



Appropriating Online Social Networking (OSN) Activities for Higher Education: Two Malaysian Cases

Suraya Hamid

Department of Information Systems, University of Melbourne, Australia & University of Malaya, Malaysia

Jenny Waycott

Health and Biomedical Informatics Research Unit, University of Melbourne, Australia

Shanton Chang

Department of Information Systems, University of Melbourne, Australia

Sherah Kurnia

Department of Information Systems, University of Melbourne, Australia

Online social networking (OSN) activities are becoming more prevalent in higher education. The phenomenon can be observed in many higher learning institutions around the world. There are many ways of appropriating OSN for teaching and learning. OSN enables lecturers and students to publish and share knowledge quickly and easily. However there are also several challenges which include the limited skills in using social technologies among lecturers and students. This paper discusses the findings from two case studies conducted using an exploratory approach employing semi-structured interviews to gather lecturers' perspectives on their appropriation and use of OSN. The findings demonstrate a range of approaches used as well as the benefits and challenges faced by the lecturers in appropriating social technologies for teaching and learning. The finding can be used as a guide for other lecturers and educational designers to improve the use of OSN activities in higher education.

Keywords: Online Social Networking, Appropriating, Teaching and Learning, Higher Education.

1.0 Introduction

Online social networking (OSN) activities are becoming more prevalent in higher education around the world (Mason & Rennie, 2008; Hughes, 2009; Kear et al, 2010). OSN is defined as a range of activities enabled by social technologies and operationalised by a group of people (Hamid et al, 2009). In the context of this paper, the social technologies of interest include blogs, microblogs, wikis, social networking sites, video sharing sites and online discussion boards or forums.

The driving factors for adoption of OSN include the increasingly ubiquitous access, ease of use, functionality, and flexibility of social technologies (Brown, 2010; Schroeder, Minocha & Schneider, 2010). It has been argued that, in the context of higher education, social technologies can support social constructivist approaches to learning; they have the potential to extend students' construction of knowledge and promote student interaction (Ferdig, 2007; Schroeder et al, 2010; McLoughlin & Lee, 2008). A further benefit of social technologies provided on the Web is that they are often free or require marginal investment, removing a potential barrier to adoption (Brown, 2010).

While research into the use of OSN in higher education is gaining more momentum, there remains a dearth of research that aims to understand the different ways lecturers are appropriating these social technologies for educational purposes. Anecdotal evidence is rather inconclusive with regards to the benefits and challenges faced by the lecturers and students when OSN technologies are introduced for classroom activities. This research aims to conduct an in-depth analysis of two case studies examining how two different lecturers in two Malaysian universities have appropriated social technologies for educational purposes. The research also aims to identify the benefits and challenges the lecturers encountered in their use of OSN for their teaching and learning. The two case studies provide preliminary insights into the appropriation of social technologies, and the benefits and challenges of OSN use for higher education. This paper is expected to contribute and enrich current understanding of how lecturers appropriate OSN and the actual benefits, challenges as well as the outcomes as experienced by them.

In the next section we provide more detail about the concept of appropriation of OSN for education, and discuss the benefits and challenges of OSN in higher education as synthesized from the extant literature. This will be followed by an overview of the methodology and data analysis techniques used for this paper and a discussion of the findings from the two case studies. Lastly, the contributions, limitations and future research will be discussed.

2.0 Literature Review

Conceptually and practically, OSN enables its users to socialise and create networks or communities online. In the higher education sector, publicly available social technologies for OSN are being appropriated for educational activities. That is, technologies originally designed for social, or non-educational, purposes are being used and repurposed to support pedagogical approaches in higher education (Hemmi, Bayne & Land, 2009). There are several views on what appropriation means in the context of using new technologies. Degele (1997) argued that the concept of appropriation comes from creativity, with users creating new ways of using tools, distinct from what the developers and managers originally designed and developed the software or application for. Orlikowski (2000) viewed appropriation as 'technologies-in-practice' in the context of IT use in organisations. Waycott (2004) examined appropriation as the integration of new tools into user's activities, while Hemmi et al (2009) used the term appropriation to describe the use of social technologies in the educational realm. According to Jones and Twidale (2005), there are two types of appropriation: (1) serendipitous appropriation which includes the uses that arise out of spontaneous creativity, and (2) goal-oriented appropriation, where a user finds a technology that can help him or her satisfy a need or aid in attaining a specific, defined goal. Additionally, Fill et al (2006) argued that pedagogically appropriating certain technologies is part of a teacher's expertise. Hence, academics need to equip themselves with the knowledge and skills to appropriate social technologies for their teaching purposes.

