

INVESTIGATING THE USE OF SOCIAL MEDIA BY UNIVERSITY UNDERGRADUATE INFORMATICS PROGRAMS IN MALAYSIA

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ABSTRACT

The use of digital technologies in higher education has been driven by a number of underlying assumptions about the affordances of the available technology for social interaction and learning. This trend has not only been advocated by administrators who may argue for digital technologies as a catalyst for pedagogical change and engagement, but rather by the students themselves as they adopt new ways of collaborating and communicating within their social circles. Interacting using Social Media Technologies (SMTs) is a phenomenon in both business (Lygouriatis C (2013), AvantiKumar, (2012) and education (Davis, Deil-Amen, Rios-Aguilar, & Gonzalez Canche, (2012)). The increase usage and employment of SMTs in personal, business and education is credited to the advancement of Internet broadband services, mobile devices, smart phones and web-based technologies. Informatics programmes are technological-oriented in nature, hence students and academics themselves would arguably be quite adept at using SMTs. Students undertaking Informatics programmes are trained to thrive in challenging, advanced technical environments as manifestations of the fast-paced world of Information Technology. Students must be able to think logically and learn “how to learn” as “knowledge upon demand” is one of the expected capabilities of Informatics graduates. This rapid change in knowledge and skill sets requires learners to not only be lifelong learners, but to be constantly connected to the field of computing science. SMTs may be the conduit that supports these needs. Despite being an Information and Communication Technology (ICT) hub and having advanced ICT Infrastructure nationally, the use of social media beyond young people in Malaysia for education purposes is still relatively new and little is known about the user experience, intentions, perceptions and acceptance of these technologies by students and academics. This study will investigate the perceptions, acceptance, usage and access to social media by students and academics in higher education in Informatics programs in Malaysia. A conceptual model based on Connectivism and Communities of Practice (CoP) has been developed to inform the study in terms of how Social Media Technologies (SMTs) can play a role in building a virtual learning community in Higher Education Institution. A significant outcome of this study will be the development of a design framework for implementing social media as supporting tools for student engagement and teaching and learning of Informatics Programs in Higher education institutions in Malaysia.

KEYWORDS

Social Media Technologies (SMTs), Social Media, Connectivism, Communities of Practice (CoPs), Informatics Programs, Higher Education

1. INTRODUCTION

This paper presents a work-in-progress study that is examining how social media is perceived and used by both students and academics in the Malaysian Higher Education Context. Recent research highlights a mismatch between how university institutions perceive students of today use technology for both academic and everyday life and their actual use and thus more needs to be known about how university students use technology in order to better support effective decisions on the adoption of technology for higher education (Corrin L, Bennett S, and Lockyer L, 2010). With particular reference to the use of social media, very little work has been reported on student and academic engagements, their perspectives and perceived effectiveness of social media usage in higher education especially in the Malaysia context. A range of research has reported on students' perception and usage of social media and digital technologies to support their learning (Hrastinski and Aghaee, 2011, Margaryan, LittleJohn and Vojt, 2010, Bennett & Maton, 2010) but much of

this work has focused on quantitative research with students from universities in United States and Australia and with an emphasis mainly on student's perception and acceptance. Thus, there are calls for more research to examine how social media is perceived and accepted by students and academics for teaching and learning purposes (Shittu, Madarsha and Tunku Ahmad (2011). Further research is required to determine what benefits students may gain through the use of social software, faculty perceptions in integrating social software into the curriculum, student's demographic factors and usage hours of social software that affect their general performance, and effective methods of using social software to support student learning and engagement with their institutions. This proposed study seeks to address these questions.

2. SOCIAL MEDIA TECHNOLOGIES (SMTs)

A Social Media Tool (SMT) is generally a portable web-enabled tool, which is accessible through platform independent web browsers. It enables the sharing of collaborative activities not only in social but also in educational, and, now increasingly, in business contexts. It is believed that through these shared and networked activities, users will become creators of collaborative knowledge that forms a collective intelligence. Levy (1999) cited by Nielsen (2010) defined collective intelligence as "a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills...No one knows everything, everyone knows something..."(p 1). Collective Intelligence is not something new but the capability of social media software to pull together all the knowledge harnessed through collaborative activities makes the process more accessible to learners.

