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Exploring the Acceptance of Online Classes in Nepal: Application of Technology Acceptance Model

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Abstract

The paper aims to explore the acceptance of online classes in Nepal using Technology acceptance model. TAM is the most widely used model to examine the acceptance of technology by users. The results have been obtained from self-administered questionnaire from different users of online class. The responses received were analyzed by several statistical tools namely Frequency distribution, Cronbach's Alpha Reliability test, Pearson Correlation coefficient and Multiple regression computed by SPSS version 26. The main conclusion drawn from this study is that perceived usefulness has much impact on intention to use online classes. Perceived usefulness and perceived ease to use have significant relationship with intention to use online classes.

Key Words: intention to use, online class, perceived ease to use, perceived usefulness

Introduction

Information and communication have major impact on education basically developing countries (Ramani, Srinivasan, 2015) and the rapid growth of internet-based technology has resulted in many approaches to learning environment in different forms like e-learning (Shawar, Al-Sadi, & Sarie, 2007). The world is witnessing a paradigm shift in learning system. The technology has shifted from traditional methods to newer mechanism learning like web-based technology along with face-to-face instructions. Online learning or often termed as e-learning is the pedagogy that includes exchange of knowledge between or amongst individual with the indulgence of information and communication technology. This modern fusion of traditional teaching system with information system has provide an overall information manufacturing and enhancing the student's learning experience.

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Information communication technology (ICT) has influence in every sphere of human life and have possessed silent presence in work places, business, education, and entertainment (Ratheeswari, 2018) and flexible and responsive learning experience requires continues involvement of ICT.E-learning with its features of flexibility of time and place allows students and institution ease in sharing learning materials. Universities implementing ICT have attract and engage larger number of students than other universities. In recent times, the demand of ICT has emerged because of opportunities on program deliverance and flexibility of time (Oliver, & Short, 1996). Despite of many opportunities of e-learning, the transformation of education mechanism has present various challenges. This paper aims to explore the acceptance of online classes/ e-learning applying technology acceptance model in Nepal.

Research Problem

Almost every country has welcome globalization giving high chances in exchanges of ideas, resources and culture and technology as an integral part has alarmed the requirement of e-learning. E-learning enables easiness in learning regardless of physic distance. The research tires to study the following:

- a. What are the factors that influence the acceptance of online classes in Nepal using TAM?
- b. Which factor has the most influence the acceptance of online classes?

Research Objectives

This study has following research objectives:

- a. To identify the factor influencing the acceptance of online class using TAM.
- b. To examine the factor that has maximum influence on acceptance of online class.

Research Limitation

- i. The sample size is too small which may not represent the entire population.
- ii. Researcher has time limit for data collection.
- iii. Lack of previous research using technology acceptance model in Nepal.

Literature Review

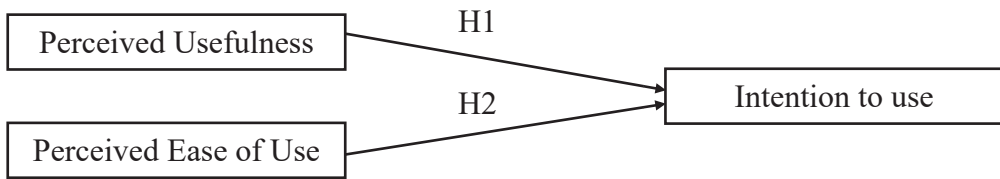
There is various literature on the first introduction of e-learning in different avenues. Abbad, Morris, & De (2009) states e-learning as a teacher -student knowledge exchange mechanism was used in in Jordan by the Arab Open University. Previous researchers have identified various factors that leads to acceptance of e-learning using

technology. A study by Masrom, (2007) depicts perceived usefulness is more important in determining intention to use than attitude toward using e-learning. They found significant relationship between student's intention to use e-learning and perceived usefulness. Hong, & Holton (2003) investigated a web-based course at University Malaysia Sarawak and reported that more than half of their participants had high level of acceptance with the web-based course. They even added that flexibility is the most important factor for the acceptance of e-learning. It was also found that satisfaction is highly influenced by Perceived usefulness and satisfaction influences the use of e-learning systems, being the first a specific contribution of this study (Ramirez *et al.*, 2017).

