

Use, Acceptance and Applicability of Virtual Learning by MBA Students in Kathmandu

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Abstract

The present paper aims to study the MBA programme students' behavioural intention, use, acceptance and the applicability of virtual learning in Kathmandu. Besides, the study also aims at identifying the influence of performance expectancy, effort expectancy, social influence, and facilitating (UTAUT constructs) conditions on behavioural intention and user acceptance of virtual learning. The research paper is based on descriptive research design and inferential analysis. The study made use of primary data collected through a structured questionnaire surveyed on 142 MBA students using a convenience sampling technique. The results showed that MBA programme students have behavioural intention and use and accept virtual learning. Performance expectancy, social influence, and facilitating conditions have a significantly positive impact on both behavioural intention and user acceptance of virtual learning. Besides, performance expectancy and social influence impacted both the behavioural intention and user acceptance of virtual learning the most. MBA students intend to use virtual learning and have agreed to accept and use virtual learning. Therefore, business schools should invest in technologies for improving virtual learning. To maximise the use of virtual learning, its usefulness should be showed to students; and teachers/peers' encouragement also increases the use of virtual learning.

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INTRODUCTION AND STUDY OBJECTIVES

Online learning has become a popular mode for teaching and learning (Pituch & Lee, 2006). Virtual learning presents a number of opportunities to schools and learners such as time and location flexibility, self-paced and student-centred, cost-effective, available to global learners, unlimited access to learning materials and knowledge, and digital storage for knowledge re-sharing and re-use (Zhang, Zhao, Zhou, & Nunamaker, 2004). Given the advantages, e-learning has grown significantly over the last decade (Koksal, 2020).

However, considering the recent corona virus pandemic, unsurprisingly, the demand for virtual learning has skyrocketed (DeVaney, Shimshon, Rascoff, & Maggioncalda, 2020). Many educational institutions around the globe are being forced for experimentation with remote teaching (Govindarajan & Srivastava, 2020) as educational institutions are unable to deliver on-campus learning. Since many schools are fully shifted to online classes, this time provide researchers and academicians with great a opportunity to explore what virtual learning has to offer. Educational institutions can explore during this experimentation with virtual learning, which part of course/program can be substituted, which parts can be supplemented, and which parts can be complimented by digital technologies (Govindarajan & Srivastava, 2020). So, instead of returning to the classroom and continuing the status-

quo, maybe there will be a better alternative, where e-learning and the traditional classroom will form a union, compensating for one where the other lacks. In addition, there is a good chance that even after pandemic subsidies, virtual learning will remain (DeVaney et al., 2020)

Most of the educational institutions have shifted to online classes to ensure academic continuity to students and Nepalese educational institutions are no exception (Poudel, 2020). Furthermore, this period is a great opportunity to country like Nepal to build a more digital learning environment and equip the teaching faculties (Poudel, 2020).

This experimentation period provides the opportunity to find the answer on how educational institutions can incorporate technology successfully for a better learning process in the future. However, to answer these questions, first of all, there is a need to research the behavioural attitude of students toward virtual learning, their intention to use virtual learning in the future and their acceptance of virtual learning system. As with any technology, mere implementation of technology is not enough to determine the success of the system but, there has to be actual use and acceptance of the system among users (Venkatesh, Morris, Davis, & Davis, 2003).

Therefore, the present research paper has tried to examine the behavioural intention, and the user acceptance of virtual learning by MBA programme students in Kathmandu.

To answer the question of use and acceptance of virtual learning, technology acceptance model can be used to study it. Many studies have been conducted to study user acceptance of e-learning using technology acceptance model (Zhang et al., 2010; Liao, Shim, & Luo, 2004; Martins & Kellarmanns, 2004; Raaij & Schepers, 2008; Pynoo et al., 2011; Salloum & Shalan, 2019). In this study, popular models of technology acceptance models such as TAM (Technology Acceptance Model), TAM2, and UTAUT (Unified theory of Acceptance and Use of Technology) are analysed.

The UTAUT model is a technology acceptance model developed by Venkatesh et al. (2003). The UTAUT model aims to explain behavioural intentions of users to use an information system and user acceptance. The model has four variables; performance expectancy, effort expectancy, social influence, and facilitating conditions that affect behavioural intention of user and acceptance of any technology. Performance expectancy, effort expectancy, and social influence directly explain the user behavioural intention. Facilitating conditions determines the user acceptance directly. Gender, age, experience, and voluntariness of use are moderating variable that moderate the impact of four independent variables on dependent variable (Venkatesh et al., 2003) The UTAUT model is used as theoretical framework to investigate the determination of user acceptance of virtual learning.

In the context of Nepal, only handful of research works has been done to study

virtual learning (Pageni, 2016; Poddar, 2020). Besides this, during the present study, no research was found that investigated or explained behavioural intention and acceptance of virtual learning using technology acceptance models such as UTAUT. Based on these facts, the study aims to focus on the following objectives.

- To identify the behavioural intention to use virtual learning by MBA programme students, and determine the acceptance level of virtual learning by MBA programme students,
- To identify the impact of performance expectancy, effort expectancy, social influence, and facilitating conditions on the behavioural intention of virtual learning by MBA programme students, and
- To analyse the impact of performance expectancy, effort expectancy, social influence, and facilitating conditions on the acceptance of virtual learning among MBA programme students.

