training are among the drawbacks (Gautam, 2020). Rayan (2020) recommended overcoming the obstacles of online learning by encouraging shy students to engage and encouraging students to attend online classes. Understanding these difficulties is essential for providing adequate online education.

Previous research (Khan et al., 2012; Laudari & Maher, 2019; Rana, 2018; Salehi & Salehi, 2012; Shrestha, 2016) has identified two types of barriers to online teaching and learning in the developing context: institutional (lack of support, limited ICT infrastructure, insufficient funds and lack of a proper plan to integrate technology in education) and teacher (teachers' lack of knowledge, skills and time). Past studies have also shown that various factors influence the usage of educational technology in teaching and learning. These elements have been labeled as necessary circumstances (Becuwe et al., 2017; Hamel et al., 2013), contextual factors (Mishra & Koehler, 2006; Porras-

Hernández & Salinas-Amescua, 2013) and obstacles (Mishra & Koehler, 2006; Porras-Hernández & Salinas-Amescua, 2013). Others (Drent & Meelissen, 2008; Francom, 2016; Kopcha, 2012) categorize them as resources, training, technical assistance, institutional rules and processes, and personal variables. Personal characteristics such as pedagogical views and technical competence have been proven to impact teachers' usage of educational technologies in studies. Tondeur et al. (2017), for example, found that teachers' competencies and perspectives on the integration of technology positively affect the intention to use online platforms.

Because it was unclear when we would be back to normal, it was critical to create an environment where teachers and students could meet the requirements of enabling education through some accessible platforms. During this difficult time, educational institutions are scrambling to find alternatives to face-to-face classroom instruction. There is a pressing need to devote not only resources but also infrastructure to providing teachers with training so that they can run lessons more efficiently on online platforms. Although this shift in the educational model is now fully implemented, it is unclear whether teachers are satisfied with the results of employing online platforms and resources for teaching. It's also crucial to know how they plan to use them in the future so that institutions can make more informed decisions about their large investments in or upgrades to online platforms. Although there were various internet-enabled online education platforms available prior to the introduction of COVID-19, their acceptance rate was low. Students and professors are becoming increasingly interested in online platforms such as Zoom meetings, Google Meets, Google Classes, social media, blogs and YouTube, among others. Since the COVID-19 pandemic, several universities worldwide have been continuing teaching-learning activities online. Higher education teachers in developed countries have prior training, exposure and experience with online education whereas teachers in developing countries such as Nepal have no previous experience or training. Besides, online education is a relatively recent phenomenon in Nepal. Hence, this study fills the gaps by exploring teachers' perspectives and intentions to use digital platforms for online teaching.

The question arises as to whether online teaching platforms constitute a revolutionary development in the education sector or merely a forced application for the time being. Whether professors are interested in or content with the numerous advantages of online classrooms, or whether they are bothered by the various issues. We are currently apprehensive about the ability of online platforms to totally or partially replace traditional classrooms after COVID-19. Do teachers plan to use online teaching platforms and resources after COVID-19? Are the desired objectives from online teaching platforms being met by the teachers or institutions? These are critical questions for the execution of various higher education policies.

METHODOLOGY

A descriptive cross-sectional study was used in this research. Given the present pandemic scenario, an online Google form questionnaire was recommended. Respondents received self-administered questions using Google Forms via social media platforms such as Facebook, emails, Messenger and Viber groups. An online survey was performed among teachers from higher education institutions after three months of online teaching (HEIs) to investigate teachers' perceptions of teaching online using various digital platforms and intentions to use these platforms. The survey was conducted using social media platforms such as Viber and Messenger groups and emails to gather teachers' perspectives from various tertiary level institutions. A total of 227 teachers in higher education participated in the study. The participants were higher

education teachers engaged in online teaching. The survey was posted to Viber and Messenger Groups. Out of 227 research participants, 47.1% were between 31 to 40 years, 62.6% were engaged in management education, 84.1% were male and 15.9% were female. Similarly, 45.4% of the 227 participants had 10-20 years of teaching experience and 77.5% worked as full-time teachers. Likewise, 48.9% of the teachers were teaching in the affiliated colleges of two different universities such as Tribhuvan University and Pokhara University. Besides, a few of the samples also represented colleges with international affiliations. General ethical considerations were followed while collecting and interpreting the data. Recruitment of the participants in this study was carried out using consecutive sampling. The samples were representative of gender, teaching experience, areas of teaching and type of organization. Participants gave their informed consent before data was collected and the survey took place from September to December 2020.