For the acceptance of student's intention to use e-learning it is very essential, users must have positive perception towards it and easy access to the environment. A study conducted on e-learning in Nepal by Shakya *et al.*, (2018) depicts that it is effective and cheaply available resourceful tool for learners and with this era of technology, learning process is no longer limited (Aryal & Aryal 2007). Another study by Chen & Chen (2005) describes personalization is important in web-based learning. Personalization of web-based learning requires collection of personal data to profile learner preferences, interests, and browsing behaviors in providing personalized services. Instructor characteristics and teaching materials are the predictors of the perceived usefulness of e-learning, and perceived usefulness and playfulness are the predictors of the intention to use e-learning (Lee, 2009). There are various studies in context to acceptance of e-learning using various model but little or no research has been conducted in context of Nepal applying acceptance model. This paper aims to examines the acceptance level of e-learning in Nepal and what is the main factor that drives the acceptance of e-learning in Nepal using Technology acceptance model.

Theoretical Framework

Technology acceptance model was designed on the basis of Theory of Reasoned Behavior in the aim of understanding the acceptance of technology. TAM explains the intention of individual and use of technology with various factors. TAM has been most influential model for technology acceptance with primarily two important factors that influence individual intention to use technology: perceived usefulness and perceived ease to use (Charness & Boot, 2016). Perceived usefulness is the degree to which using the technology enhances the individual performance and efficiency whereas perceived ease to use is the degree that people believe using the technology is free of efforts. Based on the Technology Acceptance Model by Davis, the conceptual framework (Perceived usefulness and Perceived ease to use as independent variable and intention to use as dependent variable) was developed as presented in figure below:



Methods and Materials

Research Methodology can be understood as a science of studying how research has been done. It looks into the research design, nature and sources of data, data collection procedure and tools & technique of analysis. For the purpose of achieving the objectives of the study, the applied methodologies are used. The research methodology to be used in the present study is briefly mentioned below.

Questionnaire was developed and used as an instrument for data collection. A total of 400 questionnaire were distributed at a random basis in Nepal. That data was than analyzed using SPSS version 26. Descriptive analysis, Reliability analysis, Pearson Correlation and Regression analysis were the performed in the data.

To investigate the revised TAM model, a total 12 items were generated. Of the 12 items, six items measure Perceived usefulness, three items Perceived ease to use, and three items measure intention to use. A five-point Likert scale was used, where 1= strongly disagree and 5= strongly agree, to identify the response of each items and some demographic items were included with different measurement scales. The final sample size was 352.

Results and Discussion

Descriptive Analysis

A total of 352 respondent from various part of Nepal has participated in this study. Major respondent was Male (67%), above 40 years (40.9%), teaching faculty (63.1) working in Government school/college (75.3%) and were involve teaching Graduate students (50.3%). Majority of respondent's field of study was both mixture of theoretical and practical (55.4%) and used Zoom (71%). And can find that maximum respondents didn't have prior experience of online classes. All are data are reliable at 77.1 %. The data are presented in Table 1.

Table 1: Background Profile of the Respondents

Demography	Characteristics	Frequency	Percent
Gender	Male	236	67.0
	Female	116	33.0
Age	Below 25 years	100	28.4

	26-40 years	108	30.7
	Above 40 years	144	40.9
Category of involvement in your university	As a teaching faculty	222	63.1
	As a staff	2	0.6
	As a student	124	35.2
	Other	4	1.1
Online class involvement level	School education	13	3.7
	Graduate level	177	50.3
	Master level	146	41.5
	MPhil/PhD	16	4.5
College category	Community (Public) school/college	40	11.4
	Private school/college	45	12.8
	Government school/college	265	75.3
	Others	2	0.6
Field of study	Numerical subject	31	8.8
	Theoretical subject	118	33.5
	Mixed subject	195	55.4
Online class experience	Yes	164	46.6
	No	188	53.4
App used for Online class	Zoom App	250	71.0
	Microsoft Teams App	89	25.3
	Google Classroom	8	2.3
	Other	5	1.4