The overall purpose of this study is to explore MBA programme students' intention and their acceptance of virtual learning. In this study, the term 'e-learning' and 'virtual learning' is used interchangeably.

This paper is organised into five parts. The second part reviews the existing literature. The third part describes the research methodology. The fourth

part present and analyses the data collection and finally last part provides the conclusion of the study.

REVIEW OF LITERATURE

This section presents the literature related to the studied topic.

Review of conceptual framework

E-learning and Advantages

E-learning is defined as technology-based learning through network technologies (Zhang et al., 2004). Also, Clark and Mayer (2016) have defined virtual learning/e-learning as instruction delivered on an electronic device such as a laptop, a tablet, a smartphone that supports learning. In their book e-learning is classified as asynchronous and synchronous.

First, the asynchronous e-learning form is typically self-paced that allows learners to access study -resources at any time or location on their own and is supported by email and discussion board (Hratinski, 2008). Second, Clark and Mayer (2016) have defined synchronous e-learning as a system designed for real-time instructor-led sessions such as virtual classrooms or webinars that allow instant feedback and interaction. In addition to time, location, and pace flexibility, e-learning is also cost-effective. E learning saves travel costs and offers content to the maximum number of students without expanding the institution's infrastructure, such as buildings (Arkorf & Abaidoo, 2015).

Despite the growing scope of e-learning, there are disadvantages as well. The major disadvantages are that students do not feel the sense of community/real campus life experience, lack of social interaction. Also, e-learning is not effective in all courses such as medical science (Zhang et al., 2004; Haythornthwaite, 2002; Arkorf & Abaidoo, 2015).

Some research works argue e-learning can fully supplement traditional face-to-face classroom while others argue e-learning is not as effective. There is no simple answer as a lot of factors come into play such as students' profile, discipline, etc. However, most of them agree that e-learning does complement and enhance traditional F2F(Face-to-face) learning (Zhang et al., 2006). Given the advantages, many schools and universities have invested considerable resources in the virtual learning system. However, the benefits cannot be realised if learners do not use and accept it (Pituch & Lee, 2006). As with the implementation of any new information technology, students' use and acceptance are essential to the successful implementation of a virtual learning system (Raaij & Schepers, 2008).

Technology Acceptance Models

There are many technology-acceptance models such as TRA, TAM/TAM2, the Motivational Model, the Theory of Planned Behaviour, the Model of PC Utilization, the Innovation Diffusion Theory, and the Social Cognitive Theory (Venkatesh et al., 2003). These models explain user adoption of new

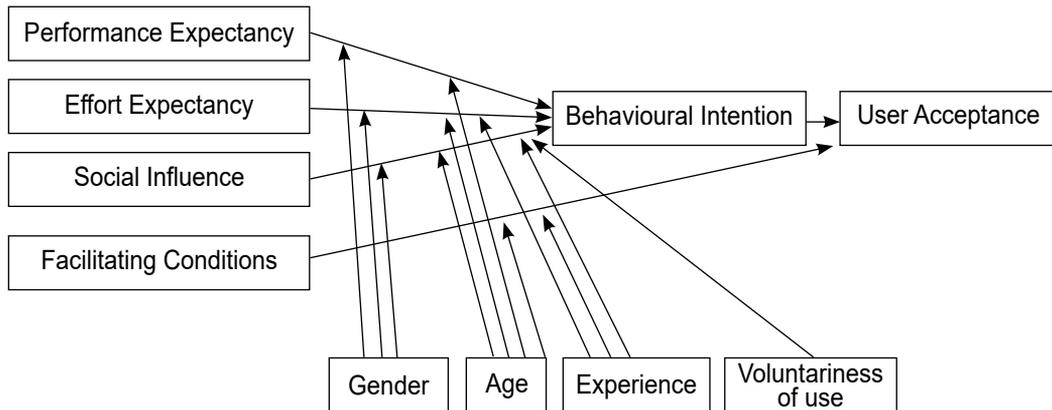


Figure 1. UTAUT Model

Note. Based on Venkatesh et al., 2003

technologies and have introduced variables that affect user acceptance. TAM is a leading model in explaining and predicting system use (Chuttar, 2009). Davis (1989) developed the TAM model by adopting the TRA model to the context of user acceptance of information systems. TRA is the first technology acceptance model in the literature. TRA was initially developed in 1980. Since, it has been revised many times, eventually becoming its current and most comprehensive model in 2003, as UTAUT.

All these eight models and theoretical framework were examined, and the most important features of these models were combined to develop a Unified Model for Understanding Technology Acceptance (UTAUT) (Venkatesh et al., 2003) They have come up with four main constructs: performance expectancy, effort expectancy, social influence and facilitating conditions. The model has four moderating variables: age, gender, experience and voluntariness of use to explain and predict system use. It seems reasonable to use UTAUT

model as a theoretical framework in this study as UTAUT contains all the salient features of eight models. Moreover, many researchers have used UTAUT in educational settings (Zhang et al., 2010; Liao, Shim, & Luo, 2004; Martins & Kellarmans, 2004; Raaij & Schepers, 2008; Pynoo et al, 2011; Salloum & Shalan, 2019). Therefore, to understand factors affecting behavioural intention and user acceptance of virtual learning by MBA programme students the UTAUT model was used.

