International Students’ Acceptance on using Social Networking Site to Support Learning Activities

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Abstract

The increasing numbers of international students studying in UCSI University necessitates research into appropriate ways to support cultural diversity in teaching and providing learning tools for them. International students usually face problems in adapting to culturally different education system and this complicates the discipline specific skills that they have come to learn. In addition to that, the number of contact hours is known to be insufficient, especially for cases of large classes of freshmen, where individual face-to-face could be a better way to bridge the cultural gap. Social networking site is known to be able to bridge the cultural gap and build trust among students and members of the faculty. It is also a platform for knowledge sharing when the students start to accept that the interaction among members within the site could support their learning activities. The question here is whether they are ready to accept social networking site as a learning tool. This paper evaluates the international students’ acceptance on using the social networking site to support their learning activities, using the UTAUT model, which postulates the constructs of performance expectancy, effort expectancy, social influence, and facilitating conditions on using technology. These constructs determine the behavioural intent, which influences the usage behaviour of the technology. Effectiveness of social networking to support students’ learning activities in higher education is expected to be highly dependent on the acceptance of the students in various aspects, and this research reports the progress of students in accepting the emerging technology as their learning tool. A variety of lessons concerning the use of social networking site and how it can be linked to other online tools are presented, especially in terms of building trust among students across culture differences. Thoughtful consideration in planning the structure of collaboration tools is recommended, not only for providing learning environment but also in terms of assisting students in adapting to culture diversity.

Keywords: Emerging technologies, social networking, learning tool, knowledge sharing, UTAUT

1. INTRODUCTION

Over the past five years, the development of Web 2.0, which O’Reilly (2004) introduced as the concept of a new generation of web-based tools for knowledge sharing, has given birth to a number of emerging technologies that are labelled under the name social media. This
phenomenon has great potential to socialise online learning to a greater extent than before (Bryant, 2007), where it is considered as “architecture of participation that harnesses the wisdom of crowds” (Surowiecki, 2004). Social media include virtual worlds, blogs, wikis and social bookmarking, which have particular educational significance (Trinder et. al., 2008, p. 17). Social networking is one of those emerging technologies that made its way through the hype of virtual presence, up to extend that it becomes a daily life among the new generation.

Among the technology tools that could facilitate knowledge sharing and learning activities among students include electronic bulletin boards, discussion forum, knowledge directories, groupware, databases, intranets, intelligent search engines, personal web pages, electronic mails, virtual conference rooms, libraries and others (Alavi & Leidner, 2001, Bender & Fish, 2000, Chase, 1997, Geraint, 1998). New technology that enables knowledge sharing includes e-learning, which is a training tool that can be used to train employees to use the knowledge sharing systems and to recognise knowledge sharing behaviours (Wild et al., 2002), blogs, which is a new medium for social interaction and discourse with emerging role in the sharing and building of knowledge (Vaast et al, 2006), and social network communities, which is also referred to as social network sites.

Acceptance of emerging technologies among academicians and students are under observation by current researchers all over the world. International students’ acceptance of the learning tool is vital for the success of the implementation, especially in a private university where the diverse culture could make the situation difficult for the students to adapt to the learning environment. There is a need to know whether the acceptance level is at the ‘ready stage’ or not, before the tool can be fully absorbed into the education system. As how Moran & El-Gayar (2006, p. 2846) commented, “For such initiatives to improve students’ learning and teaching effectiveness, such technology-based initiatives must be accepted by students and faculty alike.”

This paper is part of an ongoing action research on implementation of social networking site (SNS) and other collaborative online tools (e.g. website, web-based file sharing tool, weblog, online quiz, social bookmarking) to support students’ learning activities. It discusses the international students’ acceptance on social networking site as part of their learning tools. The main instrument used for this particular purpose is the UTAUT model by Venkatesh et al. (2003), which is a known model for testing the users’ acceptance of information technology tools.

Effectiveness of social networking as a support learning activities among international students is expected to be highly dependent on the acceptance of the students in various aspects, and this research reports the progress of students in accepting the emerging technology as their learning tool.

