The Influence of Subjective Norm on Behavioral Intention In Using E-Learning: An Empirical Study in Hong Kong Higher Education

Hon Keung Yau, Tsz Chung Ho

***Abstract*—This study aims to assess the relationship between subjective norms and behavioral intention in using e-learning in Hong Kong higher education. Questionnaire survey was applied and 153 questionnaires were collected. The findings showed that subjective norm was significantly and positively correlated with learners' behavioral intention in using e-learning.**

***Index Terms*— behavioral intention, subjective norm, e-learning, Hong Kong higher education**

I. INTRODUCTION

Technology has grown up into the next generation, especially internet and computer technology. Computer has also become one of the daily necessaries as its cost and price are getting cheaper. In the recent years, e-learning is introduced to our life and more and more people are willing to use it to gain knowledge. At the beginning, information or course material in the internet is displayed by World Wide Web (Web pages) in form of hypertext, downloadable files, graphics, animations, audio and video [1]. With the improved technology, some companies have started to develop applications. These applications allow users to perform more tasks. However, in order to bring e-learning to a mature stage, e-learning has to be user-friendly and useful, and most importantly is that learners need to be willing to use e-learning. So, there is a need to understand the factors that affect one's intention to use e-learning. Thus, the question in this research was "can subjective norm influence learners' behavioral intention in using e-learning in Hong Kong higher education?"

II. LITERATURE REVIEW

Subjective norm is a social influence. Subjective norm is defined as "the person's perception that most people who are important to him or her think he/she should or should not perform the behavior in question" [2]. Also, subjective norm is a component included in the theory of reasoned action and the theory of planned behavior showing that subjective norm can influence one's behavior by impacting on one's behavioral intentions [3].Therefore, it can be believed that subjective has influence on behavioral intention. Some recent studies showed different results. A study showed that subjective norm was a significant factor influencing learners' behavioral intention in using e-learning [4]. However, another study showed a very different result [5]. According to above definition and findings, it can therefore be assumed that:

H1: Subjective norm will have positive influence on behavioral intention of using e-learning.

III. METHODOLOGY

Questionnaire survey is chosen as the research method in this study to collect necessary data to examine the relationship between subjective norm and behavioral intention of using e-learning in higher education. Two variables were included to examine the relationship which are "Subjective Norm" and "Behavioral Intention" (Table II). The variable "Subjective Norm" consists of three questions (Table I) and variable "Behavioral Intention" consists of four questions (Table II). 7-Point Likert scale is applied in this questionnaire, as Likert scale often used to ask people to state their agreement with a statement. 7-Point Likert scale consists of 7 options for each question. "1" represents "Strongly Disagree"; "4" represents "Neutral"; "7" represents "Strong Agree".

TABLE I
ITEMS OF QUESTIONNAIRE (Subjective Norm)

Question	Items	Factor Loading
1.	People important to me support my use of e-learning	0.786
2.	My classmates and friends think that e-learning is an appropriate mode of learning and study for me	0.766
3.	My family considers e-learning to be an appropriate mode of learning and study for me	0.797

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H. K. Yau is with the Department of Systems Engineering and Engineering Management, City University of Hong Kong, Kowloon Tong, Kowloon, Hong Kong (corresponding author to provide phone: 852-34426158, Fax: 852-34420173, email: honkyau@cityu.edu.hk).

T. C. Ho was with the Department of Systems Engineering and Engineering Management, City University of Hong Kong, Kowloon Tong, Kowloon, Hong Kong (email: tszcho8-c@my.cityu.edu.hk).

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TABLE II
ITEMS OF QUESTIONNAIRE (Behavioral Intention)

Question	Items	Factor Loading
1.	I intend to use e-learning in the future	0.798
2.	I would continue to see myself using e-learning for handling academic issues	0.774
3.	Using e-learning makes learning more interesting	0.694
4.	I would seriously consider studying in e-learning mode again	0.400

The questionnaire is started to develop when the research model is finalized. When the distributable version of questionnaire is completed, pilot test is conducted. The purpose of pilot test is to ensure that the subjects can understand the questions and also understand them in the same way. 14 questionnaires were distributed to my friends who are currently studying the same major in the same university. Those pilot test participants have marked down the grammatical mistakes, the questions that they are not understand and they have also commented on the questionnaire. Based on their comments, the questionnaire is modified and carried out the second pilot test to ensure that the questionnaire can reach the purpose. The questionnaires are distributed after the questionnaire is finalized. The target group of this survey is the students in higher education – Hong Kong university students.

Questionnaires were distributed during the lecture time, as this is the easiest way to reach a large amount of students in higher education at the same time. Also, with the help of my supervisor, I am able to reach the postgraduate students. Some questionnaires were distributed by my friends.