Review of Related Studies

Over the years, numbers of researchers have tested UTAUT model in various context, however few research have been done in the context of user acceptance of e-learning/online learning/virtual learning. Among them, the earliest research of user acceptance of web-based learning was conducted by Liao et al., (2004). They conducted their research on Student Acceptance of the Web-based learning Environment of Undergraduate IS course by using

UTAUT framework in voluntary. The study discovered that performance expectancy and social influence had a more significant impact on behavioural intention than effort expectancy. Also, facilitating conditions had a significant impact on use behaviour which is consistent with UTAUT model. They also state that UTAUT model can be used to evaluate user acceptance of web-based learning environment.

Raaij and Schepers (2008) critically studied the use and acceptance of virtual learning environment in China to validate and understand technology acceptance in a collectivistic culture. The study tested extended TAM2 with computer anxiety and personal innovativeness. The study found that perceived usefulness directly impacts the use of virtual learning environment. The perceived ease of use and the subjective norm (same to social influence) has only an indirect effect via perceived usefulness. The results indicated that technology acceptance model hold just as well in Chinese setting with collective culture, as they do in western countries with individualistic culture. Sumak, Polancic, and Hericko (2010) conducted a study of a virtual learning environment using the UTAUT as a ground theory to validate the UTAUT model in the context of e-learning setting. Authors have also included attitude toward using as an additional construct. They have found that PE and SI have a significant impact on the students' attitude towards using Moodle, PE being the strongest determinant. Meanwhile, the results showed no influence of EE (Effort Expectancy) on students' attitude.

On the other hand, they found that there was no significant influence PE (Performance Expectancy), EE, and attitude towards using on behavioural intention. However, social influence did determine the behavioural intention of the students' according to the results. The study found that the behavioural intention and facilitating conditions have an impact on the actual use of the system, behavioural intention being the stronger indicator.

Pynoo et al. (2011) conducted research investigating the secondary school teacher's acceptance of the digital learning environment. Their study found that performance expectancy is the main predictor of Digital Learning Environment acceptance, and effort expectancy is subordinate to performance expectancy. They also found that facilitating condition has indirect influence, rather than direct influence as suggested by Venkateshet al., (2003). In addition, facilitating conditions perhaps have a significant indirect impact on user acceptance via performance expectancy and effort expectancy. Hsu (2012) investigated the students' use and acceptance of Moodle, adopting the UTAUT model. Three independent variables: performance expectancy, effort expectancy, and social influence have a significant impact on the behaviour intention of students to use the Moodle. However, social influence has the most significant impact on behavioural intention, which is consistent with the results of Sumak et al. The study claims that facilitating condition is not a salient predictor of acceptance of technology in the advanced information infrastructure community such as Taiwan. The

students' behavioural intention significantly determines the actual use of any technology, in this case, Moodle.

Tan (2013) conducted a study regarding the students' acceptance and use of English e-learning websites using the UTAUT model eliminating moderating variables. The results of the study were consistent with the UTAUT model; performance expectancy, effort expectancy, and social influence had an impact on users' behavioural intention and in turn the use of the website. In addition, facilitating conditions also had an impact on the use of websites. The study suggested that UTAUT can be used to study user acceptance. Yang, Feng, and Macleod (2017) observed that user adoption of cloud computing in education was slow and in its early phase despite the advantages and positive prospects of cloud computing. Therefore, they conducted a study to understand the college students' acceptance of cloud classrooms in flipped instruction by integrating UTAUT and connected classrooms climate. The study has found that effort expectancy, social influence has a significant and positive relationship with the respondents' user acceptance of the cloud classrooms. However, the study has found that performance expectancy and facilitating conditions have no significant impact on user acceptance of cloud classrooms. Vidanagama (2016) investigated the user acceptance of e-learning among undergraduates in Sri Lanka using Technology Acceptance Model. The objective of the study was to examine variables to consider when universities in Sri Lanka consider investing in

an e-learning system. Results of the study indicate that positive attitude towards using is important to students' behavioural intention to use e-learning. Perceived ease of use (equivalent to effort expectancy) is more important than perceived usefulness (equivalent to performance expectancy) when it comes to positive attitude towards using e-learning. And in turn, the facilitating conditions make e-learning more easier for students to use. Therefore, the study suggested that facilitating conditions would increase the ease of use, which in turn would increase the positive attitude towards using and which finally impacts the behavioural intention of students to use e-learning.

Salloum and Shaalan (2019) examined the factors that impact student acceptance of e-learning systems in higher education using the UTAUT model. The purpose of the study was to explore the user acceptance of e-learning among UAE (United Arab Emirate) students. The results indicated that the performance expectancy and social impacts behavioural intention positively. However, there was no significant impact of the effort expectancy on behavioural intention. The results show that facilitating conditions and behavioural intention positively impact user behaviour. The obtained results corroborate the UTAUT theory in the context of e-learning.