2. SOCIAL NETWORKING TO SUPPORT LEARNING ACTIVITIES

Social network sites (SNS’s) such as Friendster, MySpace, have drawn significant press from the business and academic communities. Boyd (2004) described SNS’s as technologies that enable public articulation of social networks. As of July 2005, Friendster reported over 17 million users and MySpace reported over 20 million users, which leads to strong adoption trends, particularly among the college demographic. The trend changes from one SNS to
another, and this was observed in an international private university, where the change of trend was from Friendster to Facebook, within a year.

SNS can be oriented towards work-related contexts (e.g. LinkedIn.com), romantic relationship initiation (the original goal of Friendster.com), connecting those with shared interests such as music or politics (e.g. MySpace.com), or the college student population (the original incarnation of Facebook.com) (Ellison, Steinfield & Lampe, 2007).

According to Stutzman (2006), SNS’s allow more than the public articulation of social networks; in each service, a user creates a richly detailed personal profile. This has brought to an interest to evaluate the breadth of SNS penetration and the scope of information and knowledge shared in SNS on a typical institute of higher learning.

There is an opportunity of using the features in the social networking site, such as Facebook Group, to ‘assemble’ the students from the same course and let them make friends among themselves. Due to culture differences and lack of understanding between cultures, students have certain fear of trusting and making friends even though they attend the same class every day. Some students may find difficulties of making friends, especially after the class is dismissed and everybody rushes home.

This was supported by Goman (2002), who indicated that opportunities (such as SNS) should aid in building trust among participants to overcome the knowledge sharing (and learning activities) obstacle whereby participants are not comfortable sharing their knowledge with people they do not know. Trust can reside in a social relation between two individuals or in multiple social relations among a group of people; and individual level trust can be expanded easily to social trust if trust resides in social relations rather than a single individual or group (Park, 2006). The social relation is constructed through social interactions which are empowered by interpersonal trust, which makes socialisation the world where individuals share feelings, emotions, experiences and mental model (Samara, 2007).

Social networking sites are believed to be able to resolve another obstacle to knowledge sharing and supporting learning activities, which is a lack of open communication (Ramirez, 2007). Previous researches in this area has examined the use of Friendster Testimonials as self-presentational devices (Boyd & Heer, 2006) and the extent to which the attractiveness of one's Friends (as indicated by Facebook's "Wall" feature) impacts impression formation (Walther, Van Der Heide, Kim, & Westerman, n.d.).

Facebook, as well as other SNS’s, can be used as a platform for collaboration of course contents. It can link the students in a ‘Group’ to related articles, websites, social bookmarks, videos and blogs, to expand the students’ knowledge and support learning activities. The ‘Group’ could be used to announce latest updates on the course assessments and class activities, and to encourage discussion among students regarding the difficult topics and finding friends to form groups for their group assignments.

Figure 1 shows the overall look of the whole implementation with Facebook as a platform to other course contents.
3. RESEARCH OBJECTIVES AND HYPOTHESES FOR UTAUT MODEL

Venkatesh et al. (2003) proposed an acceptance model combining eight existing tools into one model called the “Unified Theory of Acceptance and Use of Technology (UTAUT)”, which has been shown to outperform other models for studying the acceptance of technology.

The UTAUT model by Venkatesh et al. (2003) postulates six constructs: performance expectancy, effort expectancy, social influence, self efficacy, anxiety, and attitude toward using technology. These constructs determine the behavioural intent, whereas another two constructs (i.e. behavioural intent and facilitating conditions) influence the usage behaviour of the technology. This research model also examines four moderating variables, i.e. gender, age, experience and voluntariness, which have varying influence on the primary constructs.

Figure 2 shows how these constructs are related to each other, which forms the UTAUT model.
The objective of this research is to evaluate international students’ acceptance on SNS as a mean to forecast, explain, and improve usage pattern. The research also examined the applicability of UTAUT to the SNS as a new innovation for learning tool in an international private university education system.