Previous works, especially by Kennedy et al (2009) who studied the general use of information technologies by young students, and Hemmi et al (2009) and Jones et al (2005), who studied the use of social technologies, suggest that the appropriation of social technologies is not an easy and straightforward process. As higher education deals with a new generation of students who are perceived to be familiar with OSN and social technologies, the literature has shown evidence of some efforts made to use these technologies to support educational activities with a certain degree of success. However, the process of appropriation of the social

technologies is not well researched and can be considered a big gap in this research space.

Researchers have also argued that the pedagogical and social affordances of OSN should be leveraged for enhancing educational outcomes of students (Lee & McLoughlin, 2008; Tay & Allen, 2011). Tay and Allen (2011) argued that students should be given the choice to use the tools that they feel comfortable and familiar with and that they believe are viable for completing the tasks at hand. In this regard, the social affordances of OSN might not be provided in one particular social technology but rather in the combination of several social technologies. Therefore, lecturers could be advised to avoid specifying social technologies but rather specify the processes for the students to discover what will work for them. However, this approach may not be practical for lecturers teaching large classes. Furthermore, it may be difficult for lecturers to translate the potential of social technologies into actual usage (Bowers et al, 2010). Bowers et al proposed a Web 2.0 learning design underpinned by the Taxonomy of Learning, Teaching and Assessing. They focused on technology as a mediator of interaction and at the same time emphasised the importance of considering the content and pedagogical aspects of the task when designing a Web 2.0 learning activity.

We situate our study within the framework of learning, teaching and assessing as discussed in Bower et al (2010) and also within the context of understanding the pedagogical and social affordances of social technologies described by Lee and McLoughlin (2008) and Tay and Allen (2011). Based on a comprehensive literature review, we identified four categories of OSN educational activities, namely content generating, interacting, sharing, and collaboratively socialising (Hamid et al, 2010). Most social technologies allow users to easily create their own content and also to actively share information, opinions and support across networks of users. Students can write entries in blogs or wikis or record an audio file for a podcast lecture series (Kaplan & Haenlein, 2010; Hemmi et al., 2009; Kane & Fichman, 2009; Ras & Rech, 2009). Generating content can also involve creatively producing multimedia content for posting on file sharing sites such as YouTube (Anderson, 2007; Sandars & Schroter, 2007). Using social technologies, students are easily able to publish their work and ideas in a public space for others to view and download. For example, multimedia files can be shared on file sharing websites such as Flickr, YouTube or Slideshare, and social bookmarking sites allow users to bookmark certain websites or tag keywords for users with similar interests to peruse (Andreas et al, 2010; Murray, 2008; Ras & Rech, 2009). Sharing content and information using social technologies can mean much more than just publishing them online. It may involve further improvement and enrichment to the content and information being shared. For instance, someone else might expand the contents by putting more facts and figures or correcting erroneous data such as on Wikipedia.

Social technologies support interactions among students by allowing them to actively participate in a discussion. They can leave comments on a blog or discussion board and ask for more detailed explanations, adding someone as a friend and initiating communication by leaving a message (Kaplan & Haenlein, 2010; Hemmi et al., 2009; Munoz & Towner, 2009). In addition, interaction can involve responding to others' blog postings, co-writing wiki entries to enrich content on a selected topic, and joining a group on social networking sites (Andreas et al, 2010; Kane & Fichman, 2009). Students can work collaboratively in an online social environment to solve certain issues or problems with their peers, or to organise social events (Andreas et al, 2010, Hemmi et al., 2009; Kane & Fichman, 2009; Munoz & Towner, 2009). By collaboratively socialising also, students can establish and actively communicate with the contacts made online, with the aim of working towards particular outcomes or producing deliverables, in both online and offline modes (Lockyer & Patterson, 2008).