E-learning in Nepal

Education in Nepal is largely dominated by face-to-face tutoring and Nepalese universities have not yet

institutionalised technology integrated practices (Pangeni, 2016). However, Nepal Open University, established in 2016, offers full-fledged online academic degrees and has formally institutionalised the online learning system in Nepal (Sthapit & Shrestha, 2020). Two other universities of Nepal; Tribhuvan University (TU) and the Kathmandu University (KU) also offer Open and Distance Learning (ODL), though, for a limited number of bachelors and master's programme (Pangeni, 2016). As internet penetration and the awareness and knowledge of technological devices are increasing, e-learning is slowly yet steadily developing in Nepal (Poddar, 2018).

Sthapit and Shrestha (2020) found that management students' experience with the online classes was equivalent to that with their previous face-to-face classes. The study also discovered that Nepalese students view face to face classroom learning and e-learning as similar in terms of acquiring knowledge (Sthapit & Shrestha, 2020). Yet a very limited option is available for Nepalese students who prefer online education in comparison to face-to-face learning options. However, in 2020 the use of e-learning has skyrocketed due to the COVID-19 outbreak and schools offering only face to face have also shifted to online learning.

However, there are a lot of challenges that needs to be overcome in order to develop e-learning as there is this stigma that e-learning is very expensive, and not as interactive as physical classes, and the inability of government to incorporate e-learning

in community schools, only private institutions are investing e-learning (Poddar, 2018). Moreover, there is also concern about the digital divide as many households; especially in rural areas do not have access to computers and other electronic devices, let alone internet facilities (Ghimire, 2020). Furthermore, many believe that the digital divide could leave students from less privileged communities worse off (Ghimire, 2020).

However, despite the challenges, due to the covid-19 outbreak, Nepal Government has also come up with e-learning platforms such as 'Sikai Chautari' to facilitate students from grades 1 to 10 (Sapkota, 2020). Ministry of Education Nepal has appealed to educational institutions to start classes through the alternative system and encouraged online teaching (Dahal, 2020). With many challenges and no preparation, schools and colleges in Nepal have still adopted the online classes, students and teachers are adapting (Ghimire, 2020). Nevertheless, this time provides us with data to further research about the opportunities that e-learning can offer and the information necessary to digitise the education. However, first, the use and acceptance of virtual learning and its determining factors need to be investigated.

Theoretical Framework

The theoretical framework is adopted from the UTAUT (Unified theory of acceptance and use of technology) model. The theoretical framework for the study is presented in figure 1. Over the years' strong empirical support

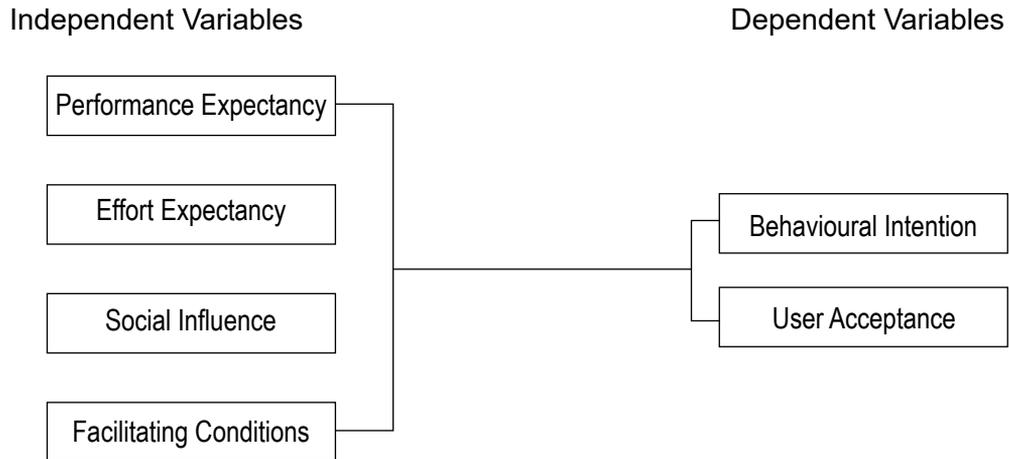


Figure 2. *Theoretical Framework*

has been established and considered UTAUT good model to study user acceptance of virtual learning in educational settings (Sumak et al., 2010; Pynoo et al., 2011; Tan, 2013; Salloum & Shaalan, 2019).

There are two dependent variables which comprises of behavioural intention and user acceptance. Behavioural intention measures whether respondents intend to use e-learning during their coursework and in the future. User acceptance measures whether the respondents accept virtual learning, for instance, to what degree respondents find virtual learning to be interesting, whether respondents think virtual learning to be a good idea, and to what extent respondents have a favourable attitude towards virtual learning.

Independent variables comprise performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy measures to what extent

respondents perceive e-learning to be useful, to increases their productivity, to increase their chances of getting good result, and to enable them to complete tasks quickly. Effort expectancy measures to what degree respondents perceive e-learning to be easy to use, learn, and understand. Social influence measures whether respondents such as teachers, peers, parents, and schools consider e-learning as important/fashionable. Facilitating conditions measure whether the respondents have necessary resources, skills, and assistance to attend virtual classes.

RESEARCH METHODS

The study has implemented a descriptive research design as it has used structure questionnaire design to achieve the aim of the exploring the MBA programme students' behavioural intention and acceptance of virtual learning. This study has used descriptive research design for fact-finding and to identify adequate information about UTAUT constructs and the behavioural

intention and user acceptance of virtual learning and its relationship. This study requires hypothesis testing, which is why inferential analysis is made.