Soruce: Survey Questionnaire, 2020

Reliability and Validity of Scales

To test the reliability, Cronbach Alpha coefficient was used. To check the reliability of scales coefficient must be above 0.70. The general alpha coefficients are found as perceived usefulness (0.858), perceived ease to use (0.722). According to this result, it is possible to say that research has a good degree of reliability.

Table 2: Reliability and Validity of Scales

Constructs	Cronbach's Alpha
Perceived Usefulness	0.858
Perceived Ease of use	0.722

Pearson Correlation

Table below shows the correlation of dependent variable (Intention to use) with independent variables (Perceived Usefulness and Perceived Ease to use). The tables indicate a positive relationship between Perceived usefulness and Intention to use (.649) and perceived ease to use (.577). The p-value of perceived usefulness is 0.000 which is less than 0.005 which shows significant relationship with intention to use whereas perceived ease to use p-value is 0.000 which is also less than 0.005 indicating significant relationship with intention to use. Table 2 shows positive and significant relationship of both independent variables with dependent variables.

Table 3: Pearson Correlation Analysis

Variables		Perceived Usefulness	Perceived ease to use	Intention to use
Perceived Usefulness	Pearson Correlation	1	.629**	.649**
	Sig. (2-tailed)		0.000	0.000
	N	352	352	352
Perceived ease to use	Pearson Correlation	.629**	1	.577**
	Sig. (2-tailed)	0.000		0.000
	N	352	352	352
Intention to use	Pearson Correlation	.649**	.577**	1
	Sig. (2-tailed)	0.000	0.000	
	N	352	352	352

Multiple Correlation

According to Standardized Coefficients Beta, perceived usefulness (0.474) is the important factor that influence the intention to use followed by perceived ease to

use (0.279). The regression coefficients are accepted at 0.05 significance level. The adjusted R square shows that 68.4 % independent variable defines dependent variable.

According to the table, 1 unit increase in perceived usefulness increases the intention by 0.474 and 1 unit increase in perceived ease to use increases the intention by 0.279.

Table 4: Multiple Correlation Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.545	0.175		3.120	0.002	
Perceived Usefulness	0.556	0.059	0.474	9.438	0.000	1.653
Perceived ease to use	0.304	0.055	0.279	5.559	0.000	1.653

Dependent Variable: Intention to use
R-square: 0.684

Statement of hypothesis

Hypothesis	p-value	Remarks
H1: There is no significant relationship between perceived usefulness and intention to use.	0.000	Rejected
H2: There is no significant relationship between perceived ease to use and intention to use.	0.000	Rejected

Conclusion

In present world context, with high speed internet and communication, Nepal has witness immense importance of e-learning. This paper finds that perceived usefulness and perceived ease to use have positive as well as significant relationship with intention to use e-classes. This study shows that perceived usefulness is predictor factor for intention to use of online classes. Maximum of users are using Zoom app which is easier than another app to function. Nepal is the amongst the least developed country and using internet as a primary mode for education exchange can be a hassle. The study shows that electricity and high-tech speed are the important issue in regard to e-learning. The paper even depicts that e-learning can be a option for education exchange but is not long term solution in Nepal. Universities should formulate policies that supports online education and the country should simultaneously provide cheap and reliable internet service to the users.

Institution should develop its infrastructure that fits and suits to e-learning. A different wing should be established and arranged so as it can easily implement the e-learning environment. For policy makers, this paper helps them in various manners. Future studies could be conducted to examine TAM with different samples and at different sectors. It can be used with more external variables and constructs to find more validating and impressive findings.

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