Based on a review of the extant literature we have identified four major benefits of OSN use in higher education, namely improving engagement, enhancing learning motivation, offering personalised course material, and developing collaborative skills (Wheeler et al, 2008; Rifkin et al, 2009). OSN activities have the potential to improve student engagement and increase their participation in classroom, in particular among quieter students. Students can work collaboratively online, without the anxiety of having to raise questions in front of peers in class – or by enabling expression through less traditional media such as video (Wheeler et al, 2008). Quieter students may feel reluctant and hesitant to participate and interact actively in class. However, with the use of online technologies (be it blogs, wikis, Facebook, and etc), the students are more likely to participate online compared to face-to-face interaction as some students may have a personal trait of being shy to speak up in public. Students may also create a sense of belonging and ownership when they are given the freedom to publish their work online (for instance in the personal blog related to the course) or contribute to the class blog. Learning to use social technologies can further boost students' motivation and may, in fact, improve the overall quality of students' work. A study by Rifkin et al (2009) indicates that when students publish their work online for multiple audiences, the external audience motivates them to create original, interesting and engaging work. This in turn can lead to a more positive assessment from the peers and lecturer.

In addition, lecturers have reported that the use of online technologies can encourage online discussion amongst students outside school, beyond the traditional classroom setting (Gray, Chang & Kennedy, 2010). In the case of social networking sites or blogs, when students update their user profiles and personalise their respective pages, they can provide comprehensive information about themselves (e.g., full name, date of birth, address, educational background, hobbies, social, and even political or religious affiliations). The academics who are using such technologies in their classroom will then be able to learn more about the students they teach simply by viewing the students' profiles (Griffith & Liyanage, 2008). In response to this, lecturers can personalise the course material based on the students' profiles (Oradini & Saunders, 2008). Some social technologies such as wikis and to some extent blogs, encourage inquiry-based and collaboration activities among students. This opens room for active participation and can therefore create opportunities for effective learning. Linked with this principle of collaborative production, social technologies enable learners and teachers to share and publish artefacts produced as a result of the learning activity (e.g., course materials such as course syllabus, course notes, assignments, test cases, etc) and invite feedback from peers. By publishing and presenting their work to a wide audience through blogs, wikis, or podcasts, learners benefit from the opportunity to appropriate new ideas, and transform their own understanding through reflection (Dale & Pymm, 2009).

Previous research has also identified challenges associated with using social technologies in higher education. Jones et al (2010) conducted an empirical investigation of OSN use in four universities in the UK involving 76 questionnaire participants and 14 interviews with students. They found five challenges of social software for learning such as the separation of life and studying; originality and copyright issues; sense of information flooded; time constraint, and lecturers are not up-to-date and may not know how to integrate and make use of social software. Their findings confirmed in general the earlier issues highlighted by Kennedy et al (2009) based on their Net Generation research in three Australian universities. In their report, Kennedy et al (2009) listed six policy issues which teaching and learning with technology should address: student learning; diversity, equity and access to technology; curriculum and assessment; academic integrity; staff development and capacity building, and lastly, ICT infrastructure. Despite the benefits and challenges identified, Kennedy et al (2008) also cautioned educators that not all young generation students are attuned to OSN. Therefore, lecturers are advised to be mindful in their appropriation and use of OSN as to cater to the various students' learning preference. The literature discussed above has been used to establish deeper understanding of the topic and to guide the empirical data collection and data analysis for the research reported in this paper.

3.0 Methodology and Data Analysis

This section explains the process we used to collect, code, and analyse the data from two case studies examining the appropriation of OSN in higher education by two lecturers in Malaysia. We chose to use a case study approach because it is appropriate for exploring contemporary phenomena (Yin, 2003) and focuses on understanding the dynamics present in a situation being investigated (Eisenhardt, 1989). Using the case study approach, researchers gather rich depictions of the social context of the studied phenomena, resulting in rich and insightful information (Yin, 1994).