From the UTAUT model, it is known that the students’ acceptance to SNS depends on the performance expectancy, effort expectancy, social influence and facilitating conditions. With these constructs, the research objective leads to following research questions:

- How is the performance expectancy related to the adoption of SNS to support learning activities?
- How is the effort expectancy related to the adoption of SNS to support learning activities?
- How is the social influence related to the adoption of SNS to support learning activities?
- How are the facilitating conditions related to the adoption of SNS to support learning activities?

The considerations of the constructs of UTAUT model, which are mentioned in the research questions, lead to the hypotheses development as follows:

1. **Performance expectancy (PE)** is defined as the degree to which the international students believe that using the SNS will help support their learning activities.
   
   \[ H1: \text{PE is positively associated with intention to adopt SNS to support learning activities} \]

2. **Effort expectancy (EE)** is defined as the degree of ease associated with the use of the SNS.
   
   \[ H2: \text{EE is positively associated with intention to adopt SNS to support learning activities} \]

3. **Social influence (SI)** is defined as the degree to which an international student perceive that it is important for others to believe that he or she should use the SNS. This variable is important in the early stages of experience with technology, with the effect diminishing over time.
   
   \[ H3: \text{SI is positively associated with intention to adopt SNS as learning technology} \]

4. **Facilitating conditions (FC)** represents the organisational support, which include the constructs of perceived behavioural control, facilitating conditions, and compatibility with other platform of technology. Some researchers did not include the facilitating conditions in their research model, finding that this variable to not be significant as a determinant of intention (Venkatesh et al. (2003). Since usage of SNS is not formally taught to the students, this research includes the variable to understand the existence of diverse conditions on the international students’ situation.
   
   \[ H4: \text{FC is positively associated with intention to adopt SNS as learning technology} \]
3. METHODOLOGY

Survey Instrument

The survey instrument is based on the constructs defined in the UTAUT model by Venkatesh et al. (2003), with the constructs tailored for this study. The question domains include: performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioural intention. The survey instrument collected demographic information such as gender, age, home country and experience in using SNS.

In addition to this, other means of data collections, such as classroom observation, documentations, students’ feedback, and students’ results for the course involved, are used to support the discussion on the UTAUT survey results.

Participants

The study was conducted at an international private university in Malaysia. Approximately 120 international students were identified in the selected SNS (i.e. Facebook), and they were directed to the online questionnaire via Facebook messages. Out of these respondents, 29 questionnaires were answered within the 7-day period of data collection and only 24 questionnaires were fully completed.

Data Analysis

This researcher used Pearson correlation coefficient to examine each hypothesis to interpret the degree of relationship between the five model constructs, and to estimate the relationships between the variables. Coefficient of determination ($r^2$) for each of these relationships is presented as well, with the supporting demographic data and findings from other descriptive methods.

4. RESULTS

The general demographics of the 24 participants for gender showed that 19 participants were male (76 percent) and 5 participants were female (20 percent). The mean age of the participants was 20.96 with 76 percent (19 participants) being younger than twenty-five. Figure 3 shows the general demographic of the participants, according to age and home country.
The average experience the participants had in using social networking sites is between one to three years, with 20 percent (5 participants) having the experience for less than 1 year.

Table 1 provides a summary of Pearson correlation coefficients analysis to test the relationships between the UTAUT model constructs for each hypothesis. While the UTAUT model suggests that facilitating conditions not to be included as a determinant, this result shows that the relationship between facilitating conditions and behavioural intention to be significant.