There were two components of the online survey. The first section dealt with the research participants' socio-demographic features. The second section collected information on teachers' attitudes and the variables influencing teachers' inclination to utilize digital platforms on a seven-point Likert scale. Data were analyzed using SPSS. The characteristics of the respondents were examined using descriptive statistics such as frequency distribution and the perception of teachers towards online teaching was measured using mean value analysis. Exploratory factor analysis was used to identify the factor structure of the measure used in the study and examine internal reliability. Content validity improved the surveys' validity by engaging subject experts to examine items that measure the particular construct. Face validity was then used by asking ten teachers to rate the surveys based on their conformity with the study goals and intelligibility of the questions. A couple of questions were rephrased and expanded upon due to these reviews. A seven-point Likert scale was used to rate the questions. The reliability coefficient was used to determine the survey's reliability for 33 items. The results revealed a good level of reliability coefficient (Cronbach $\alpha = 0.77$). SPSS version 25 was used to analyze the quantitative data and frequency distributions were calculated for the majority of the items. Various statistical tools such as descriptive statistics, correlations, regression and exploratory factor analysis were employed to analyze the data.

RESULTS AND DISCUSSION

Socio-Demographic Characteristics of the Research Participants

Table 1 summarizes the respondents' demographic and job-related characteristics. The table reveals that most of the sample respondents (84.1%) were male whereas 15.9% were female. In terms of age group, 47.1% of the respondents were in the age group of 31–40 years; 35.2% in the age group 41–50 years, 10.1% of the participants in the age group of 30 years and below, and 7.5% in the age group of above 50 years. Similarly, as presented in Table 1, 77.5% of respondents were full-time teachers, 48.9% of the teachers were engaged in affiliated colleges and 47.1% in the constituent college whereas very few (4.0%) worked in the colleges of international affiliation. Likewise, more than half (62.6%) of the respondents are involved in teaching management courses, 13.7% in humanities and social sciences studies, and 10.6% in health, medicine and engineering systems. Regarding the OCAs, the majority (48.5%) of the teachers used Microsoft Teams for online teaching, 27.8% used Zoom, 18.1% used Google Classroom and 5.7% used other applications.

Table 1
Socio-Demographic Profile of Respondents

Variables	Categories	Frequency	Percent
Gender	Male	191	84.10
	Female	36	15.90
Age Group	up to 30 years	23	10.10
	31 to 40 years	107	47.10
	41 to 50 years	80	35.20
	More than 50 years	17	7.50
Teaching Service	Full-Time Faculty	176	77.50
	Faculty on Contract	51	22.50
Type of Institution	Constituent College	107	47.10
	Affiliated College	111	48.90
	Others	9	4.00
Area of Teaching	Management	142	62.60
	Engineering	24	10.60
	Humanities and Social Sciences	31	13.70
	Health Science and Medicine	24	10.60
	Others	6	2.60
Teaching Experience	Less than 5 Years	29	12.80
	5 -10 Years	71	31.30
	10 - 20 Years	103	45.40
	20 Years and More	24	10.60
Online Classroom App	Zoom	63	27.80
	Microsoft Teams	110	48.50
	Google Classroom	41	18.10
	Others	13	5.70
Total		227	100.00

Teachers' Perceptions towards Online Classroom Applications (OCAs)

Table 2 (See Appendix A) shows the mean value of the use of digital platforms in online teaching, the experience of using online classroom applications and perception towards online education via various online platforms. Different 33 items were used to measure it using a 7-points Likert Scale where one denotes “strongly disagree” and seven represents “strongly agree.” It is clear from the table that the mean value of all statements is more than the average value of 4. It denotes that all these items used to measure teachers' perceptions are important and considered while teaching online.

Among these 33 items, perceived security (mean of 6.21) and online classroom applications bringing new opportunities for teaching and learning (mean of 6.13) were considered a significant factor for indicating a positive attitude towards online education using online teaching tools. Similarly, statements such as 'I have to be more creative in my teaching pedagogies to prepare for classes on the OCAs' (mean of 5.76), 'I have to prepare more to teach on the OCAs as compared to the traditional teaching' (mean of 5.39), 'I am supported and encouraged by my Institution to use the OCAs' (mean of 5.32), 'I trust the OCAs for instruction during COVID-19 pandemic' (mean of 5.70), 'I will continue using OCAs as an additional tool for teaching, even after COVID-19' (mean of 5.29), 'I look forward to teaching my next course on OCAs during COVID-19' (mean of 5.83), 'I know how to use different OCAs' (mean of 5.65), 'I frequently play around with the other features provided by an OCA' (mean of 5.39), 'I think teaching using the OCAs is relevant' (mean of 5.70) and convenient (mean of 5.27), 'My institute has made it mandatory to use OCAs for education' (mean of 5.75), 'It is easy and convenient to share teaching resources during online class' (mean of 5.88), and 'Teaching using the OCAs help me teach large number of students' (mean of 5.79) also indicate that overall teachers hold positive attitude towards teaching online using online platforms. They have developed online teaching ability during the course of time; they trust online platforms, relevancy of using online platforms; they have intention to use online classroom applications even in future; and they are digitally literate.