Research Setting

This research took place in two Malaysian universities. There are two main motivations for conducting this research in the localised context of Malaysia. Firstly, the principal researcher, who is Malaysian, has a better understanding of the context. Thus, understanding the culture, social values and language enabled the researcher to be fully engaged with the research context and develop a deeper association with the research participants. Secondly, Malaysian higher education has started to adopt OSN on a wider scale and young Malaysians are very active users of OSN (Zakaria, Watson, & Edwards, 2010). Therefore, the Malaysian context offers a good opportunity to explore the phenomenon investigated in this study.

The two case studies described in this paper are drawn from a larger ongoing study involving interviews with Malaysian and Australian lecturers. For the purpose of this paper, two cases considered revelatory cases were investigated in detail. In the first case, the lecturer applied a systematic and detailed appropriation process that has not been identified or reported in other studies. Further, in this case the lecturer no longer needs to allocate a certain percentage of marks in her assessment to encourage students to interact and participate. This is not typical and suggests that the appropriation of social technologies in this example has been successful. In the second case, the lecturer appropriated four social technologies seamlessly in his teaching. This, again, is an

unusual practice: other cases generally only employed one or two social technologies. In both cases studied here, the students were pre-service teachers pursuing education degrees.

Data Collection and Analysis

The data collection involved interviews with two lecturers in two Malaysian public universities in July 2010 and August 2010. Potential participants were identified based on personal contacts and through their university’s websites. The final selection of the participants to be involved was then based on their use of social technologies after they responded to an initial invitation. Interviewing was chosen as the data collection method because it provided the researcher with the opportunity to collect rich data that revealed lecturers’ perceptions of the benefits and challenges they faced when appropriating OSN in their teaching practices. Bryman and Bell (2007, p. 474) argued that the use of semi-structured interviews offers flexibility where the interviewer “picks up on things said by interviewees” and “the interviewee has a great deal of leeway in how to reply”. This approach also allows person-to-person interaction where the researcher is able to alter the line of questioning depending on the answers and discussion. Specifically, the participants were asked about the process they used to identify and appropriate OSN, the advantages they perceived of using OSN for their students and for themselves, and lastly the obstacles they and their students encountered while using OSN. The duration of interviews was between 40 minutes to 1 hour. The interviews were audio taped and transcribed.

The data were analysed manually using thematic analysis (Boyatzis, 1998). All interview transcripts were printed, read multiple times, and notes were recorded in the margins to identify potential themes. These were then collated, reviewed, and examined for connections and redundancies. Over time, the themes were expanded, contrasted and changed. For this current work, our focus is mainly on the appropriation process as well as the benefits and challenges of OSN use from the two lecturers’ perspectives. To mitigate potential subjectivity bias and provide triangulation, the data analysis was reviewed by multiple researchers involved in this study.

4.0 Findings and Discussion

Table 1 below summarises the context of both case studies in terms of what and how social technologies were used. Below, we provide a detailed discussion of the findings based on the data analysis. First we discuss how the two lecturers were using social technologies to support OSN activities, then we describe the OSN activities in more detail, followed by a discussion of the processes lecturers followed when appropriating social technologies for educational purposes, and an outline of lecturers’ reflections on the benefits and challenges of using OSN in higher education.

Table 1. Summary of OSN activities for the two case studies

Attributes	Case Study 1 (Lecturer A)	Case Study 2 (Lecturer B)
Social Technologies used by the lecturers	Blog and Facebook	Wiki, Twitter, Facebook, SlideShare.net

OSN Activities (used by both lecturers and students)	<p>Content generating: lecturer notes, related link and examples.</p> <p>Sharing: related questions to test students' understanding and students can share draft assignment for feedback.</p> <p>Interacting: students interact and discuss topic assigned, give their reflection and for other students' to comment.</p> <p>Collaboratively socialising: Facebook used more for small group discussion</p>	<p>Content generating: Assignments prepared in Wiki, Slideshare.Net as substitute to LMS in publishing lecture notes</p> <p>Sharing: announcement, update and sharing interesting and relevant articles (post the link) using Twitter especially to unplanned updating</p> <p>Interacting: Informal interaction in Facebook to motivate and enhance students interaction</p> <p>Collaborative socialising: group work through Wiki</p>
Assessment approach used by the lecturers	Assessment for interaction using OSN (in the past, lecturer allocated 5% to encourage and motivate students use of the social technologies. Currently, there is no need to provide such marks due to strong and positive support from the students)	60% of assessment marks for Wiki and it includes face-to-face and online interaction
Methodology used by the lecturers	OSN is used as a supplement to conventional teaching and learning approach.	
Issues faced by the lecturers	<p>Time management</p> <p>Limited skills (students)</p> <p>Limited ICT infrastructure</p>	<p>Time management</p> <p>Limited skills (students)</p> <p>Limited ICT infrastructure</p>

