

Acceptance of Online Classes among Nursing Students

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ABSTRACT

Introduction: Online learning emerged as an essential alternative for traditional classroom education to ensure continuity of educational activities during the COVID-19 pandemic. Its overall effectiveness is closely related to students' acceptance of this modality. Despite its growing use, the extent to which nursing students accept online learning remains insufficiently examined. This study therefore aims to assess the acceptance of online learning among nursing students.

Methods: A descriptive cross-sectional study was conducted among 246 nursing students of Kathmandu using convenience sampling technique. An online survey tool comprising of five-point Likert scale was used to collect the data. The scale assessed perceived usefulness, perceived ease, and behavioral intention of nursing students toward online learning. Data were analyzed using SPSS version 25, employing descriptive and inferential statistics to determine acceptance levels and associated factors.

Results: Overall, 59.8% of students exhibited a high level of acceptance of online learning, while 40.2% reported lower acceptance. Only 26.4% agreed that online classes facilitated communication. Regarding ease of use, 42% felt they received adequate institutional support. Behavioral intention toward online learning was moderate, with 30.5% expressing satisfaction and 34.6% willing to recommend online classes. Institutional affiliation significantly influenced acceptance, with students from government institutions reporting higher acceptance ($p = 0.005$). However, sex, age, education level, and prior online experience did not show significant associations ($p > 0.05$).

Conclusion: Although more than half of the nursing students showed high level of acceptance of online learning, significant challenges such as inadequate communication and institutional support were noted. Strengthening digital infrastructure and providing structured institutional support could enhance the effectiveness and acceptance of online education among nursing students.

Keywords: E-learning acceptance, Nursing students, Online learning, Pandemic.

INTRODUCTION

The COVID-19 pandemic resulted to prolonged closure of educational institutions, creating an immediate need to shift from traditional classroom-based teaching to alternative mode of teaching.¹⁻⁴ Online learning, a pedagogical shift that takes place over the internet, became a practical alternative to ensure continuity of academic activities, allowing students to engage in learning at their own pace and convenience, overcoming geographical and time constraints.^{5,6} Globally, most countries adopted online learning platforms to sustain educational delivery during the pandemic.^{3,4} With technological

advancement, online education has expanded more in developed countries, providing access to a wide range of learning resources and fostering interactive engagement between students and instructors.⁷ Despite challenges like technological limitations, socio-economic barriers, and digital literacy gaps hinder accessibility^{2,8}, various universities and institutes in Nepal implemented virtual classes, issuing guidelines to facilitate remote learning of students including nursing students.¹

The effectiveness of online classes depends on student's ability to learn comfortably through digital platforms and their acceptance of technology used. Previous studies have shown that factors such as learners' perceptions of

technology, along with their computer-related knowledge and skills, play a critical role in shaping this acceptance.^{9,10} For nursing students, who require extensive hours of theoretical instruction and hands-on practical training, any disruption in class continuity can delay learning and hinder skill development.¹¹ If online classes are well perceived and accepted, they may serve as an alternative or complementary approach when physical classes are not feasible. Therefore, understanding students' perceptions and acceptance of online learning is essential before integrating it into routine or crisis educational settings. However, limited studies have explored this area, particularly among nursing students. Hence, this study aims to assess the acceptance of online learning among nursing students.

METHODS

A descriptive, cross-sectional study design was conducted among nursing students to assess acceptance of online classes. A sample size of 260 was calculated considering 95% confidence interval, 5% margin of error, prevalence of 87.1%¹² for acceptance of online classes and 50% non-response rate. However, 246 participants using convenience sampling, who completed online survey form were included in the study. The inclusion criteria for participants were diploma, graduate and undergraduate nursing students studying in government and private nursing colleges of Nepal and willing to participate in the study. The survey link was shared on online platforms, such as Viber, Gmail, Facebook, Messenger, and WhatsApp. Ethical approval was obtained from the Institutional Review Board (IRB) of X (Ref. 454/2077/78). An information sheet was provided, and written informed consent was obtained from all participants before data collection.

The survey tool consisted of two sections: 1. Socio-demographic information which included age, sex, level of education and type of institution, and 2. Online learning acceptance scale which contains 12 statements measured in 5-point Likert scale was developed based on extensive literature and discussion with experts. This scale assessed three domains of acceptance: Perceived usefulness (6 statements), Perceived ease of use (3 statements) and Behavioral intention (3 statements) toward online classes among nursing students.⁷ The total score ranged from 12 to 60 with higher scores indicating greater acceptance. Acceptance levels were categorized as follows:^{13,14}

Low acceptance: Score < mean score,

High acceptance: Score $\geq$ mean score.

Pretesting of tool was done among 25 nursing students who met the inclusion criteria to assess clarity, feasibility and reliability. Content validity was ensured through expert consultation and internal consistency was tested

using Cronbach's alpha, which was 0.855 indicating good reliability.¹⁵

The data were exported from Google Forms to Microsoft excel, coded, and then imported upload into Statistical Package for the Social Sciences (SPSS) version 25 for further analysis. Descriptive statistics including frequency, percentage, mean, and standard deviation, were used to summarize socio-demographic characteristics and level of acceptance of online learning. The Chi-square test was used to examine association between level of acceptance and selected variables.