Result of KMO test and Bartlett's Test of Sphericity

To assess construct validity and ensure that the data gathered for an exploratory factor analysis were suitable, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (KMO) test and Bartlett's Test of Sphericity were used. The KMO test ensured that the study's sampling was adequate. Bartlett's Test of Sphericity tested the correlations between items to see if they were significant enough for EFA. In this study, the value of KMO is 0.789, which is more than the acceptable limit of 0.6. It indicates that the sample is adequate to run the factor analysis. The other measurement is Bartlett's test of sphericity, and its value was 2574.165 and p-value <0.001. This measure indicates a highly significant correlation among the items of the constructs in the survey, which is appropriate for factor analysis. Table 3 shows the result of KMO and Bartlett's Test.

Table 3
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.789
	Approx. Chi-Square	2574.165
Bartlett's Test of Sphericity	df	435
	Sig.	.000

Communalities

In this study, initially, 33 different items were used to measure teachers' perceptions of the OCAs. The responses were measured on a 7-point scale (1 = strongly disagree to 7 = strongly agree). Factor loading (communalities) was calculated to estimate the variance in each variable that is accounted for. Factor loading is considered to be very significant if they are > 0.50. To conduct an EFA, the statistical significance of Bartlett's Test of Sphericity must be less than 0.05. EFA was performed using the principal component analysis and a varimax rotation. Three items – I6, I23, and I33 – had factor loadings that were less than the acceptable level of 0.5. As a result, these items

were deleted and EFA was done again with 30 items, with all extraction values beyond the 0.50 acceptable range. Table 4 shows the result of communalities (See Appendix B).

Result of Exploratory Factor Analysis (EFA)

An exploratory factor analysis (EFA) was conducted on 30 items after removing three items with a factor loading less than the minimum acceptance range of 0.5. We use varimax rotation for conducting factor analysis, and the factor solution was determined based on the number of eigenvalues greater than one. After running EFA, we found that three items had cross-loading in more than one factor. So, we removed these items and, finally, nine factors were extracted based on 27 items. The first factor comprises of 4 items (I9, I10, I11, I27), the second factor comprises of five items (I12, I19, I20, I21, I22), the third factor comprises of four items (I2, I3, I4, I5), the fourth factor comprises of four items (I17, I18, I28, I29), the fifth factor comprises of three items (I30, I31, I32), the sixth factor comprises of two items (I7, I8), the seventh factor comprises of two items (I13, I16), the eighth factor comprises of two items (I24, I25). The ninth factor comprises one item only. These factors were named as training and administrative support, trust in an OCA, poor pedagogical tools, digital literacy, ethicality, online teaching ability, intention to use, technological barriers, and perceived security. These nine factors explained 66.675% of the variance in the pattern of relationships among the items. The percentages explained by each factor were 10.396% (training and administrative support), 9.835% (trust on an OCA), 9.267% (poor pedagogical tools), 8.846% (digital literacy), 6.998% (ethicality), 6.083% (online teaching ability), 5.406% (intention to use), 5.405% (technological barrier), and 4.439% (perceived security). The output of factor analysis is given in Table 5.

Table 5
The output of Exploratory Factor Analysis

Factors	Item code	Item loading	% of Variance	Cum. Variance
Training and Administrative support	I9	.679		10.396
	I10	.848	10.396	
	I11	.840		
	I27	.715		
Trust in OCA	I12	.581		20.231
	I19	.742		
	I20	.551	9.835	
	I21	.781		
	I22	.646		
Poor Pedagogical Tools	I2	.693		29.498
	I3	.855	9.267	
	I4	.831		
	I5	.694		

Teachers' Perception of Online Teaching

Digital Literacy	I17	.787		38.344
	I18	.722		
	I28	.640	8.846	
	I29	.534		
Ethicality	I30	.800		45.342
	I31	.833	6.998	
	I32	.721		
Online Teaching Ability	I7	.876		51.425
	I8	.890	6.083	
Intention to Use	I13	.656		56.831
	I16	.627	5.406	
Technological Barriers	I24	.876		62.236
	I25	.835	5.405	
Perceived Security	I1	.763	4.439	66.675

Correlations

The correlation between different factors extracted through EFA has been given in Table 6.