Social Technologies for OSN Activities

In Case Study 1, the lecturer interviewed is a female lecturer, aged more than 45 years old and has experience of teaching for more than 15 years. She holds a senior lecturer post at the Faculty of Education in an anonymous University A. Her passion in teaching supported by the use of technology is evident from her early career where she adopted Web 1.0 tools such as the Yahoo! Group and group email to support her teaching. In this particular study, the lecturer used blog on WordPress and Facebook.

“For teaching and learning, mostly I use blog (WordPress). I also use Facebook. However, I am not using Facebook for teaching, just for announcement purposes. It is very much like Twitter, we use it to let the students know what is going on.”

In the second case study, the lecturer interviewed used four social technologies seamlessly. The lecturer is a male, aged between 35 to 45 years old and has been teaching for 10 years. The course he is teaching is a core subject for final year undergraduate students in University B. Similar to the first case study, the students taught in this course are pre-service teachers who will graduate to become qualified secondary school teachers. The decision to use social technologies was influenced by the lecturer's own educational background; he also conducted academic research on the use of Wikis. In addition to the Wiki, the lecturer also used Twitter and Facebook to support communication with the students.

“There are four social technologies that I use. First is Wiki, second is Facebook and the third one is Twitter. While Facebook is really popular among my students, I used Twitter because it has the ability to send information very fast. Further, I don't have to use proper sentences to type in like in Wiki. Lastly, I uploaded my lecture notes on SlideShare.net. I asked my students to do the same.”

In the context of adopting social technologies, it is observed that the lecturers in both case studies have not resorted to using only one social technology. The use of supporting technologies in addition to the primary tools provides evidence of how social technologies have become arguably prevalent in today's classrooms. In both cases, social technologies are used to complement the traditional face-to-face teaching delivery. This also indicates that conventional teaching and learning is still relevant but made more relevant by introducing newer technologies to provide an enriched learning experience for students.

Online Social Networking Activities

Content generating: As can be seen in Table 1, in both cases social technologies were used for content generating. This included the publishing of lecture notes by the lecturers and sharing of the class resources. Further, the students also used the social technologies to generate content when they wrote up their reflections in blogs or prepared their group assignments in Wikis. In the first case study, students used blogs to write weekly reflections about the concepts they had learned that week. Because students published their reflections of what they had learned each week, the lecturer and students were able to easily chart the students' progress and understanding of the topic. The lecturer mentioned:

"I think I can now easily see how my students progress over the semester. I can gauge their understanding of the course by seeing how 'wiser' they have become (in relation to the course) at the end of the semester as compared to when they are in the beginning of the semester. Beyond assessing them in formal examination, at least this way also tells us whether we have achieved or not the learning objectives set early in the semester."

In the second case study, the lecturer occasionally shared the links he found on the Internet with the students via Twitter instead of putting up the links on the course's LMS. The beauty of Twitter, according to the lecturer, is that it was fast and easy to use. Where necessary, the lecturer also sent notifications to his students if the class had to be postponed due to some unavoidable reasons.

Sharing: The lecturer in the first case study also shared related articles about the topic discussed and some of her past year exam questions she thought the students might benefit from. The lecturer expected that the students would in return use these past year questions to test their understanding of the topics and discuss among themselves for possible answers. Despite doing this, the lecturer acknowledged having no knowledge of whether the students were really using these past exam questions to prepare for their examinations. The lecturer in the second case study shared new contents uploaded to third party sharing websites such as Slideshare.net and later tweeted the information about the uploaded documents to the students via Twitter. The lecturer encouraged students to share the information with their friends who had no access to Twitter.

"Typically, every time I found new materials that I think my students would benefit from, I would share the links immediately on my Twitter. Sometimes I also share random thoughts that I have just to challenge my students' analytical skills."