There were 200 questionnaires distributed and 153 questionnaires were returned. There were 153 out of 163 questionnaires fully completed.

Effective response rate = Total number of complete questionnaires returned/ Total number of questionnaires distributed
= 153 / 200 x 100 %
= 76.5 %

Validity and reliability are the most important and fundamental characteristics of every survey procedure. Factor analysis and reliability analysis were conducted to ensure that the collected data was valid and reliable to carry out further investigation.

Factor analysis is a multivariate analysis procedure. This procedure is trying to identify underlying "factors". The purpose of factor analysis is to reduce the variables involved to explain a relationship [6]. The minimum acceptable value of factor loading and corrected item-total correlation is 0.3 [7]. In the other hand, the items with < 0.3 have to be deleted. As shown in Table I and Table II, none of the item is less than 0.3, thus, all seven items were retained.

TABLE III
RELIABILITY STATISTICS (Subjective Norm)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.882	.882	3

TABLE IV
RELIABILITY STATISTICS (Behavioral Intention)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.834	.838	4

Alpha model is used to conduct reliability analysis for this study. Therefore, Cronbach's alpha is the coefficient used in the analysis. The minimum Cronbach's alpha has to be larger than 0.7 [8]. On the other hand, the scale is treated as not reliable, if Cronbach's alpha is smaller than 0.7. As shown in Table III and Table IV, all the items are larger than 0.7, therefore these two variables are considered as reliable.

IV. RESULTS

163 questionnaires were collected and 153 questionnaires were treated as "completed". About 54.2% of respondents were male and 45.8% of respondents were female. In this study, there were total 9 age groups. There were 20.3% of respondents aged under 20; 56.9% aged between 20 – 23; 9.8% aged between 24 – 27; 3.9% aged between 28 – 31; 3.9% aged between 32 – 35; 2.6% aged between 36 – 40; 1.3% aged between 41 – 44; 0.7% aged between 45 – 48; 0.7% aged above 48. Therefore, most respondents were aged between 20 – 23. The education level was divided into 3 subgroups, 70.6% respondents came from bachelor degree; 28.1% of respondents came from master degree; 1.3% of respondents came from doctorate degree.

Person correlation was applied to verify the hypotheses by finding a linear relationship between two continuous variables. Person correlation is able to find out the strength of the relationship as well as the direction.

TABLE V
CORRLATION BETWEEN VARIABLES

		Subjective Norm	Intention
Subjective Norm	Pearson Correlation	1	.681**
	Sig. (2-tailed)		.000
	N	153	153
Intention	Pearson Correlation	.681**	1
	Sig. (2-tailed)	.000	
	N	153	153

According to Table V, the Pearson Correlation Coefficient is + 0.681** (p = .000 < .01). Therefore, their relationship was statistically significant and null hypothesis was rejected. Since the Pearson Correlation Coefficient lies between .60 - .79, so the strength of correlation is strong. The impact of

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Subjective Norm on Behavioral Intention was positive and significant. So, H1 was supported by the result of Pearson Correlation Test.

V. DISCUSSION

Subjective norm is positively correlated with intention and it is consistent with the hypothesis and previous studies. One possible explanation is that an individual under social influence will try to conform the expectations of others [9]. This is because subjective norm may be an extrinsic motivational fact which can encourage university students to self-regulate the use of e-learning [10]. There is an example in Korea. People living in Korea are encouraged to use IT in every field so that they can catch up with the social change caused by IT. Also, university students in Korea think that e-learning is beneficial for their future, like: job preparation and they are feeling afraid as they might fall behind the students who have e-learning experience [10]. Therefore, university students in Korea are willing to adopt e-learning. The situation in Hong Kong is similar to Korea, as IT in Hong Kong is occupying an important position and almost all sectors involve using IT to accomplish the required tasks. Hence, we can conclude that the students in Hong Kong are influenced by the surrounding people and they want to follow this trend. Otherwise, they may fall behind and lose their competitive advantage(s). Thus, subjective norm is positively and significant correlated with intention to use e-learning. Subjective norm is also an important construct in this study, as the result showed that it is strongly correlated with the intention.

VI. CONCLUSION

It can be concluded that subjective norm has significant and positive impact on learners' behavioral intention of using e-learning in higher education. Since the target participants were students in higher education, the findings of this study contributed to those educators who are teaching in higher education. Base on the findings, in order to enhance the usage of e-learning, educators should introduce the concept of using e-learning to those freshmen's parents and the educators should also encourage their students to adapt e-learning.

The limitations of this study are small sample size and uneven distribution of education level. If sufficient resource is provided, the sample size could be larger which the education level will be more evenly distributed.

For future study, students in different countries can be investigated separately, as the result could be significantly different from this study.

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