Table 6

Correlations of Factors Extracted through Exploratory Factor Analysis

Factors	TAS	Trust	PPT	DL	EH	OTA	TB	PS	IU
TAS	1								
Trust	.126	1							
PPT	-.059	-.224**	1						
DL	.243**	.515**	-.131*	1					
EH	.093	-.122	.269**	.012	1				
OTA	.169*	.174**	.074	.250**	.167*	1			
TB	-.127	-.109	.360**	-.151*	.152*	.004	1		
PS	.073	.237**	-.044	.193**	.075	.044	-.090	1	
IU	.235**	.542**	-.203**	.494**	-.060	.243**	-.136*	.272**	1

** Significant at the 0.01 level

* Significant at the 0.05 level

Note: TAS is Training and administrative Support, PPT is Poor Pedagogical Tools, DL is Digital Literacy, EH is Ethicality, OTA is online teaching ability, TB is technological barriers, PS is perceived security, and IU is the intention to use

It is clear from the table that there is a significant positive correlation between intention to use with training and support, trust, digital literacy, online teaching ability and perceived security. Similarly, there is a significant negative correlation between intention to use with poor pedagogical tools and technological barriers and no significant correlation between intention to use and ethicality. We find a low to moderate correlation between intention to use and other independent variables as the correlation coefficient ranges from 0.060 to 0.542 only.

Regression Analysis

The multiple regression analysis shows the impact of all independent variables on the dependent variable (intention to use). The coefficient table along with model summary result of ANOVA is given in Table 7.

Table 7
Coefficients

Model	Beta	T	Sig.	Collinearity Statistics	
				Tolerance	VIF
(Constant)		1.998	.047		
TAS	.106	1.935	.05	.911	1.098
Trust	.335	5.252	.000	.673	1.486
PPT	-.083	-1.407	.161	.791	1.264
DL	.230	3.608	.000	.672	1.489
EH	-.039	-.689	.492	.870	1.149
OTA	.116	2.088	.038	.887	1.127
TB	-.004	-.063	.950	.842	1.188
PS	.134	2.458	.015	.921	1.086

Dependent Variable: Intention to Use

Note: TAS is Training and Administrative Support, PPT is Poor Pedagogical Tools, DL is Digital Literacy, EH is Ethicality, OTA is online teaching ability, TB is technological barriers, PS is perceived security, and IU is the intention to use

Model Summary

Model	R Square	Adjusted R Square	Std. Error
1	.404	.382	.84875

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	106.565	8	13.321	18.491	.000
Residual	157.043	218	.720		
Total	263.608	226			

The positive slope coefficients and the p-values less or equal to 5 percent significance level indicate a significant positive impact of training and support, trust, digital literacy, online teaching ability, and perceived security on intention to use. Similarly, the p-value of F-statistics less than 1% level of significance confirms that the regression model used is suitable. And the adjusted R-square 0.382 indicates that 38.2 percent of the variation in the intention to use an OCA is explained by the independent variables used in this model.

Discussion

The study investigated teachers' views of their intentions to use online classroom apps in online teaching to better understand the transition and its implications for teachers' teaching methods and delivery of education. The majority of teachers at higher education institutions use online platforms like Microsoft Teams, Zoom and Google Classrooms, which support the findings of Shrestha et al. (2021) that Zoom and Google Meet are the most extensively used platforms for online instruction. Furthermore, the findings revealed that perceived security and online classroom applications bringing new opportunities for teaching and learning were considered to be significant factors for indicating a positive attitude toward online education using online teaching tools, which confirm the findings of Fang et al. (2019) whereas contrast with the results of Kulal and Nayak, (2020), who concluded that online platforms are not secured.

The findings of the study also reveal that teachers hold a positive attitude towards teaching online; they have the intention to use online classroom applications even in the future and are digitally literate, affirming the findings of Shrestha et al. (2021) were 88.2% of the teachers reported that they plan to use online resources even in the post-pandemic period. The studies (Lemay, Doleck & Bazalais, 2021; Kulal & Nayak, 2020) present contrasting findings that the teachers were uncomfortable with adopting new technology due to a lack of proper teacher training. They also lack familiarity with the digital platforms used for online teaching, which may become a barrier for teachers to use them even though they intend to use them. Similarly, the same finding contradicts the findings of Vanitha and Alathur (2021), reporting that many teachers were appropriately trained about various OCAs and their usefulness which ultimately suggests that the training and development on online platforms and their uses leads to effective teaching in higher education. Even though teachers hold a positive attitude towards teaching online, the study indicates that teachers are facing difficulties in conducting online classes due to poor skills in teaching online and technological barriers which confirms with the findings of Kulal and Nayak (2020) where the result highlighted technical issues and poor skill of teaching online as the major problem.

Similarly, the study also indicated that intention to use is significantly correlated with training (Laudari, 2019; Albugami & Ahmed, 2015; Cunningham, 2015; Agbo, 2015) and administrative support (Gautam and Gautam, 2020; Agbo, 2015; Ghavifekr et al., 2016; Panigrahi et al., 2018; Reid, 2014), trust (Agbo, 2015; Cunningham, 2015; Elatrachi & Oukarfi, 2020; Laudari, 2019; Panigrahi et al., 2018); Tondeur, et al., 2017; Vasinda et al., 2017; Shah et al., 2020), digital literacy (Blundell et al., 2016; Ifinedo et al., 2020; McKnight et al., 2016; Nelson et al., 2019; Sipila, 2014; Vasinda et al., 2017; Phelps & Vlachopoulos, 2020), online teaching ability and perceived security (Gautam & Gautam, 2020). In the same way, there is a substantial negative link between intention to use and poor educational tools and technological impediments. Still, no such correlation exists between intention to use and ethicality.

