Knowledge sharing through Social Media for Higher Education Classroom

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ABSTRACT

This paper presents the outcome of a research that investigates the trend, attitude and perception of students using social media to share knowledge in the classroom. Whilst some people perceived social media as a phenomenon that distracts students from focusing on their studies, others view social media as a technology that can facilitate teaching and learning. This study used mixed method via questionnaire and using focus group to write and share knowledge through social media from 247 students in Nakhon Si Thammarat Rajabhat University of Thailand. The results of the study found that most students used Facebook to discuss and share knowledge in higher education classroom. This study highlights the advantage of social media via Facebook for sharing knowledge in the classroom and used as tools for teaching and learning.

Keyword: Facebook, teaching and learning, attitude, perception

I. INTRODUCTION

Knowledge sharing is part of life for most people, most of which use information technology for communication in the workplace and sharing the information through social media such as Facebook, Twitter, LinkedIn, Lines etc. According to Adamovic et al. (2012) knowledge sharing is evident when people share their tacit knowledge with one another. Foss et al. (2010) state that knowledge sharing is designed to transform individual knowledge into organizational knowledge. Knowledge sharing is considered as a significant component of knowledge management success (Aliakbar et al, 2012).

Today, social media technology becomes a part of knowledge sharing and can assist the process of sharing knowledge in the organization. Social media is a dynamic field that can be used to manage knowledge sharing, and social media can also be used as a communication tool where people within the organization will be able to engage in knowledge sharing (Jones et al., 2009). Same as in the classroom social media can help students to share knowledge in the classroom because it is easy and convenience to share knowledge from one to another. Today, most universities use the social media as tools for learning and teaching in the classroom. For instance, teachers can send message to his/her students by using Facebook, Line, and Twister. However, the problem which occurs in the classroom is to get the students’ attention away from their smart phones, or social media such as Facebook and Line. The other problem in about the disruptive behavior of the students. Therefore, the purpose of this paper is to investigate the trend of social media and technology appropriate for use in the classroom. This paper attempts to investigate and report on a survey of how students used social media in the classroom and answers questions concerning usage of the social media and types of social media that benefit them in the classroom. The authors hope that the results of this study can be used to improve the courseware and the method for teaching and learning in higher education classroom.

A. Objectives of this study

The purpose of this study is to investigate the trend of using social media as means of sharing knowledge in the classroom. The following objectives are used to guide the study:

1. To investigate the trend of social media for sharing knowledge in higher education.
2. To measure the student’s attitude in terms of motivation and satisfaction while using social media for learning and sharing knowledge in higher education.
3. To measure the perception of students in terms of ease of learning when using social media for teaching and learning.

II. LITERATURE REVIEW

A. Knowledge sharing
To achieve success in classroom management, teachers and students should know how to transfer knowledge in the classroom. Normally, teachers can use various methods of learning and teaching in the classroom such as using face-to-face teaching, blend based teaching, or problem based teaching. But today, the technologies can be used to assist the teachers for teaching in the classroom. One of many methods of teaching can be knowledge sharing from teacher to students or sharing knowledge between students. Knowledge sharing can be carried out through face-to-face or using technologies such as Facebook, Lines, and Twitter.

Researchers view knowledge sharing from many perspectives. Aliakbar et al. (2012) for instant view knowledge sharing as a significant component of knowledge management success. This is because knowledge sharing, according to the authors is an important elements of knowledge processing.

Husted and Michailova (2010) contend that knowledge sharing is designed to transform individual knowledge into organizational knowledge. Knowledge sharing can be communicated from teacher to students or student to student and knowledge sharing can exist in groups. For instant students can create Fan page in Facebook and share knowledge in a closed group. The other example is about course management such as students studying Thai language can create Thai language subject group in Facebook and allow students to add to this group via invitations. Then they can share knowledge and discuss assignments, homework and activities related to the subject.