Interacting: In both case studies, the lecturers used the social technologies, particularly Facebook, to support informal interaction with their students. Similarly, students were encouraged to use the same medium to interact among themselves. In the first case study, besides the reflections made in blogs, the students were commonly seen continuing their reflections and discussions via informal interaction in Facebook. The second lecturer claimed that his students frequently asked him questions pertaining to the course on Facebook. This informal mode of interaction helped the students to tap more of the lecturers' expertise and this was beneficial to not only students who asked the questions but also other students who were just lurking on the class Facebook group. The use of Facebook was critical when it came to the group project. The students were divided into several groups in which they are assigned to develop a multimedia presentation related to the course's topic. The lecturer mentioned the active use of Facebook by the students to support their small group discussions (of 4-5 students per group) and this sometimes led to a face to face meeting among themselves.

Collaboratively socialising: The first lecturer (case study one) used Facebook as the chosen medium to support this OSN activity. She encouraged the students to virtually 'mingle around' with all the registered students in the class Facebook group. She claimed that some students preferred only to keep their socialisation among friends whom they were comfortable with. The lecturer also expected students to extend their socialisation into meaningful learning experiences (i.e., collaboratively socialising in common pursuit of amassing knowledge).

“I encouraged my students to collaborate among themselves in completing their group works. I frequently see the students interacting among themselves on Facebook and surprisingly, they are discussing about the assignments I gave them.”

The second lecturer widely adopted a Wiki for supporting collaborative socialisation among his students. The lecturer claimed that the Wiki was an ‘e-whiteboard’ where students could put up their work. This analogy described the ability of Wiki to hold an amount of students’ work in the repository and where other students could edit (add, remove, change) the content easily. The collaborative work supported by the Wiki made co-creation of content easier, and the published final outputs could also be easily shared.

Appropriation Process of Social Technologies for Educational Purposes

In the context of appropriating social technologies for teaching and learning purposes, the lecturer in the first case study described a systematic way of identifying and using social technologies for her class. Interestingly, the appropriation process was strongly influenced by her own research interests in understanding students’ learning preferences. The lecturer mentioned four stages involved in her use of the OSN activities. These were (a) pre-implementation, (b) choosing the social technologies, (c) designing and using the social technologies, and (d) assessing the effectiveness.

In pre-implementation, the lecturer made use of Biggs’ learning style (Biggs, 2003) to understand students’ preferences. Based on the lecturer’s own research performed in 2001, the lecturer discovered that most of the students could be categorised as persons who prefer visual information rather than auditory information. She also discovered that the students who were introverts made up a small proportion of students and in comparison, most of the students saw themselves as extroverts. The lecturer conducted a simple SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to choose the right social technology. Typically, the lecturer compared at least two social technologies side by side. In addition to paper-based SWOT analysis, the lecturer would test-drive the social technologies to assess their usability. This trial-and-error approach had seen the lecturer adopt Friendster, a social networking site, for a short period of time with her students. According to the lecturer the students liked Friendster and used it every day as for socialisation. However, the lecturer chose not to continue to use it because it could not be used to systematically upload content and useful class information.

In designing and using the social technologies, the lecturer looked at four critical considerations of her use of OSN; content, delivery, outcome and service. The lecturer developed the course content for both face-to-face lectures and the virtual interaction via blog based on the syllabus requirements. From the delivery angle, while the main approach was still face-to-face lecture, the use of a WordPress blog for course reflections was given strong emphasis. On the outcome side, the lecturer expected that the students’ learning outcome would match the expected learning outcomes designed for the course. This was done through a set of assessments, discussed below. To address the service aspect of her use of OSN, the lecturer committed to posting something related to the course every week. She also ensured that she replied to the students’ comments, however minimal (e.g., by saying something as simple as “*I noted your suggestions*”, “*Thanks for your comment*” or more elaborate feedback such as by “*I totally agree with your view. Further, if I may offer an alternative view to that initial thought of yours*”). The lecturer claimed that the comments would indicate to the students that she actually read and appreciated their replies. The lecturer also added that, if the students sent her a link to visit, she would make an attempt to do so and provide her own views about the materials shared by the students. By doing so, she believed the level of student’s motivation would increase and they would be more engaged with the course.