Study Area, Population, and Sample

The population of this research paper is all the students' pursuing MBA degree at TU, KU, and PU affiliated colleges based in Kathmandu. The data was collected from full time MBA programme students aged between 23 and 27 years from the School of Management, Tribhuvan University (SOMTU), the Kathmandu University School of Management (KUSOM) and business schools affiliated to Pokhara University, all of which based in Kathmandu. Since many students come to Kathmandu for higher education and since many MBA colleges are based in Kathmandu, therefore, to collect data from students from different background, Bagmati province was selected.

A validated structured questionnaire was sent to the 200 students via

electronic means. However, only 142 valid responses were received resulting in 71 percent response rate. Out of 142 students, 59 respondents were of Pokhara University, 42 respondents were of Tribhuvan University and 41 respondents were of Kathmandu University.

Convenience sampling was used for data collection. Convenient sampling was used to reach the respondents for the study. An online survey questionnaire was used to collect data from students, as the data were collected during the crisis of COVID-19. Validated constructs adopted form UTAUT (Venkatesh et al., 2003) was used to develop the questionnaire.

Reliability of the data

This study has used Cronbach's alpha to measure the reliability and validity of the primary data to determine the internal consistency among the variables.

In this study Cronbach's alpha is used to test the validity and reliability

Table 1: Coefficient of Cronbach's Alpha

Variables	Cronbach's Alpha	Remarks
Performance Expectancy	0.823	Good
Effort Expectancy	0.817	Good
Social Influence	0.754	Acceptable
Facilitating Conditions	0.600	Acceptable
Behavioural Intention	0.849	Good
User Acceptance	0.888	Good

Note. Calculation based on researcher's Survey, 2021

Table 2: Respondents Profile

Category	Response Category	Frequency	Percentage (%)
Gender	Male	59	41.5
	Female	83	58.5
	Total	142	100
University	Pokhara University	59	41.5
	Tribhuvan University	42	29.6
	Kathmandu University	41	28.9
	Total	142	100

Note. Calculation based on researcher's Survey, 2021

of the primary data for determining internal consistency among the various constructs. An alpha value of 0.7 or higher is considered valid and is the reliable standard of approval (Tabler, 2018). Five out of six variables have reliability of least 0.70, except for facilitating conditions. However, for academic purpose 0.6 is also considered just acceptable. Thus, the variables in the study are reliable and valid enough to carry out the research.

In this section, various descriptive statistical tools such as percentage, mean, and standard deviation of all independent and dependent variables were used.

To inference the impact of UTAUT constructs on behavioural intention and user acceptance correlation and regression analysis were employed Nevertheless, the conclusion of the study is based on the results of regression analysis as the study aims to find the impact of one variable on other.

DATA ANALYSIS AND DISCUSSIONS DESCRIPTIVE ANALYSIS

Descriptive analysis presents the simple description of respondents' profile, independent variables and dependent.

The distribution of students based on the gender reveal that most students are female (58.5%) followed by male students (41.5%). Similarly, in terms of frequency, 59 respondents are male and 83 respondents are female. The distribution of students according to the university reveals that most students are in Pokhara University, followed by Tribhuvan University, and Kathmandu University.

Table 3 shows the descriptive analysis of UTAUT constructs (independent variables). The mean of performance expectancy is 3.22 shows that respondents agree about virtual learning being useful to them. Effort expectancy has a mean value of 3.672 reveals that respondents agree that

Table 3: Descriptive analysis of Independent Variables

Descriptive Analysis: Independent Variables	Mean	Standard Deviation
Performance Expectancy	3.22	0.828
Effort Expectancy	3.67	0.741
Social Influence	3.39	0.765
Facilitating Conditions	3.6	0.646

The statements range from 1 to 5 (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree)

Note. Calculation based on researcher's Survey, 2021

Table 4: Descriptive analysis of Dependent Variables

Descriptive Analysis: Dependent Variables	Mean	Standard Deviation
Behavioural Intention	3.5	0.859
User Acceptance	3.35	0.892

The statements from 1 to 5 (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree)

Note. Calculation based on researcher's Survey, 2021

Virtual learning system easy to use and learn. Respondents also agree about the influence of the social influence factor in the use of VLE as the mean score is 3.39. The mean score of 3.60 show that respondents agree that they have the facilitating conditions for virtual learning.

Table 4 shows the descriptive analysis of independent variables. Respondents agree that they intend to use virtual learning as the mean score is 3.50. Respondents slightly agree to the use and acceptance of virtual learning as the mean score is 3.35

Correlation Analysis

Correlation Analysis is implemented

to evaluate the correlation intensity between independent variables (performance expectancy, effort expectancy, social influence, and facilitating conditions) and dependent variable (behavioural intention and user acceptance). Correlation also measures the direction of the relationship between two variables.

The correlation analysis in Table 5 shows that all the independent variables have a significant positive relationship with behavioural intention. The data in table 5 shows that all the independent variables are highly correlated with the behavioural intention. The data shows that performance expectancy and behavioural intention of virtual learning has the highest correlation.

