

Perception Towards Using Mobile Phone Videography as a Digital Teaching Material for the Nursing Instructors Sukhothai Thammathirat Open University

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Received: 28/5/2019

Accepted: 5/6/2019

Abstract - This dissertation aims to explore the perception towards the use of mobile videography as a digital teaching tool of the nursing instructors from Sukhothai Thammathirat Open University. It also aims to providing a workshop for the instructor's professional development in technology skills and to increasing confidence in technology integration usage within the classroom. The research study, therefore, used the Unified Theory of Acceptance and Use of Technology Model (UTAUT) to measure the four factors which have an influence over the behaviors regarding intention to use mobile phone videography. The researcher conducts the pre-test and post-test questionnaire before and after treatment in order to gather the data of the behavior intention. The results are expected to show and reflect the importance of instructor's professional development in technology skills from the nursing instructor's point of view. In addition, they are expected to stimulate some positive impact on technology integration models to support teacher which will encourage the nursing instructors improve their class instruction.

Keywords - Perception; Technology Integration; Mobile Phone Videography; Professional Development

I. INTRODUCTION

As we might notice that mobile phones have become more commonly used than computers and have widely spread all around the globe on the expressway (Keskin & Metcalf, 2011). "Mobile devices have exceeded the adoption of new technologies for education" (Al Hosni, Ali, & Ashrafi, 2010). Mobile phones are no longer just phones for dial and calling, they have reached the levels of personal multi-purpose tools. People carry mobile phones with them and use them all the time and everywhere (Franklin, 2011).

For the purpose of usage, people use them to call, take pictures, record videos, record audio sound, play music, browse the Internet, play a game, check the weather, find directions, translation, reading, attend a virtual class, and even set up the conference or researching. In the educational approach, the mobile devices have become part of the daily life for both teachers and students of the 21st century. When everyday lives depend mostly on technology, the technological environment has formed a generation called "digital natives" with a different way of thinking, learning and consuming information from past generations (Cobcroft, Towers, Smith, & Bruns, 2006).

II. REVIEW OF LITERATURE

A. Technology Integration

The Technology Integration is defined as “Curriculum Integration with technology usages and involvement of technology as a tool to enhance the learners in education contents or other approaches in instructional work task” (Labbo & Karen, 2010). Some examples of technology integration given by Labbo & Karen (2010) include virtual field trips, video for historical contents, online assignment and other technology tools that should make the learning process more effective, enhancing and provide deeper perspective for learners.

B. Professional Development in Technology

Teachers are the most precious and important determinant in achieving purposive technology integrated educational technology reform. According to Ottenbreit-Leftwich (2010), “It is important and beneficial to guide teachers to use technology to enhance teaching and require expected learning outcome rather than wait for the nature of technology to change the role in teaching and learning”.

C. Cell Phones in Education Usage

Amin, Mahmud, Abidin, & Rahman (2006) expressed the web-based learning as a designed m-learning program. They used microself.net as a platform for distributing information. These scenarios allow online learning to be more flexible because the application works through all internet browsers. This means learners allowed to access the lesson using any devices and from anywhere. Web-based learning engaged learners easily as it allows cell phones to access the contents at any time. This digital device allows students to arrange their timetable, submit assignment, receive real-time feedback on their work or register their courses.

III. METHODS

This research study uses a quasi-experimental method in order to observe and measure the

perception towards mobile phone videography as a tool for professional development focusing on technology skills for the nursing instructor. The researcher planned to conduct the mobile phone videography training as a treatment for this study.

The main research objective is to explore, develop, demonstrate and evaluate the perception toward using mobile phone videography as a digital teaching material for nursing instructors. This researcher used UTAUT models (Unified Theory of Acceptance and Use of the Technology) that consist of four independent variables (Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition) it aims at finding two dependent variables (Behavior Intention and Use Behavior). The researcher used a questionnaire to collect the data from the participants in order to measure the determinants and test the hypotheses.

This research study consisted of four procedures according to the research objectives. The procedures include the following:

- 1) To explore the perception towards the usage of mobile phone videography as a digital teaching material for the school of nursing instructors.
- 2) To develop the technology skills by conducting a mobile videography workshop for the school of nursing instructors.
- 3) To demonstrate the implementation of how to integrate the mobile phone videography to the school of the nursing instructors.
- 4) To evaluate the school of nursing instructor’s perception towards using mobile phone videography as a digital teaching material.