Generally, Social Media Technologies (SMTs) can be grouped into seven categories; text-based, media sharing, social networking, mobile-based applications, virtual world & games, synchronous communications and conferencing applications, and mashups. All these tools have different functionalities and purposes to suit the needs of students in this digital environment with the tools giving students the ability to set up their own personal learning communities within the Internet environment which would allow them to stay connected in the topic of their interest. Students can take advantage of these various functionalities in their own personal learning communities. For example, students could use text-based applications such as blogs, wikis, and discussion forums for their individual or group assignments and projects. One of the popular micro-blogs commonly used is Twitter. Students could also use social networking websites such as Facebook, Ning, and more to get connected with their friends, family, and lecturers. Students are spoilt with choices and availabilities of these tools which they could harness and use not only for entertainment purpose but also for their academic purpose. In addition, most of these are now easily accessible via their smart phones and hand-held portable devices.

There has been an explosion in the use of social media across many contexts, e.g., marketing, advertising, recreation, banking, recruitment, education, etc). The continuous growth and expansion of the World Wide Web, the move internationally by many countries towards knowledge economies, the need for globalization and the advancement of new technologies are all factors that have led to the need to reconsider the current pedagogies and engagement mechanisms adopted for teaching and learning in higher education. Because students in the digital age are heavily exposed to various emerging technologies and the vast amount of information which they can access from anywhere at any time, the role of higher education institutions now might be to focus on helping students to re-configure their knowledge as well as produce new knowledge. As such, there is a need to innovate current educational practices and explore new learning paradigms that could address the learning needs for the 21st Century (Brown, 2006). Tapscott (2008) stated that "in education the net generations are forcing a change in the model of pedagogy, from a teacher-focused approach based on instruction to a student-focused model based on collaboration" (p. 11).

Despite the increase in the use of social media in education, very little research has been done to explore social media use in universities in the Asia-Pacific region. The studies have reported that generally in Asia Pacific countries, most educators are using social media as informal collaboration tools, mainly for social networking and communication purposes, rather than using it as part of the teaching and learning process. This study aims to develop a better understanding of where South East Asia, and in particular Malaysia is placed with taking advantage of the opportunities social media offer, it will be essential to understand the current use of social media and student and academic perception of this use. This study will explore this issue by considering the conceptual frameworks of Communities of Practice (CoPs) by Ettiene Wenger (1998) and

Connectivism proposed by George Siemen (2004), which have been popularly linked as a theoretical explanation for the use of social media, to propose a conceptual model (explained below) for social media implementation in higher education institutions.

There is a perception that social media applications have the ability to help students improve their learning by engaging them in informal learning activities and processes. Siemens (2004) described informal learning as one of the significant trends in learning. Cluett and Skene (2007) add that social software can be used to encourage critical thinking, team work, creativity and self-paced learning among students, and these skills in turn, help students to develop deep learning approaches. Bartlett-Brag (2006) argues that use of these emerging technologies can stimulate the capture of tacit knowledge from informal learning situations.

3. CONCEPTUAL MODEL TO GUIDE THE RESEARCH STUDY

A conceptual model that integrates the characteristics of Community of Practice Theory (CoP) developed by Ettiene Wenger (1998), and Connectivism (a proposed learning theory advocated by George Siemens (2004)) has been developed to inform the study in terms of how Social Media Technologies (SMTs) can play a role in building a virtual learning community in Higher Education Institution. The conceptual model also helped to guide the study by informing the coverage of the study, the type of questions to be asked and who the study should focus on.

Connectivism and Communities of Practice (CoPs) can be used to complement each other as both emphasize on social learning and learning through collective intelligence. Jo Bloggs (2005, para 6) in her blog writes “Wenger states that the collective is necessary simply because ‘domains’ are too complex for one individual to master while Siemens claims that the differing perspectives brought together by nodes in the same network are necessary for exploring ideas and attaining meaning from knowledge (Siemens, 2004)”. Both Connectivism and Communities of Practice (CoPS) theories promote informal learning and consider learning experiences among peers as equally valuable as learning in the formal setting (Giesbrecht, 2007). In Connectivism, students formed many connections and actively participated in the network which makes up the learning community. Siemens (2007) added that learning is a continual process which can occur in different settings including communities of practice, personal networks and work place task.