Table 5: Correlation Analysis of Behavioural Intention and All Independent Variables

	Y1	X1	X2	X3	X4
Y1	1	0.635**	0.523**	0.615**	0.593**
		0.000	0.000	0.000	0.000
X1		1	0.509**	0.462**	0.504**
			0.000	0.000	0.000
X2			1	0.416**	0.584**
				0.000	0.000
X3				1	0.480**
					0.000
X4					1

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Note. Calculation based on researcher's Survey, 2021

The correlation analysis in table 6 shows that all independent variables have significant positive correlation with user acceptance of virtual learning.

Among the independent variables, performance expectancy and user acceptance have the highest correlation.

Here, X1, X2, X3, and X4 represent the independent variables. They are symbolised for X1=Performance Expectancy, X2=Effort Expectancy, X3=Social Influence, X4=Facilitating Conditions. In other the hand, Y1, Y2 are dependent variables representing Y1= Behavioural intention and Y3= User Acceptance.

Regression Analysis

Regression Analysis shows the impact of independent variables on dependent variables. Table 7

shows the impact of performance expectancy, effort expectancy, social influence, and facilitating conditions (independent variables) on behavioural intention of virtual learning. Table 8 shows the impact performance expectancy, effort expectancy, social influence, and facilitating conditions on user acceptance of virtual learning. The data are analyzed, and the results are discussed in the following paragraphs.

From table 7 and 8 it is found that that performance expectancy, social influence, and facilitating conditions has a significant impact on both dependent variables: behavioural intention and user acceptance of virtual learning. The R square value in table 7 is 0.584 and in table 8 is 0.637. These values state that the independent variables explain behavioural intention by 58.4% and user acceptance by 63.7%.

Table 6: Correlation Analysis of User Acceptance and All Independent Variables

	Y2	X1	X2	X3	X4
Y2	1	0.673**	0.449**	0.672**	.560**
		0.000	0.000	0.000	0.000
X1		1	0.509**	0.462**	0.504**
			0.000	0.000	0.000
X2			1	0.416**	0.584**
				0.000	0.000
X3				1	0.480**
					0.000
X4					1
X5					

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Note. Calculation based on researcher's Survey, 2021

The R square values also indicate that there are many other factors that influence behavioural intention and user acceptance of virtual

In both results, effort expectancy does not have a significant impact on both dependent variables. Also, there is no multi-collinearity. The Variance Inflation Factor is less than 10 in each variable. Similarly, the regression model fits the data in view of the F-value and significance level of 48.158 and 60.073 which shows that model is appropriate. There is a significant relationship between dependent and at least one independent variable.

Discussion

The finding of the study suggests that respondents agree with performance expectancy of virtual learning. Students do find virtual learning to be useful in

their course. During the times of covid-19 stakeholders of educational institutions including students have realised how useful virtual learning is. Similarly, students agreed with the perceived ease of use (effort expectancy) of virtual learning the most. The analysis reveals that students find using and learning VLS easy. It is because the age group of students of the study are digital natives, i.e., someone who has grown up in digital age. Therefore, students won't mostly have technological issues.

Besides, students also agree the role of social influence to use virtual learning. This research was carried out during the crisis of covid -19, so many schools and colleges have asked students to use virtual learning mandatorily. It is obvious that teachers would ask their student and think that students should use virtual learning. Besides, schools who do not use virtual learning have, no other means to continue

learning therefore many people think students should use virtual learning.

Furthermore, students agree that they have facilitating conditions to learn virtually. One explanation could be the growing rate of internet users in Nepal. The internet users have grown by 315000 between the year 2019 and 2020. In January 2020, the number of internet users were 10.21 million (Kemp,2020) and the number is increasing. It is obvious that students have facilitating conditions as the MBA programme requires students to have mobile or computer, even if the course is classroom-based. Therefore, many students have access to mobile/ laptops and internet and skills to use it.

The analysis shows that students agree that they intend to use virtual learning. Moreover, the students slightly agree with the use and acceptance of virtual learning.

The results conclude that performance expectancy, social influence and

facilitating conditions have significant positive impact on the behavioural intention of students to use virtual learning. Performance expectancy and social influence are the strongest determinant of behavioural intention of virtual learning which is consistent with findings of Liao et al., (2004). Moreover, Raaij and Schepers (2008) and Sumak et al., (2010) have found performance expectancy to be the strongest determinant of behavioural intention to use a technology. Therefore, educational institutions need to demonstrate the usefulness of virtual learning, if they want to increase the behavioural intention of students to use virtual learning.

Moreover, this research was conducted in a mandatory setting, and in such case many studies have found social influence to have a significant role (Agarwal & Prasad, 1997; Hartwick & Barki, 1994; Karahanna, 1999; Taylor & Todd, 1995a; Thompson, 1994; Venkatesh & Davis, 2000 as cited in Liao et al., 2004).

Table 7: Regression Results of Behavioural Intention

Dependent Variable: Behavioural Intention	Beta	T Value	P Value	VIF
(Constant)	-0.263	-0.887	0.377	
Performance Expectancy	0.342	4.768	0.000	1.576
Effort Expectancy	0.111	1.330	0.186	1.697
Social Influence	0.358	4.824	0.000	1.437
Facilitating Conditions	0.290	2.970	0.004	1.775
R Square	0.584			
F Value	48.158			
P Value	0.000			

Note. Calculation based on researcher's Survey, 2021

Table 8: Regression Results of User Acceptance of Virtual Learning

Dependent Variable: User Acceptance	Beta	T Value	P Value	VIF
(Constant)	-0.423	-1.473	0.143	
Performance Expectancy	0.445	6.392	0.000	1.576
Effort Expectancy	-0.041	-0.504	0.615	1.697
Social Influence	0.481	6.680	0.000	1.437
Facilitating Conditions	0.239	2.524	0.013	1.775
R Square	0.637			
P Value	0.000			
F Value	60.073			

Note. Calculation based on researcher's Survey, 2021

On the other hand, the absence of significant impact of effort expectancy on behavioural intention to use virtual learning is consistent with results of [Sumak et al., \(2010\)](#) and [Salloum and Shaalan \(2019\)](#).