CONCLUSION

The present study aimed to determine influencing factors of intention to use the OCAs. Exploratory factor analysis was used to extract nine different aspects linked to the OCAs. The study then looked at the influence of each item on intention to use. The study concluded that training and support, trust, digital literacy, online teaching capacity and perceived security were the major factors influencing the desire to use an OCA. These factors have a positive influence on the intention to use the OCAs. The findings have important implications for universities and colleges to train teachers in the field of online mode of education, develop policies on using technology and invest in relevant infrastructures to move towards a blended approach to teaching and learning in the future (Benito et al., 2021; Shrestha et al., 2021). Educational authorities can support teachers in higher education by providing more explicit guidelines on teaching and learning and assessment in multiple education situations, including those that occur during a pandemic or any other emergencies.

The study only revealed findings, limiting its applicability to a larger population. Because the study was restricted to only two higher education institutions, it may not be a compelling case for understanding online education activities during the pandemic in other developing nations. Furthermore, this study did not look at students' fair access to technology or their concerns about the digital gap in crises, both of which might be examined in future research. In addition, future studies should include gathering data from a more significant number of participants, including both teachers and students, to better understand how people perceive and intend to use online platforms.

REFERENCES

- Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: The challenges and opportunities. *Interact. Learn. Environ.* <https://doi.org/10.1080/10494820.2020.1813180>
- Agbo, I. S. (2015). Factors influencing information and communication technology (ICT) in teaching and learning computer studies in Ohaukwu local government area of Ebonyi state- Nigeria. *Journal of Education and Practice*, 6(7), 71–86.
- Al-Balas, M., Al-Balas, H. I., Jaber, H. M., Obeidat, K., Al-Balas, H., & Aborajooh, E. A. (2020). Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: Current situation, challenges, and perspectives. *BMC Med. Educ.* 20, 341. <https://doi.org/10.1186/s12909-020-02257-4>
- Albugami, S., & Ahmed, V. (2015). Success factors for ICT implementation in Saudi secondary schools: ICT directors, headteachers, teachers, and students. *International Journal of Education and Development using ICT*, 11(1), 36-54.
- Alzahrani L, & Seth, K.P. (2021). Factors influencing students' satisfaction with continuous use of learning management systems during the COVID-19 pandemic: An empirical study. *Education and Information Technologies*, 26, 6787-6805. <https://doi.org/10.1007/s10639-021-10492-5>
- Becker, A. (2017). Rage, loss and other footpaths: Subjectification, decolonisation and transformation in higher education. *Transformation in Higher Education*, 2, 7. <https://doi.org/10.4102/the.v2i0.23>
- Becuwe, H., Roblin, N. P., Tondeur, J., Thys, J., Castelein, E., & Voogt, J. (2017). Conditions for the successful implementation of teacher educator design teams for ICT integration: A Delphi study. *Australasian Journal of Educational Technology*, 33(2), 159-172. <https://doi.org/10.14742/ajet.2789>
- Benito, Á., Dogan Yenisey, K., Khanna, K., Masis, M. F., Monge, R. M., Tugtan, M. A., & Vig, R. (2021). Changes that should remain in higher education post-COVID-