RESULTS

Of the total 246 participants, majority of the participants were female (97.6%), below 25 years of age (71.5%) and belonged to government institutes (71.5%). Regarding level of nursing education, nearly equal proportions of participants had PCL Nursing (39.0%) and BNS (39.8%) qualifications, while smaller percentages had BSc. Nursing (7.7%), BMS (7.7%), and Master's in Nursing (5.7%). (Table 1)

Table 1. Demographic information of participants (n=246)

Variables	Frequency	Percentage
Gender		
Female	240	97.6
Male	6	2.4
Age		
Below 25 years	176	71.5
26-35 years	61	24.8
above 36 years	9	3.7
Level of Nursing Education		
PCL Nursing	96	39.0
BNS	98	39.8
Bsc. Nursing	19	7.7
BMS	19	7.7
Masters Nursing	14	5.7
Category of Institute		
Government	176	71.5
Private college	70	28.5

Four out of ten participants agreed that online classes improved their teaching/learning performance and enabled faster task accomplishment whereas small proportion (4-5%) strongly disagreed with these statements. Half of the participants agreed that online classes save time in searching for materials while 18% participants disagreed.

Similarly, most of the participants (39%) disagreed that online classes facilitated communication between instructor and students. Most participants (40.7%) agreed that online classes were useful for both pandemic and non-pandemic situations and 20% strongly with this

statement, whereas 8% strongly. Majority of participants (64%) perceived that their prior experience with computer systems made online classes more useful and effective for them. (Table 2)

Table 2. Distribution of participants in various domains of Online learning acceptance scale

Statements	Strongly Disagree 1 (%)	Disagree 2 (%)	Neutral 3 (%)	Agree 4 (%)	Strongly Agree 5(%)
Perceived usefulness of online classes					
Improve my learning/teaching performance.	4.1	15.4	39.4	37.4	3.7
Enables me to study course content easily and accomplish my tasks more quickly	5.3	19.5	34.6	36.2	4.5
Makes communication easier between the instructor and students	6.9	32.1	30.1	26.4	4.5
Saves time for searching course materials.	3.3	15.0	31.7	45.9	4.1
Useful for both pandemic as well as non-pandemic situation	8.5	11.4	19.1	40.7	20.3
Previous experience with computer systems and applications helped me in involvement and using the Virtual Apps	8.5	5.7	21.5	46.3	17.9
Perceived ease of online classes					
No difficulty accessing and using an e-learning system in my Institution	6.1	25.2	35.4	30.5	2.8
Proper assistance and support from my institution	8.5	19.1	28.0	41.5	2.8
Easy communication with instructor and students	5.7	27.2	28.9	32.9	5.3
Behavioral intension					
Satisfied with online classes.	5.3	13.0	45.9	30.5	5.3
Will use online classes regularly	6.1	27.6	32.9	28.9	4.5
Will recommend online classes to others	5.3	18.7	37.0	34.6	4.5

In terms of perceived ease of online classes, 41.5 % receiving proper assistance for online class from their institution while 33.3% did not face any difficulties accessing and using online learning in their institution. Similarly, 38.1% participants agreed that due to easier communication with instructor, online learning was easy to use. (Table 2)

Almost 36% participants were satisfied with online classes and 39% were willing to recommend them to others. However, 34% participants were unwilling to use online classes regularly. (Table 2)

Table 3 shows the level of acceptance of online classes among nursing students. The overall mean score $\pm$ SD of acceptance of online scale was 38.2 ± 7.4 . Almost 60% participants have high acceptance of online classes. The mean score for the perceived usefulness of online classes

was 19.7 ± 4.4 . Majority of participants (68%) perceived online classes are highly useful while only 45% perceived online classes were easy to use. Less than half (47.2%) of the participants accepted behavioral intention to continue using online classes (mean $\pm$ SD, 9.2 ± 2.4).

Table 3. Level of Acceptance of online class

Variables	No. of items	Score range	Mean score $\pm$ SD	Level of Acceptance	
				High %	Low%
Perceived usefulness	6	6-30	19.7 ± 4.4	67.5	32.5

Perceived ease to use	3	3-15	9.1 ± 2.2	44.7	55.3
Behavioral intention	3	3-15	9.2 ± 2.4	47.2	52.8
Acceptance of Online class	12	12-60	38.2 ± 7.4	59.8	40.2

The chi-square test showed that the association between institutional affiliation of participants and level of acceptance of online class was statistically significant (p -value =0.003*). However, other demographic variables (age, gender, level of education and previous online experience) has no significant association with level of acceptance of online classes. (Table 4)