Table 1: Pearson correlation coefficients for n = 24

<table>
<thead>
<tr>
<th>Study Assumptions</th>
<th>Correlation coefficient (r)</th>
<th>Coefficient of determination (r²)</th>
<th>Verified Result on Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Performance expectancy is positively associated with intention to adopt SNS to support learning activities</td>
<td>+ 0.6353</td>
<td>0.4395</td>
<td>Proved</td>
</tr>
<tr>
<td>H2: Effort expectancy is positively associated with intention to adopt SNS to support learning activities</td>
<td>+ 0.6644</td>
<td>0.4807</td>
<td>Proved</td>
</tr>
<tr>
<td>H3: Social influence is positively associated with intention to adopt SNS as learning technology</td>
<td>+ 0.6939</td>
<td>0.5243</td>
<td>Proved</td>
</tr>
<tr>
<td>H4: Facilitating conditions is positively associated with intention to adopt SNS as learning technology</td>
<td>+ 0.6522</td>
<td>0.4632</td>
<td>Proved</td>
</tr>
</tbody>
</table>
5. DISCUSSION

As shown in Table 1, the positive performance expectancy, effort expectancy, social influence and facilitating conditions will increase the possibility of using the social networking site to support learning activities among international students at a private university. On the other hand, the variance of each relationship is quite low, which is below 50 percent, except for social influence.

From the high percentage of Hypothesis 3 (H3), it is understood that international students depend highly on their social surroundings and influence. In other words, the more friends of theirs use a social networking site (SNS) for learning, the more they use the site for the same purpose. At the same time, they learn from each other on how to use the SNS by responding to each other and getting invites to new features from friends. These factors are shown in the observation and feedback received from the students via Facebook, where some of the international students had no second thoughts of adding their lecturers as ‘friends’, to better know them and to reach them whenever possible to ask about assignments and matters regarding their subject.

The behavioural intention of using SNS to support learning activities is secondly depending on effort expectancy of the international students (H2). The observation was made during the class activities, when the students were advised to join SNS to better communicate with the lecturer after the face-to-face sessions. Some of the international students found it easy to follow the advice because they already had accounts with Facebook, which was initially for keeping in touch with friends and family back in their home countries. There are a number of international students who were not used to the concept of SNS, but the showed effort by following the advice and learning from their friends on how to use the site.

Hypothesis 4 (H4), on facilitating conditions affect the behavioural intention of using SNS to support learning activities among international students, shows that the technology support affects the international students’ intention of using the SNS other than just for personal use. From the observation, the international students were known to rely on the university computer lab and internet connection, especially when they newly joined the university as freshmen. If they are not in courses with heavy usage of computers (i.e. computing, information technology), they would probably have no intention to buy or own computers or notebooks, thus it would be inconvenient to be online and use SNS to support learning activities.

The lowest percentage is shown on performance expectancy of using SNS to support learning activities (H1). This proves that the behavioural intention of using SNS as learning tool will only be dependent on the performance expectancy after all the other factors (i.e. effort expectancy, social influence and facilitating conditions) are no longer a problem.

6. CONCLUSION

This study used a well-established UTAUT model up to certain extend. The model is used to identify the relationship between the four constructs and behavioural intention individually. The results show that the international students agreed on the idea that the performance expectancy, effort expectancy, social influence and facilitating conditions will lift the behavioural intention of using SNS to support their learning activities.
Future research should focus on different sets of international students diverse in background and possibly lifestyle status and personalities, which could lead to an understanding on how these students from different background accept and interact with each other in a virtual environment (i.e. in SNS). These should be included in each relationship suggested in the UTAUT model.

This study started off by assigning students to a few links of websites and SNS (Facebook), for the students to keep updated on the syllabus and learning content of a course. Facebook was chosen as a platform to ‘aggregate’ all links and course contents, based on the feedbacks given by the students in the beginning of the semester, which supports the trend of SNS in the case university that has changed from Friendster to Facebook within a year.

As mentioned in the beginning, there are many ways to use SNS for learning purpose, and these include aggregating links and contents, encouraging discussions and sharing of ideas, and supporting communication among members of the group (especially in building trust among students). These methods of using SNS would be further experimented in future research, with different objectives and learning outcomes.

Time factor could be considered in using the UTAUT model to understand the change of perception on participants, before and after the implementation of using SNS for managing classroom activities. Understanding the international students’ acceptance on SNS to support learning activities could assist in better management of a big class, especially for e-learning and distance learning, with international students from diverse culture background in mind.

7. REFERENCES