This study adopted the SECI model developed by Nonaka and Takeuchi (1995) that involves four parts, socialization, externalization, combination and internalization. Socialization is to share knowledge via face-to-face such as community of practice (Cops). Therefore, this study looks into knowledge sharing using social media from students’ perspective. In addition, externalization is important for learning and teaching in the classroom. The teacher transfers the knowledge to the students and towards the end of the class, the teacher gives assignments to the students. Whenever the students encounter problems, they will discuss the assignment through social network via Facebook. The Computer Education Program created a group in Facebook called Computer Family NSTRU. This group has 247 members comprising students of this program. Therefore, the students use this Computer Family NSTRU to discuss about the assignment. If they have problems, they will post the questions to this group and the teachers will answer the question and share knowledge through Facebook. Therefore, knowledge sharing is an activity when knowledge is exchanged between two or more people. Knowledge sharing can be in communities, organization and education.

B. Social Media
According to Wikipedia (2012), social media is the interaction among people in a virtual environment that facilitate the creation, sharing, and exchange of information and ideas. Kaplan and Haenlein (2010) defined social media as the internet applications build based on Web 2.0 that is focused on the ability for people to collaborate and share information online.

The advancement of the internet technology has brought about extensive use of the social media applications such as Facebook, Myspace, Twitter, WhatsApp, and various other chats, forums and discussion boards. Latest statistics on the usage of Facebook for instance show a world-wide usage of 13.9%. Thailand, with an average Internet penetration of about 30%, has 26.4% users of Facebook, whilst Malaysia has 46.6% users of Facebook with 60.7% Internet penetration (Internet World Stats, 2014). These are way above the Asian average of 6.5% Facebook users and 27.5% Internet penetration. This is an indication that social media is becoming pervasive and affecting the lives of many people and is expected to become a necessity in a not too distant future.

C. Planned Behavior Theory
Theory of planned behavior (TBP) is a theory about the link between beliefs and behavior. TBP has been shown to be practical in social behavior predicting in many functional areas (Aliakbar et al, 2012). This study used the Theory of Planned Behavior based on the three independent variables, which are knowledge
perception of using social media, attitude toward using social media and behavioral intention.

D. Framework of this study
The research model of this study adapted from Pamela and Byant (2012) based on the Theory of Planned Behavior. There are three independent variables and one dependent variable as shown in figure 1.

![Figure 1: Framework of this study (Pamela & Byant, 2012).](image)

E. Variables of this study
This study emphasized on three dependent variables which are students’ attitude, students’ perception, and behavioral intention.

1. Students’ attitude
Attitude means the feeling of each individual person and for this study it refers to the feeling of learners when the instructor transfers knowledge to learners. Many researchers interested in the study of attitude of learners (Kaiser et al., 1999) note that knowledge is a precondition of attitude formation. While Kellert and Westervelt (1984) note that level of knowledge is one of several factors affecting attitudes in children. A significant relationship between knowledge and attitudes concerning the environment has been found in several studies (Seubsom, 2013; Tikka et al., 2000; Weaver, 2002). Attitude is important in learning management and there have been many studies on this. According to Breeze (2002) who studied the attitude toward learner among Spanish university learners and British university learners, found that the learners feel responsible for their own learning, and were motivated by factors other than examinations. For the learners, they normally depend on their teachers for guidance, feedback and motivation. They need the classroom structure to provide discipline and the social environment to give them opportunities for interaction.

2. Students’ perception
Most people assume everyone sees the world the same way. This can be expected because people are not able to compare what they see to what someone else sees. This wildly accepted assumption however can be inaccurate. There is evidence that each person’s perception of the world is different only in minor way (Mosher, 1998). The perception can be hearing, vision and smell, each involve different neurons of each individual (Little, 1999). However, perception may not be what you think it is. Perception is not just a collection of inputs from our sensory system. But perception is actually message constructed using outside input, inner-neuron processes and past, relevant information stored in the brain (Mosher, 1998).

3. Behavioral intention
Behavioural intention is an indication of an individual's readiness to perform a given behaviour. It is assumed to be an immediate antecedent of behaviour (Ajzen, 2002). It is based on attitude toward the behaviour, subjective norm, and perceived behavioural control, with each predictor weighted for its importance in relation to the behaviour and population of interest. Therefore, this study adapted the behavioural intention as the activities and frequency of using social media.