- 19: A mixed-methods analysis of the experiences at three universities. *Higher Learning Research Communications*, 11, 51–75. <https://doi.org/10.18870/hlrc.v11i0.1195>
- Blundell, C., Lee, K. T., & Nykvist, S. S. (2016). Digital learning in schools: Conceptualizing the challenges and influences on teacher practice. *Journal of Information Technology Education*, 15, 535-560. <https://doi.org/10.28945/3578>
- Carrillo, C., & Flores, M. A. (2020). COVID-19 and teacher education: A literature review of online teaching and learning practices. *European Journal of Teacher Education*, 43(4), 466–487. <https://doi.org/10.1080/02619768.2020.1821184>
- Cheng, G., & Chau, J. (2016). Exploring the relationships between learning styles, online participation, learning achievement and course satisfaction: An empirical study of a blended learning course. *Br. J. Educ. Technol.* 47, 257–278. <https://doi.org/10.1111/bjet.12243>
- Cunningham, M. (2015, November). Factors impacting the adoption of Technology-enhanced learning techniques by universities in Nairobi, Kenya. In 2015 IEEE International Symposium on Technology and Society (ISTAS) (pp. 1–7). IEEE. <https://doi.org/10.1109/ISTAS.2015.7439446>
- Dawadi, S., Giri, R., & Simkhada, P. (2020). Impact of COVID-19 on the education sector in Nepal challenges and coping strategies. Sage Submissions. Preprint. <https://doi.org/10.31124/advance.12344336.v1>
- Drent, M., & Meelissen, M. (2008). Which factors obstruct or stimulate teacher educators to use ICT innovatively? *Computers & Education*, 51(1), 187–199. <https://doi.org/10.1016/j.compedu.2007.05.001>
- Du, Toit, J., & Verhoef, AH. (2018). Embodied digital technology and transformation in higher education. *Transformation in Higher Education*. 2018. <https://doi.org/10.4102/the.v3i0.52>
- Elatrachi M., & Oukarfi, S. (2020). Determinants of ICT integration by teachers in higher education in Morocco. In A. Kavoura, E. Kefallonitis, & P. Theodoridis (eds), Strategic, innovative marketing and tourism (p. 289–299). https://doi.org/10.1007/978-3-030-36126-6_32
- Fang, C. Wang, G. & Huang, B. (2019). Can information technology promote the development of student's cognitive abilities? An estimate based on the net effect of value-added educational instruments. *Open Edu*, 4, 100-110.
- Francom, G. M. (2016). Barriers to technology use in large and small school districts. *Journal of Information Technology Education: Research*, 15(1), 577–591. <https://doi.org/10.28945/3596>
- Gautam, D., & Gautam, P. (2020). Transition to online higher education during the COVID-19 pandemic: Turmoil and way forward to the developing country of South Asia- Nepal. *Journal of Research in Innovative Teaching & Learning*, 14(1), 93-111, Emerald Publishing Limited 2397-7604. <https://doi.org/10.1108/JRIT10-2020-0051>
- Ghavifekr, S., Kunjappan, T., Ramasamy, L., & Anthony, A. (2016). Teaching and learning with ICT tools: Issues and challenges from teachers' perceptions. *Malaysian Online Journal of Educational Technology*, 4(2), 38–57.
- Hamel, C., Turcotte, S., & Laferrière, T. (2013). Evolution of the conditions for successful innovation in remote networked schools. *International Education Studies*, 6(3), 1–14. <https://doi.org/10.5539/ies.v6n3p1>
- Ifinedo, E., Rikala, J., & Hämäläinen, T. (2020). Factors affecting Nigerian teacher educators' technology integration: Considering characteristics, knowledge

- constructs, ICT practices and beliefs. *Computers & Education*, 103760. <https://doi.org/10.1016/j.compedu.2019.103760>
- Khan, M. H. S., Hasan, M., & Clement, C. K. (2012). Barriers to the introduction of ICT into education in developing countries: The example of Bangladesh. *International Journal of Instruction*, 5(2), 61–80.
- Kopcha, T. J. (2012). Teachers' perceptions of the barriers to technology integration and practices with technology under situated professional development. *Computers & Education*, 59(4), 1109–1121. <https://doi.org/10.1016/j.compedu.2012.05.014>
- Kulal, A., & Nayak, A. (2020). A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District. *Asian Association of Open Universities Journal*, 15(3), 285–296. <https://doi.org/10.1108/AAOUJ-07-2020-0047>
- Lai, K. (2011). Digital technology and the culture of teaching and learning in higher education. *Australasian Journal of Educational Technology*, 27(Special issue, 8), 1263–1274. <https://doi.org/10.14742/ajet.892>
- Laudari, S. (2019). Breaking barriers: Exploring digital practices of teacher educators in Nepal. (Doctoral thesis), University of Technology, Sydney. <https://opus.lib.uts.edu.au/bitstream/10453/137075/2/02whole.pdf>
- Laudari, S., & Maher, D. (2019). Barriers of ICT Use in EFL teacher education courses in Nepal: An activity theory perspective. *Journal of NELTA*, 24(1), 77–94. <https://doi.org/10.3126/nelta.v24i1-2.27681>
- Lemay, D.J, Doleck, T & Bazelais, P. (2021). Transition to online teaching during the COVID-19 pandemic. *Interactive Learning Environments*, 1-12. <https://doi.org/10.1080/10494820.2021.1871633>
- McKnight, K., O'Malley, K., Ruzic, R., Horsley, M. K., Franey, J. J., & Bassett, K. (2016). Teaching in a digital age: How educators use technology to improve student learning. *Journal of Research on Technology in Education*, 48(3), 194–211. <https://doi.org/10.1080/15391523.2016.1175856>
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Nelson, M. J., Voithofer, R., & Cheng, S. L. (2019). Mediating factors that influence the technology integration practices of teacher educators. *Computers & Education*, 128, 330–344. <https://doi.org/10.1016/j.compedu.2018.09.023>
- Panigrahi, R., Srivastava, P. R., & Sharma, D. (2018). Online learning: Adoption, continuance, and learning outcome—A literature review. *International Journal of Information Management*, 43, 1–14. <https://doi.org/10.1016/j.ijinfomgt.2018.05.005>
- Phelps, A., & Vlachopoulos, D. (2020). Successful transition to synchronous learning environments in distance education: A research on entry-level synchronous facilitator competencies. *Education and Information Technologies*, 25(3), 1511–1527. <https://doi.org/10.1007/s10639-019-09989-x>
- Porrás-Hernández, L. H., & Salinas-Amescua, B. (2013). Strengthening TPACK: A broader notion of context and the use of teacher's narratives to reveal knowledge construction. *Journal of Educational Computing Research*, 48(2), 223–244. <https://doi.org/10.2190/EC.48.2.f>
- Rana, K. (2018). ICT in rural primary schools in Nepal: Context and teachers' experiences [Unpublished doctoral dissertation], University of Canterbury.