Table 4. Association between Level of Acceptance and selected socio-demographic variables			
Variables	Level of Acceptance		p-value
	High N (%)	Low N (%)	
Gender			
Female	145 (60.4)	95 (39.6)	0.223f
Male	2 (33.3)	4 (66.7)	
Age			
Below 25 Years	18 (72.0)	7 (28.0)	0.188
26 years and above	129 (58.4)	92 (41.6)	
Category of institute			
Government	115 (65.3)	61(34.7)	0.005*
Private	32(45.7)	38 (54.3)	
Affiliation of institute			
University	33 (48.5)	35 (51.5)	0.003*
Academy	110 (66.7)	55 (33.3)	
Council	147(59.8)	99 (40.2)	
Education level			
PCL level	58 (60.4)	38 (39.6)	0.106
Bachelors level	77 (56.6)	59 (43.4)	
Masters level	12 (85.7)	2 (14.3)	
Previous online experience			
Yes	43 (62.3)	26 (37.7)	0.609
No	104 (58.8)	73 (41.2)	

f=fisher's exact test

DISCUSSION

The findings of this study shows that nearly 60 percent of nursing students have high level of acceptance for online learning. This finding aligns with previous studies conducted in Nepal in which 52 percent of students expressed a positive attitude toward online learning and 56 percent stated satisfaction.^{13,16} The current study indicates that although many students recognize the value of online modalities, a considerable proportion (40.2%) remains hesitant towards it. In contrast, a study from Lagos State, Igando, reported a higher acceptability (77.5 %), which may reflect differences in infrastructure, digital readiness, or institutional investment in virtual platforms.¹⁷

One notable concern was communication, as only 26.4 percent of students agreed that online classes facilitated interaction between instructors and students. Similar finding was reported from other study, whereby 18.4 percent reported very minimal interaction with lectures followed by minimal interaction between students by 17.5 percent.¹⁸ These findings highlights a critical gap in the online learning experience, as effective communication is essential for engagement and comprehension in nursing education.

The ease of use of online learning platforms also yielded mixed responses. The study demonstrated that only 45 percent perceived online classes were easy to use. In contrast, majority of participants (64.8%) in a study conducted in Kathmandu University, Nepal agreed that accessing the internet for online education was easy.¹⁹ Differences might be due to varied student groups in that study, which included MBBS, Nursing, and BDS students who may have had greater technological exposure. In the present study, 42% of the students reported receiving adequate institutional support, indicating that a considerable proportion did not feel sufficiently assisted by their institutions. Evidence from another study shows a similar pattern: although most respondents acknowledged that universities offered some form of support, only 27.5% were actually satisfied with the assistance they received.²⁰

The current study suggested 33.3 percent did not face any difficulties in accessing and using online learning in their institution indicating a majority of students faced difficulties. Comparable studies reported slow internet connections as major difficulties among 77 percent of students.¹³ The other study also reported 24.6% facing technical problems as constraints in online learning in Indonesia.¹⁸ These issues highlights the importance of stable infrastructure and technical support for successful adoption of online learning.

Less than half (47%) students were found to have high acceptance for behavior intention of online learning. About 30 percent of students were satisfied with online classes and 34.6 percent were willing to recommend them to others in this study. However, previous study reported

that a though higher percentage of nursing students (56%) were satisfied towards online learning, majority (78%) indicated that practical/clinical simulation exercises is difficult through online class.¹⁶

In this study, lower proportion (28.9%) intended to use online classes regularly comparable to another study conducted in Nepal in which 31.2 percent of participants reported unwillingness to participate in future e-learning courses.¹³ These findings suggest that while students acknowledge some benefits, they may still prefer traditional in-person learning due to factors such as hands-on experience, peer interaction, and clinical practice requirements, which are crucial in nursing education. Institutional affiliation emerged as a significant factor influencing acceptance levels, with students from government institutions reporting higher acceptance ($p = 0.005$). This finding is consistent with previous research showing differences across universities and training councils, although earlier studies unexpectedly reported more positive attitudes among CTEVT students.¹³ Such variation may reflect differences in institutional preparedness, resource distribution, or faculty readiness for online teaching. In contrast, demographic variables such as gender, age, education level, and prior online experience did not show significant associations in the present study, even though prior studies have reported influences of age and technological skills on perceptions of online learning.¹⁸ This suggests that structural and institutional factors play a more critical role in shaping students perceptions of online education than individual

characteristics.

Overall, while online learning has been moderately accepted, improvements in communication, institutional support, and engagement strategies are necessary to enhance students; experiences and encourage broader acceptance. Future research should explore targeted interventions to address these challenges, particularly in nursing education, where practical and interactive learning components are essential.

CONCLUSIONS

The study revealed that although more than half of the nursing students demonstrated high level of acceptance of online learning, significant challenges related to inadequate communication and institutional support persisted. Only about one third of the respondents reported satisfaction and willingness to recommend online classes. Institutional affiliation showed a significant association with acceptance, with students from government institutions reporting higher acceptance. These findings suggest that although online learning may be useful for pandemics and emergency situations but not useful as alternative to physical classes. Strengthening digital infrastructure, improving communication mechanism and providing structured institutional support are critical to enhance the overall effectiveness and acceptance of online education among nursing students.

Conflict of interest: None

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