For assessment, the lecturer normally assessed the students’ works once they had completed their assignments. While the students could submit their draft answers via their blogs, these preliminary write-ups could not be considered as their finalised job. Hence, only after the due date of submission would the lecturer fully obliged to assess the students’ outputs.

The appropriation approach demonstrated by the case study one above fits the goal-oriented appropriation as suggested by Jones and Twidale (2005). On the other hand, the lecturer in case study two arguably used the serendipitous appropriation in which the use of social technologies arose out of spontaneous creativity (Jones & Twidale, 2005). In this case, the lecturer had no clear process or formal preparation for the OSN use. Instead, the implementation just grew ‘organically’. Specifically in the second case study, the lecturer spent some time explaining the social technologies he intended to use to complement the face-to-face lectures. The lecturer gave

an overview of the technologies, demonstrated how these technologies would be used for the course purposes. He also asked the students to experiment with the social technologies to give them a sense of familiarity with the tools. The lecturer explained:

“I will allow the students to play around with the Wiki to get familiar with the tool. For example, in Wiki, I ask groups to introduce members of their group. They put in their profile, names, their area of specialisation, as well as their interest in becoming teachers, why do they want to take my course, sort of personal reflections within the group.”

For the course assessment, the lecturer allocated sixty percent of the course marks on assessment alone. These marks were mostly for the group work project in the Wiki. The levels of interaction among group members in traditional classroom setting and in Wiki were given emphasis. Asked about how the lecturer allocated marks for interaction, the lecturer argued that the quality of work determined the interaction level. He claimed that there was a correlation (while not numerically justified) between a high degree of interaction among students and the quality of students' work.

It is interesting to note that no common method exists either in the literature or found in the field pertaining to the way social technologies are being used for teaching and learning. Despite that, the first case study provides an exemplary case on how lecturers could systematically leverage social technologies for OSN activities.

Lecturers' Reflections on the Benefits and Challenges of Using OSN

The following discussion describes lecturers' reflections about some of the benefits and challenges resulting from their appropriation of social technologies for use in higher education.

Engagement and interaction: In regards to engagement and interaction with students, both lecturers in the two case studies believed they engaged and interacted better with the students particularly those termed as introverts. Both of the lecturers observed that students who were introverts had many good ideas to share with the class. However, their natural dispositions limited them from being vocal like the extroverts. Using social technologies as the platform, this situation could be overcome and the two lecturers noted that introvert students were now more competitive with their peers. This created a synergistic relationship, beneficial for students' academic development. According to the lecturer in the first case study:

“For introverts at least they now have a platform to communicate although they become lurkers in the beginning ... but at the end, if they want to start speaking, this will be the first platform.”

Appropriation of social technologies helped the lecturers in both cases to come up with creative and innovative ways of teaching and learning. Using more than one social technology provided variety, offering more options to create an enjoyable learning experience for students. For example, the lecturer in the second case study noted his class had changed into a more 'lively' environment after using social technologies. The students were more open and talkative (in a good way) as a result of their online interaction, having made their revisions and work together in a significant amount of time on Wiki and on other tools especially Facebook. According to the lecturer, this phenomenon was totally opposed to what he had observed in his previous classes that used the traditional lecture-based and the lecturer-centric approach.

Time management: The lecturer in the first case study found the use of OSN was not really time consuming. She even considered the use of OSN as really easy and said it required less work than the traditional mode of teaching. Pedagogically, she claimed that she just 'extended' her previous use of Web 1.0 tools such as group email to the new stream of applications labelled as Web 2.0. The lecturer in the second case study mentioned the ability of the social technologies to make learning go far beyond the realm of the physical classroom. Specifically, the lecturer argued that social technologies extended the classroom experience beyond the classroom hour into what he termed 'virtual time'.

“I think it becomes the extended class from my face-to-face meeting with the students. So it extends the class activity beyond the class hour. I cannot be there to monitor all their activities so I use these tools to monitor what they are doing and learning and what's their discussion all about. In short, when my student and I used the social technologies, we are able to have what I can say as the 'virtual time'.”