III. RESEARCH METHODOLOGY
The mixed method design was used in this study, the instrument was used based on theory of Planned Behaviour and divided into three parts. The first part is independent variable which consists of student’s attitude and student’s perception. The second part is behaviour intention which includes the activities and frequency of using social media. The third part is about knowledge sharing. These variables were subjected to reliability tests and found to be reliable as illustrated by their Cronbach alpha values of between .700 and .800 respectively.

A. Developing the instrument
The instrument was developed based on the knowledge sharing and experience of the environmental education plus extensive literature search on the subject. The study selected a subject called knowledge management in education (CIT 4124514). The subject details included knowledge management, knowledge sharing and the channel of sharing knowledge via Facebook, Line, Twister, Linked In, blog etc. The instrument consists of five parts; personal data, student’s attitude, student’s
perception, behavioral intention and knowledge sharing.

B. Sampling Population
The sample population are the students from faculty of education. The faculty of education included 10 major courseware which are Thai language, social education, physical education, English language, computer education, science education, psychology education, mathematical education, physics education and early childhood education. This study selected the sampling population from 247 students from computer education program because most students always used social media in the classroom and at home. Therefore, the sample size of 200 was determined for this study.

C. Data Collection
The study used survey questionnaires sent by email to all participants. The questionnaire included structured as well as opened-ended questions. Selected participants completed the questionnaire and returned by using Facebook Chat, email and Line.

IV. DATA ANALYSIS
Various techniques were used to analyze the data including descriptive statistics, reliability analysis and also factor analysis. Factor analysis was carried out to assess construct validity, whereas regression analysis was used to analyze the data. All respondents were undergraduate students, in term of gender, 48 (24%) were males and the remaining 152 (76%) were females. The respondents age between 17-19 years old. Table 1 shows the frequency of using social media.

Table 1. The frequency of using social media

<table>
<thead>
<tr>
<th>Using social media</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td>72</td>
<td>35.6</td>
</tr>
<tr>
<td>Usually</td>
<td>29</td>
<td>14.4</td>
</tr>
<tr>
<td>Often</td>
<td>23</td>
<td>11.4</td>
</tr>
<tr>
<td>Occasionally</td>
<td>40</td>
<td>19.8</td>
</tr>
<tr>
<td>Seldom</td>
<td>36</td>
<td>19.8</td>
</tr>
</tbody>
</table>

Table 1 shows the frequency of using social media and found that almost all respondents used the social media with slightly less than 20% of respondents indicated that they seldom use the social media.

Table 2. Types of social media

<table>
<thead>
<tr>
<th>Types of social media</th>
<th>Frequency of learning to use</th>
<th>Percentage (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>142</td>
<td>70.3</td>
</tr>
<tr>
<td>Twister</td>
<td>9</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 2 shows the four types of social media used as tools for sharing knowledge in this study. Not surprisingly, 70.3% of respondents indicated that they use Facebook, with Whatsapp falling far behind at 18.8%. Therefore, this study can report that most students used Facebook as a tool for discussing and sharing knowledge.

Table 3. Knowledge sharing via social media

<table>
<thead>
<tr>
<th>Knowledge sharing</th>
<th>frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td>122</td>
<td>60.4</td>
</tr>
<tr>
<td>Usually</td>
<td>37</td>
<td>18.3</td>
</tr>
<tr>
<td>Often</td>
<td>36</td>
<td>17.8</td>
</tr>
<tr>
<td>Occasionally</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Seldom</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3 shows the frequency of using social media to share knowledge between teachers and students, or between students and friends. Majority of respondents (60.4%) indicated they always used the social media for knowledge sharing whilst only 2% indicated they seldom use the social media to share knowledge.