IV. CONCEPTUAL FRAMEWORK

The selected theory for the conceptual framework was the UTAUT developed by Venkatesh (2003). The UTAUT model was appropriated for this research because each determinant of the theory helped to understand

the factors which have an influence over the intention to use and actual of teachers on mobile phone videography in their class. The variables of the model are Performance expectancy, Effort expectancy, Social influence, and Facilitating conditions (Venkatesh, 2003).

The researcher applied this model to the study because this conceptual framework helped the researcher to frame specific components which related to variables of treatment during the research completion.

V. RESEARCH HYPOTHESIS

H_{o1}: Performance Expectancy does not have an influence over Behaviour Intention to use mobile phone videography.

H_{a1}: Performance Expectancy has an influence over Behaviour Intention to use mobile phone videography.

H_{o2}: Effort Expectancy does not have an influence over Behaviour Intention to use mobile phone videography.

H_{a2}: Effort Expectancy has an influence over Behaviour Intention to use mobile phone videography.

H_{o3}: Social Influence does not have an influence over Behaviour Intention to use mobile phone videography.

H_{a3}: Social Influence has an influence over Behaviour Intention to use mobile phone videography.

H_{o4}: Facilitating Condition does not have an influence over Behaviour Intention to use mobile phone videography.

H_{a4}: Facilitating Condition has an influence over Behaviour Intention to use mobile phone videography.

VI. COLLECTION OF DATA

The data was collected using pre-test and post-test questionnaire. The pre-test was conducted at the introductory session before conducting the mobile phone videography workshop and the post-test was conducted after the workshop finished. The training session was a twelve-hour workshop taking place in four days. The researcher used the questionnaire in order to gather the data regarding the teacher's behavior intention to use mobile videography as digital teaching material.

Multiple Linear Regression models were used to measure the Null Hypothesis (H_o), the significance of independent variables (Performance expectancy, Effort expectancy, Social influence and Facilitating condition) which have significant influence on Behavior Intention to use and Use Behavior on the use of mobile phone videography.

The multiple regression analysis was performed with all the assumptions it complied with. The results of the multiple regression are presented in Table I. The summary of the computed means of all the items according to variables is displayed in Table I. The overall score for each variable was obtained from the response to the questionnaire items. The means of all the computed items are higher than 3.00. The result shows the participants consider that each determinant has an influence over behavior intention to use mobile phone videography.

**TABLE I
MULTIPLE CORRELATION**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770 ^a	.592	0.527	.35915

a. Predictors: (Constant), Facilitating condition, Performance expectancy, Effort expectancy, Social influence

There are multiple correlations ($R = 0.77$) of the four significant predictors with criterion (dependent variable), as shown in Table IV. From the UTAUT model factors that influence behavior intention to use mobile phone videography are facilitating condition, performance expectancy, effort expectancy, and social influence. The four factors have a significant effect which explains 59% of the variability of

the attitude which influences the behavior intention to use mobile phone videography. Furthermore, the adjusted R square shows that the four factors accounted for 53% of the variance contributing to behavior intention.

TABLE II
REGRESSION ANALYSIS SUMMARY

	Mean	SD	B	R
Performance Expectancy	4.63	0.42	0.36	0.49***
Effort Expectancy	4.35	0.55	-0.30	0.14***
Social Influence	4.15	0.60	0.27	0.51***
Facilitating Condition	4.30	0.60	0.53	0.60***

Note: $R^2 = .59$ ($N = 30$, $p < .05$) *** $p < .01$

A multiple regression analysis was performed to evaluate the unified theory of acceptance and use of technology factors which can predict perception toward using mobile phone videography of the nursing instructors. There are four factors of the determinants which are performance expectancy, effort expectancy, social influence, and facilitating condition. The linear combination of the unified theory of acceptance and use of technology factors was statistically significantly related to the overall satisfaction $F(4, 25) = 9.08$, $p = .00$.

The sample multiple correlations were .77, indicating that 59% of the nursing instructors' perception toward using mobile phone videography can be accounted for by the linear combination of the unified theory of

acceptance and use of technology factors. Table 4.9 shows the relative strength of the individual predictors. All of the indices were statistically significant.

All of the correlation coefficient indices range from 0.14 to 0.60. Facilitating condition has the highest regression coefficient at 0.60, followed by social influence 0.51, performance expectancy 0.49, and the lowest predictor was effort expectancy which accounted for 0.14.