Challenge of limited skills: The lecturer in the first case study argued that the challenges of using OSN in higher education could be lecturer-specific. This is because she had not faced any major problems in using the social technologies. This observation might be true especially in the case of proactive lecturers who are appropriating and using these technologies without being asked to do so by the faculty.

The second lecturer, however, mentioned some challenges that had affected his students. For instance, he found it challenging to introduce the students to a new tool that was not familiar to them. While the use of Facebook appeared to be second nature to the students, a similar view could not be generalised to the use of Twitter and Wiki. The lecturer claimed that the students were not familiar with these two tools although they had some awareness of the tools. In general, the students had an awkward response when being told of the use of Twitter and Wiki for their classroom support. In order to overcome this situation, the lecturer had to encourage the students to experiment and acquire more skills through frequent use of the tools.

“Students are not familiar with the technology. I have to push them to acquire the skill. Generally, they have heard of it, seen it but never participate using it. I think it takes some time for the students to embrace and getting comfortable in using such technology (e.g Twitter) for classroom purposes.”

Challenge of limited access: The lecturer also faced another challenge in the form of students’ limited access to the Internet. The class was conducted in the computer lab but beyond that, the students had to access the Internet via the university’s campus-wide wireless infrastructure. Additionally, some students did not have the latest range of mobile phones that are capable of running mobile social technologies, particularly for Twitter and Facebook. Some students could not afford to own smart phones although all of them carried mobile phones. To respond to this problem, the lecturer and his students had to rely on the only communal access to the Internet, which was the computer lab where the class was conducted. Due to this reason also, the use of social technologies could only be considered as complementary due to limitation in its ubiquitous access.

5.0 Contributions, limitations and future research

The use of social technologies for educational purposes has changed the demands and direction of higher education. Lecturers are now being encouraged to use social technologies in their teaching in order to encourage social learning and to prepare students as graduates who will contribute to a society that now relies heavily on social technologies. From the evidence provided by the two lecturers in this paper, we found that OSN activities were used to complement current teaching and learning practices. The combination of one or more social technologies in enabling one or more OSN activities also demonstrates the confidence of the lecturers as well as the relevance of social technologies to support teaching and learning.

This paper enriches the current literature on the use of social technologies for teaching and learning which is still emerging. It also contributes to practice by providing empirical evidence of how social technologies can be appropriated successfully for harnessing teaching and learning in the higher education context as well as highlighting the benefits and challenges faced by lecturers in their use of OSN for teaching and learning. We have demonstrated that the selection of social technologies and the appropriation process are very much based on the preference of the lecturers. Thus, the wide range of social tools that are available as well as the flexibility offered by the tools to support various uses and applications may require creativity and innovation from the lecturers to appropriate the preferred technologies to support their specific needs.

There are some implications of this study findings for other lecturers and potentially, educational designers in planning, designing and using social technologies for their purposes. In particular, lecturers could consider taking up the systematic process of using OSN by meticulously planning and conducting for (a) pre-implementation analysis of students preference and learning styles, (b) conducting a formal evaluation of social technologies such as via SWOT analysis, (c) designing how OSN could be used for classroom environment, and (d) assessing the effectiveness of OSN use to ensure the teaching and learning practice achieves the intended learning objectives. For educational designers, the lessons learnt from the benefits and challenges of lecturers in using OSN activities to enhance teaching and learning should become the key pointers for them in enhancing and improving OSN for educational purposes. While many social technologies were not designed for educational purposes, this paper demonstrates they can be appropriated for teaching and learning with support of educational designers. To address the challenges such as the low level of familiarity in using certain social technologies for teaching and learning, educational designers could engage lecturers and their students in

training sessions to give them the opportunity to familiarise themselves with the system design, features and usability of the social technologies. The limitation of this paper is attributed to its localised context of Malaysian universities and the limited number of cases which may affect its applicability in other contexts. Thus, more cases of appropriating social technologies for teaching and learning in various universities and in different countries would be useful to complement the findings of this study. In particular, cases that demonstrate both successful and unsuccessful uses of social technologies for teaching and learning would be valuable to increase our understanding about the appropriate use of social technologies in higher education. Future works could be geared towards developing a 'toolkit' that could assist interested lecturers to easily and systematically use social technologies for their teaching and learning.

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