- Reid, P. (2014). Categories for barriers to adoption of instructional technologies. *Education and Information Technologies*, 19(2), 383–407. <https://doi.org/10.1007/s10639-012-9222-z>
- Roach, V., & Lemasters, L. (2006). Satisfaction with online learning: a comparative descriptive Study. *J. Interact. Online Learn.* 5, 317–332.
- Saeed, S. (2020, October 24). COVID-19 has exacerbated inequality in higher education. University World News: The Global Window on Higher Education. <https://www.universityworldnews.com/post.PHP?story=20201023103200335>
- Salehi, H., & Salehi, Z. (2012). Challenges for using ICT in education: Teachers' insights. *International Journal of E-Education, e-Business, e-Management and e-Learning*, 2(1), 40–43.
- Shah, U., Khan, S. H., & Reynolds, M. (2020). Insights into variation in teachers' pedagogical relationship with ICT: A phenomenographic exploration of Pakistani higher education. *Technology, Pedagogy and Education*, 29(5), 541-555. <https://doi.org/10.1080/1475939X.2020.1810751>
- Shrestha, S. (2016). Exploring mobile learning opportunities and challenges in Nepal: The potential of open-source platforms [Unpublished doctoral dissertation], University of West London.
- Shrestha, S., Haque, S., Dawadi, S., & Giri, R. A. (2021). Preparations for and practices of online education during the Covid-19 pandemic: A study of Bangladesh and Nepal. *Education and Information Technologies*, 1-23. <https://doi.org/10.1007/s10639-021-10659-0>
- Sipilä, K. (2014). Educational use of information and communications technology: Teachers' perspective. *Technology, Pedagogy and Education*, 23(2), 225-241. <https://doi.org/10.1080/1475939X.2013.813407>
- Tondeur, J., Van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *Educational Technology Research and Development*, 65(3), 555-575. <https://doi.org/10.1007/s11423-016-9481-2>
- Uddin, M. (2020, June 13). Effects of the pandemic on the education sector in Bangladesh. The Financial Express. <https://thefnancialexpress.com.bd/views/efects-of-the-pandemic-on-the-education-sector-in-Bangladesh-1592061447>
- Vanitha, P., & Alathur, S. (2021). Factors influencing E-learning adoption in India: learners' perspective. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-021-10504-4>
- Vasinda, S., Ryter, D. A., Hathcock, S., & Wang, Q. (2017). Access is not enough: A collaborative autoethnographic study of affordances and challenges of teacher educators' iPad integration in elementary education methods courses. *Contemporary Issues in Technology and Teacher Education*, 17(3), 411-431.
- Waghid, Z., & Waghid, F. (2016). Examining digital technology for (higher) education through action research and critical discourse analysis. *South African Journal of Higher Education*, 30(1), 265–284. <https://doi.org/10.20853/30-1-562>

APPENDIX A

Table 2
Perception of Teachers towards Online Teaching through Online Classroom Applications (OCAs)