Table 4. Purpose of using the chat facility

<table>
<thead>
<tr>
<th>Purpose of chatting</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>General chat</td>
<td>18</td>
<td>8.9</td>
</tr>
<tr>
<td>Discuss homework</td>
<td>115</td>
<td>56</td>
</tr>
<tr>
<td>Private chat</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Chat with group</td>
<td>60</td>
<td>29.7</td>
</tr>
</tbody>
</table>

Table 4 shows the purpose of using the chat facility. The results indicate majority of respondents (56%) used the chat facility to discuss about their homework.

Table 5. The total time using social media per day

<table>
<thead>
<tr>
<th>Total time using social media/day</th>
<th>Frequency</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 hours</td>
<td>23</td>
<td>11.4</td>
</tr>
<tr>
<td>3 hours</td>
<td>51</td>
<td>25.2</td>
</tr>
<tr>
<td>4 hours</td>
<td>29</td>
<td>14.4</td>
</tr>
<tr>
<td>5 hours</td>
<td>28</td>
<td>13.9</td>
</tr>
<tr>
<td>&gt;5 hours</td>
<td>69</td>
<td>34.2</td>
</tr>
</tbody>
</table>

Table 5 shows the total time using social media per day. The results show that students spend longer hours per day on social media with 34.2% of respondents indicated they spent at least 5 hours.

To meet the objectives of the study the following hypotheses have been formulated.

**Hypothesis 1: The use of social media influenced knowledge sharing attitude in higher education.**

Hypothesis 1 examined the relationship between using social media and knowledge sharing attitude. Result
of the linear regression found that there is significant relationship between using the social media and knowledge sharing attitude in higher education with p-value = 0 (<0.05) and accounts for 48.3% of the variance. Accordingly, this hypothesis is supported.

Hypothesis 2: Using social media can motivate knowledge sharing in the classroom
Result of the linear regression found that the social media can motivate the students to share knowledge with p-value = 0.001 (<0.05) and explains 5.6% of the variability around its mean.

Hypothesis 3: Using social media can be more satisfactory in improving students’ learning outcome
Result of the linear regression found that the students are satisfied using the social media in improving their learning outcome with p-value = 0 (<0.05) and explains 9% of the variability.

Hypothesis 4: Using social media is perceived to ease teaching and learning
Result of the linear regression found that the social media is significantly related to learner’s perception with p-value = 0 (<0.05) and explains 7% of the variability.

V. DISCUSSION
The results of this study reported that all students used the social media with Facebook as the most popular media used. The students like to share knowledge or discuss the assignment through Facebook. The purpose of chatting is to discuss homework and students used the chat group such as Computer Family Nakhon Si Thammarat with the majority spent more than 5 hours per day. Results of the hypotheses found that (1) social media helps to facilitate knowledge sharing. This hypothesis is supported by Crow et.al., (2008) who found that the social network influences the knowledge sharing attitude in organizations. (2) Social media helps to motivate knowledge sharing in the classroom. This hypothesis concurs with Konert et al., (2010) who found that students are more motivated to use social media as tools to reflect other students’ solutions and to give feedback. (3) Students who use social media for their teaching and learning tend to be more satisfied by improving their learning outcome. (4) The use of social media can improve students’ perception in terms of ease of learning. This hypothesis is in line with Konert et al., (2010) who state that social media can enhance the satisfaction and increase the learning outcomes of students. Based on all 4 hypotheses, knowledge sharing attitude appears to be the best predictor of social media use and should be given precedence when introducing social media as tools for teaching and learning.

VI. CONCLUSION
The study emphasized on knowledge sharing through social media for higher education classroom based on the theory of Planned Behavior. The study focused on the trend of social media which students have been using today and relate to knowledge sharing, learner’s perception when using social media as tools for learning and teaching in the classroom. This study found that the social media have influenced knowledge sharing between teachers and the students. Furthermore, social media can act as a motivator to encourage knowledge sharing in the classroom. This means the social media can motivate the students for sharing knowledge in the classroom. This study also suggests the use of social media can increase students’ satisfaction and perception towards ease of learning. In summary, social media is important for teaching and learning in the classroom today. Teachers and students will embrace the social media in classrooms and it will be good to develop more online courseware programs. Future research should compare the different social media as tools for effective teaching and learning.

REFERENCES


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