Similarly, the results show that performance expectancy, social influence, and facilitating conditions have significant positive impact on user acceptance of virtual learning. Many studies have found facilitating conditions directly impacts use behaviour such as studies of [Liao et al., \(2004\)](#), [Sumak et al., \(2010\)](#), [Tan \(2013\)](#), and [Salloum and Shaalan \(2019\)](#). Also, performance expectancy and social influence are the strongest determinant of user acceptance of virtual learning. Effort expectancy has no significant impact on user acceptance of virtual learning.

CONCLUSION AND IMPLICATIONS

This research study has found out the impact of performance

expectancy, effort expectancy, social influence, and facilitating conditions on behavioural intention and acceptance level of virtual learning among MBA students. Besides, the study investigated the behavioural intention and user acceptance of virtual learning. This study used the Unified Theory of Acceptance and Use of Technology (UTAUT) model to investigate the influence of different factors on behavioural intention and user acceptance of virtual learning.

From the results, it can be concluded that performance expectancy, social influence, and facilitating conditions have a significant impact on both behavioural intention and user acceptance of virtual learning. What is more, performance expectancy and social influence impacts both the behavioural intention and user acceptance of virtual learning the most. Meantime, effort expectancy does not impact behavioural intention and user

acceptance significantly.

In addition, it can be concluded that students' intent to use virtual learning and somewhat agree to use and acceptance of virtual learning. Students agree that virtual learning is a good idea and have a favourable attitude towards virtual learning.

This study provides insights into educational institutions, particularly business schools on what factors should be considered during the implementation of virtual learning.

In a nutshell, students intend and accept to use virtual learning to some extent. The usefulness of virtual learning and social influence play a significant part to increase the use of virtual learning among students. In addition, the findings of the study are mostly consistent with the findings of UTAUT model. Therefore, the UTAUT model can be used to study virtual learning/e-learning and is relevant in Nepal as well.

REFERENCES

- Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*, 28(3), 557-582. doi: <https://doi.org/10.1111/j.1540-5915.1997.tb01322.x>
- Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, 12, 29-42. Retrieved from: https://www.itdl.org/Journal/Jan_15/Jan15.pdf#page=33
- Chuttar, M. (2009). Overview of the technology acceptance model: Origins, development and future directions. *Sprouts: Working Papers on Information System*, 9(37). Retrieved from https://aisel.aisnet.org/sprouts_all/290
- Clark, R.C., & Mayer, R.E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (4th ed.). John Wiley & Sons, Inc. Rewrite this reference as per APA format
- Dahal, S. (2020). Is Nepal's education sector prepared for digital disruption? *The Annapurna Express*. Retrieved from <https://theannapurnaexpress.com/>
- DeVaney, J., Shimshon, G., Rascoff, M., & Maggioncalda, Jeff. (2020). Higher ed needs long term plan for virtual learning. *Harvard Business Review*. Retrieved from <https://hbr.org/>
- Ghimere, B. (2020). Digital divide too wide for online classes to succeed in Nepal. *The Kathmandu Post*. Retrieved from: <https://kathmandupost.com/>
- Govindarajan, V., & Srivastava, A. (2020). What the shift to virtual learning could mean for the future of higher Ed?. *Harvard Business Review*. Retrieved from <https://hbr.org/>
- Govindarajan, V., & Srivastava, A. (2020). A post-pandemic strategy for U.S. higher ed. *Harvard Business Review*. Retrieved from <https://hbr.org/>
- Hartwick, J., & Barki, H. (1994). Explaining the role of user participation in information system use. *Management Science*, 40(4), 440-465. doi <https://doi.org/10.1287/mnsc.40.4.440>
- Haythornthwaite, C. (2002). Building social networks via computer networks: Creating and sustaining distributed learning communities. *Building Virtual Communities: Learning and Change in Cyberspace*, 159-190. doi <http://dx.doi.org/10.1017/CBO9780511606373.011>
- Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly*, 31(1). Retrieved from <https://er.educause.edu/>
- Hsu, H. (2012). The acceptance of Moodle: An empirical study based on UTAUT. *Creative Education*. 3(8), 44-46. doi:10.4236/ce.2012.38B010.
- Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease of use. *Information & Management*, 35(4), 237-250. doi [https://doi.org/10.1016/S0378-7206\(98\)00096-2](https://doi.org/10.1016/S0378-7206(98)00096-2)
- Kemp, S. (2020). Digital 2020: Nepal. Retrieved from <https://datareportal.com/>