Code	Items	Mean	SD
1	Teaching via OCAs during the COVID-19 pandemic is secure from COVID.	6.21	1.257
2	I find student participation in class discussions to be low on OCAs.	4.35	1.739
3	I have difficulty keeping my students involved throughout the session on OCAs.	3.77	1.763
4	I find it difficult to motivate my students in the class on OCAs.	3.65	1.669
5	I find it difficult to interact with all the students in the class on OCAs.	4.48	1.938
6	I have a higher workload when teaching on OCAs than traditional teaching.	4.19	1.982
7	I have to be more creative in my teaching pedagogies to prepare for classes on OCAs.	5.76	1.483
8	I have to prepare more to teach on OCAs than traditional teaching.	5.39	1.669
9	I am supported and encouraged by my Institution to use the OCAs	5.32	1.568
10	The workshops and training provided by my institution helped me get familiar with OCAs.	4.82	1.885
11	When I have difficulty using an OCA, I can rely on the technical support provided by my institution.	4.46	2.029
12	I think I can rely on OCAs to take care of my privacy.	4.60	1.535
13	I trust OCAs for teaching during the COVID-19 pandemic.	5.70	1.254
14	I receive fair compensation for teaching on OCAs.	4.11	1.837
15	I will continue using OCAs as an additional tool for teaching, even after COVID-19	5.29	1.524
16	I look forward to teaching my next course on OCAs during COVID-19.	5.83	1.197
17	I know how to use different OCAs.	5.65	1.241
18	I frequently play around with the different features provided by an OCA.	5.39	1.313
19	I think teaching using OCAs is relevant.	5.70	1.069
20	I think teaching using OCAs is convenient.	5.27	1.341
21	I think OCAs bring new opportunities for teaching and learning.	6.13	1.139
22	I think OCAs increase the quality of teaching and learning.	4.92	1.524
23	Student evaluation is more challenging to manage on OCAs than traditional teaching.	5.11	1.729
24	I often get Internet Connection issues while teaching on OCAs.	5.40	1.667
25	I often get the technical issue (voice, Video, Sharing) while teaching using OCAs.	4.98	1.677
26	My institute has made it mandatory to use OCAs for	5.75	1.580

Teachers' Perception of Online Teaching

	teaching.		
27	My institute made it mandatory for all to attend OCA training for teaching.	4.77	1.844
28	It is easy and convenient to share teaching resources during an online class.	5.88	1.307
29	Teaching using OCAs help me prepare a large number of students.	5.79	1.422
30	I feel worried about my classroom notes getting copied if I teach online.	4.30	2.004
31	When I teach online, I perceive that I have no control over who may collect my teaching material.	4.60	1.912
32	My teaching material on OCAs can be shared without my permission.	5.05	1.817
33	Students can easily save my teaching material, including the video, PowerPoint presentations, and supporting material I use in my online class.	5.63	1.495

N= 227, 1 = Strongly Disagree, 7 = Strongly Agree

APPENDIX B

Table 4
Result of Communalities

Code	Items	Initial	Extraction
1	Teaching via OCAs during the COVID-19 pandemic is secure from COVID.	1.00	.662
2	I find student participation in class discussions to be low on OCAs.	1.00	.524
3	I have difficulty keeping my students involved throughout the session on OCAs.	1.00	.762
4	I find it difficult to motivate my students in the class on OCAs.	1.00	.776
5	I find it difficult to interact with all the students in the class on OCAs.	1.00	.552
6	I have to be more creative in my teaching pedagogies to prepare for classes on OCAs.	1.00	.815
7	I have to prepare more to teach on OCAs than traditional teaching.	1.00	.830
8	I am supported and encouraged by my Institution to use the OCAs	1.00	.626
9	The workshops and training provided by my institution helped me get familiar with OCAs.	1.00	.736
10	When I have difficulty using an OCA, I can rely on the technical support provided by my institution.	1.00	.732
11	I think I can rely on OCAs to take care of my privacy.	1.00	.550
12	I trust OCAs for teaching during the COVID-19 pandemic.	1.00	.684
13	I receive fair compensation for teaching on OCAs.	1.00	.519
14	I will continue using OCAs as an additional tool for teaching, even after COVID-19	1.00	.599

Teachers' Perception of Online Teaching

15	I look forward to teaching my next course on OCAs during COVID-19.	1.00	.726
16	I know how to use different OCAs.	1.00	.674
17	I frequently play around with the different features provided by an OCA.	1.00	.663
18	I think teaching using OCAs is relevant.	1.00	.707
19	I think teaching using OCAs is convenient.	1.00	.579
20	I think OCAs bring new opportunities for teaching and learning.	1.00	.676
21	I think OCAs increase the quality of teaching and learning.	1.00	.535
22	I often get Internet Connection issues while teaching on OCAs.	1.00	.825
23	I often get the technical issue (voice, Video, Sharing) while teaching OCAs.	1.00	.778
24	My institute has made it mandatory to use OCAs for teaching.	1.00	.558
25	My institute made it mandatory for all to attend OCA training for teaching.	1.00	.681
26	It is easy and convenient to share teaching resources during online classes.	1.00	.575
27	Teaching using OCAs help me prepare a large number of students.	1.00	.547
28	I feel worried about my classroom notes getting copied if I teach online.	1.00	.724
29	When I teach online, I perceive that I have no control over who may collect my teaching material.	1.00	.753
30	My teaching material on OCAs can be shared without my permission.	1.00	.636

Extraction Method: Principal Component Analysis.

To cite this article [APA style, 7th edition]:

Gurung, S.K., Chapagain, R., Baral, S.D., & Bhandari, J. (2022). Teachers' perception of online teaching and factors influencing intention to use online platforms during COVID-19. *Prithvi Academic Journal*, 5, 71-87.