The formula for predicting of the attitude towards using mobile phone videography in the nursing instructors.

$$\hat{Y} = 0.36X_1 - 0.30X_2 + 0.27X_3 + 0.60X_4$$

VII. SUMMARY OF THE FINDING

TABLE III
HYPOTHESIS 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.758	0.931		1.887	0.70
Performance Expectancy	0.599	0.200	2.992	2.992	0.006

H₀₁: Performance Expectancy does not use mobile phone videography. have an influence over Behaviour Intention to

H_{a1}: Performance Expectancy has an influence over Behaviour Intention to use mobile phone videography.

The prediction by multiple linear regression of the performance expectancy indicated the result that Sig. (2-tailed) = .006 which was

lower than .05. The result indicated that Performance Expectancy has an influence over Behaviour Intention to use mobile phone videography. The first null hypothesis (H₀₁) was therefore, rejected.

**TABLE IV
HYPOTHESIS 2**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.944	0.775		5.089	0.000
Effort Expectancy	0.135	0.177	0.143	0.766	0.450

H₀₂: Effort Expectancy does not have an influence over Behavior Intention to use mobile phone videography.

H_{a2}: Effort Expectancy have an influence over Behavior Intention to use mobile phone videography.

The prediction by multiple linear regression

of the Effort Expectancy indicated the result that Sig. (2-tailed) = .45 which was higher than .05. The result indicated that Effort Expectancy does not have an influence over Behavior Intention to use mobile phone videography. The second hypothesis (H_{a2}) was therefore, rejected.

**TABLE V
HYPOTHESIS 3**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.723	0.592		4.603	0.000
Social Influence	0.436	0.141	0.505	3.093	0.004

H₀₃: Social Influence does not have an influence over Behavior Intention to use mobile phone videography.

H_{a3}: Social Influence has an influence over Behavior Intention to use mobile phone videography.

The prediction by multiple linear regression

of the Social Influence indicated the result that Sig. (2-tailed) = .004 which was lower than .05. The result indicated that Social Influence has an influence over Behavior Intention to use mobile phone videography. The third hypothesis (H₀₃) was, therefore, rejected.

TABLE VI
HYPOTHESIS 4

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.302	0.569		4.046	0.000
Facilitating Condition	0.518	0.131	0.599	3.960	0.000

H₀4: Facilitating Condition does not have an influence over Behavior Intention to use mobile phone videography.

H_a4: Facilitating Condition has an influence over Behavior Intention to use mobile phone videography.

The prediction by multiple linear regression of the Facilitating Condition indicated the result that Sig. (2-tailed) = .00 which was lower than .05. The result indicated that Facilitating Condition has an influence over Behavior Intention to use mobile phone videography. The fourth null hypothesis (H₀4) was, therefore, rejected.

VIII. DISCUSSION

A. Social Influence

Defined as the degree to which an individual perceives that important others believe that he or she should use the technology (Venkatesh, Morris, Davis, & Davis, 2003). Social Influence is also the main factor to consider when conducting the professional development program. During the workshop, the participants were willing to cooperate with the given assignment. This kind of the will somehow only last for a few days. But the nursing instructor would carry on with the skills they have learned by looking at the role model. The role model, in this case, could be their colleague or co-workers, especially their friends or person they are close to.

B. Facilitating Condition

Defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the technology (Venkatesh, Morris, Davis, & Davis, 2003). After the researcher has done with the treatment, the researcher

realized that facilitating condition is one of the main motivations for the nursing instructors to use technology device in the class.

The reason is when the nursing instructor gets well support or fully encouraging from the faculty. They will be fulfilled with confidence to use the mobile phone to enhance teaching. It is also reflected that the school district cares about their personnel. This kind of boundary is powerful in terms of professional development.

IX. CONCLUSION

The research study showed that mobile phone has turned to multi-purpose educational tools for nursing instructor. The contribution of mobile phone videography can spread the education contents and new knowledge which enhancing the learning process.

Mobile phone videography is able to help nursing instructors to create the short video contents which allow the distance learning option of the learners. The benefits of learning through mobile phone videos are it could occur across countries or in deferent locations. Instructors are also the stakeholder in using mobile videography encourage them in raising their technology skills.

According to the research problem of the scarcity of technology tools used in Thai university instructors. This research study aims to investigate and increase positive perception towards using mobile phone videography in the school of nursing from Sukhothai Thanmmathirat Open-University.

The technology integration with Information and Communicational Technology (ICT) can be in any shape and form. It can help the nursing insyuctors to engage the learner in every

aspect. Also, the nursing instructor needs to remain that to insert the creative thinking into the technology usage in class.

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(Arranged in the order of citation in the same fashion as the case of Footnotes.)

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