- Koksal, I. (2020). The rise of online learning. *Forbes*. Retrieved from <https://www.forbes.com/#26347afb2254>
- Liao, Q., Shim, J.P., & Luo, X. (2004). Student acceptance of web-based learning environment: an empirical investigation of an undergraduate IS course. *Proceedings on Tenth Americas Conference on Information System*. Retrieved from <http://aisel.aisnet.org/amcis2004/377>
- Marins, L.L., & Kellermanns. (2004). A model of school students' acceptance of web-based course management system. *Academy of Management Learning and Education* 3(1), 7-26. doi: <https://doi.org/10.5465/amle.2004.12436815>
- Pangeni, S.K. (2016). Open and Distance Learning: Cultural Practices in Nepal. *European Journal of Open, Distance and E-learning* 19(2). doi: <https://doi.org/10.1515/eurodl-2016-0006>
- Poddar, M. (2018). To what extent has e-learning developed in Nepal? *Glocal Khabar*. Retrieved from: <https://glocalkhabar.com/>
- Poudel, R. (2020). Covid-19 outbreak and professional education: Shifting from physical to virtual classes. *The Himalayan Times*. Retrieved from <https://thehimalayantimes.com/>
- Pituch, K.A., & Lee, Y. (2006). The influence of system characteristics on e-learning use. *Computer & Education*, 47(2), 222-224. doi: <https://doi.org/10.1016/j.compedu.2004.10.007>
- Pynoo, B., Devolder, P., Tondeur, J., Braack, J.V., Doyck, W., & Duyck, P. (2011). Predicting secondary school teachers' acceptance and use of a digital learning environment: A cross-sectional study. *Computers in Human Behavior*, 27(1), 568-575. doi: <https://doi.org/10.1016/j.chb.2010.10.005>
- Raaij, E.M.V., & Schepers, J.J.L. (2008). The acceptance and use of virtual learning in China. *Computers & Education*, 50(3), 838-852. doi: <https://doi.org/10.1016/j.compedu.2006.09.001>
- Salloum, S.A., & Shaalan, K. (2019). Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches. *Proceedings of the International Conference on Advanced Intelligent Systems and Informatics*, 469-480. doi http://dx.doi.org/10.1007/978-3-319-99010-1_43
- Sapkota, N. (2020). Sikai Chautari: Nepal's government online learning platform. *Techsathi*. Retrieved from: <https://techsathi.com/>
- Sharma, k., & Joshi, A. (2020). Readiness for the online classes during covid-19 pandemic among students of Chitwan Medical College. *Journal of Nepal Health Research Council*, 18(47), 316-319. doi: <https://doi.org/10.33314/jnhrc.v18i2.2725>
- Sharma, K., Deo, G., Timalisina, S., Joshi, A., Shrestha, A., & Neupane, H.C. (2020). Online learning in the face of covid-19 pandemic: Assessment of students' satisfaction at Chitwan Medical College of Nepal. *Kathmandu University Medical Journal*, 18(70), 40-47. Retrieved from: <http://www.kumj.com.np/>
- Sthapit, A., & Shrestha, B. (2020). Comparative knowledge gained from online and face to face learning modes in management courses in Nepal. *Journal of Business and Social Science Research*, 5(1), 35-50. doi: <https://doi.org/10.3126/jbssr.v5i1.30197>
- Sumak, B., Polancic, G., & Hericko, M. (2010). An empirical study of virtual learning environment adoption using UTAUT. *2010 Second International Conference on Mobile, Hybrid and On-line learning*, 17-22. doi: 10.1109/elml.2010.11
- Taber, K. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(1), 1-24. doi:10.1007/s11165-016-9602-2
- Tan, P.J.B. (2013). Applying the UTAUT to understand factors affecting the use of English e-learning websites in Taiwan. *SAGE Open*, 3(4), 1-12. doi:10.1177/2158244013503837
- Taylor, S., & Todd, P. (1995). Assessing IT usage: The role of prior experience. *MIS Quarterly*, 19(4), 561-570. doi <https://doi.org/10.2307/249633>
- Thompson, R. L., Higgins, C.A., & Howell, J. M. (1994). Influence of experience on personal computer utilization: Testing a conceptual model. *Journal of Management Information Systems*, 11(1), 167-187. doi <https://doi.org/10.2307/249633>
- Venkatesh, V., & Davis, F.D. (2000). A theoretical extension of technology

- acceptance model: Four longitudinal field studies. *Management Science*, 46 (2). doi: <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). User acceptance of information technology: Towards a unified view. *MIS Quarterly*, 27(3), 425-478. doi: 10.2307/30036540
- Vidanagama, D. (2016). Acceptance of e-learning among undergraduates of computer degrees in Sri Lanka. *International Journal of Modern Education and Computer Science*, 8(4), 25-32. doi: 10.5815/ijmeecs.2016.04.04
- Yang, H.H., Feng, L., & MacLeod, J. (2019). Understanding college students' acceptance of cloud classrooms in flipped instruction: Integrating UTAUT and connected classroom climate. *Journal of Educational Computing Research*, 56(8), 1258-1276. doi:<https://doi.org/10.1177/0735633117746084>
- Zhang, D., Zhao, J.L., Zhou, L., & Nunamaker, J.F. (2004). Can e-learning replace classroom learning? *Communication of the ACM*, 47(5), 75-79. doi:<http://dx.doi.org/10.1145/986213.986216>
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Conflict of interest

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