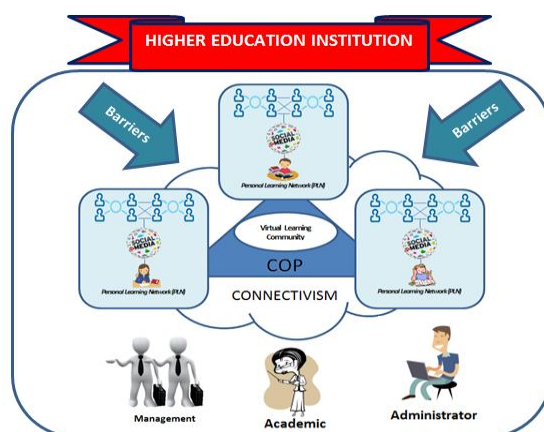


Figure 1. Proposed Conceptual Model

The conceptual model in Figure 1 above was developed to guide the research process and interpret the data from within the theoretical context. The conceptual model proposed draws from Community of Practice (CoP) as the building blocks of the virtual learning community for Higher Education Institutions. On the other hand, Connectivism helps students to build their own Personal Learning Network (PLN) which are interconnected to form the virtual learning community within the specific domain or area of study. This PLN is an informal learning platform for students in which they connect, interact and communicate with people, their peers, professionals, etc in their own personal learning environment. Each PLN might be connected to one or more than one virtual learning communities, within or outside the respective institution. These wide

connections of networks enable students to source vast amount of resources that could contribute to the knowledge development activities within each learning community. The effective sharing and sourcing of information in the entire network could be achieved through the connections supported and established via the use of Social Media Technologies (SMTs). SMTs are used as the tools to provide the environment for students to stay connected, to facilitate the growth of the network and to strengthen the community. The adoption of SMTs for teaching and learning activities will not be successful without the support from the top management, academics and administrators of the institution. Identification and clear understanding of the barriers that will refrain the formation of virtual learning community and the use social media are equally crucial to ensure a successful adoption of SMTs in higher education institution. Finally, the conceptual model will be mapped against the students reported interactions to help to understand their engagement process and to help to interpret the data collected.

4. RESEARCH STUDY METHODOLOGY AND CURRENT STATUS

As of April 2013, there are 20 public universities, and 62 private universities, University College, and colleges in Malaysia (www.visachannels.com). Based on the statistics provided by the Ministry of Higher Education Malaysia (www.mohe.gov.my), as of December 2011, there are 383 higher education institutions in Malaysia, and the total enrolments for undergraduate students is 1,049,885. There were 122,517 students enrolled in the Science, Maths and Computing Cluster.

A mixed-method research methodology using a quantitative-qualitative (Quant-Qual) model will be used. Quantitative data is being collected in the first phase in which surveys are being used to collect data from students, academics and administrators from both Informatics and non-informatics undergraduate programs to investigate their support, exposure and use of social media technologies for engagement, teaching and learning. For this study, 180 academics, 300 students and 18 administrators from across 6 different Malaysian higher education institutions (both private and public) will be asked to complete an anonymous survey. Data collection for phase 1 will take place from October to December 2013.

The second phase will involve the collection of qualitative data in which a sample of the same voluntary Informatics academics (30), students (30) and administrators (12) of the institutions will be interviewed to better understand their needs, usage and experiences in using social media technologies for their classes. Observations will also be conducted based on the undergraduate classes identified by the voluntary Informatics academics to better understand how social media technologies are being used for student engagement and teaching and learning. Phase two will be conducted from January to February 2014. The results of the qualitative and quantitative data collection will contribute to this study. A policy analysis framework will be used to examine the current policies being implemented in the higher education institutions sampled.

5. CONCLUSION

Higher education in the 21st-Century is in the process of change. Students in this generation are heavily exposed to digital technologies and the Internet. The extensive use of the Internet and social media has the potential to offer new types of student engagement and educational settings. The use of social media in higher education is becoming critical as the use of these tools and technologies has been part and parcel of current student's lifestyles. Higher education institutions should take this opportunity to harness these technologies that are already integrated into students' daily lives to design an innovative and creative education environment that will enhance and improve their learning experiences. Siemens (2007, para. 6) states: "... our institutions need to change because of the increasing complexity of society and globalization. Schools and universities play a dual role: accommodating learner's method and mode of learning and transforming learners and preparing them to function in the world that is unfolding". Research is showing that social media can be supportive of student learning, but there is limited knowledge on how it is being used and the outcomes of using it within educational settings. There is wide range of social media usage in educational settings now being reported, but many issues are still unexamined. Limited studies have been focusing on the educators' readiness, acceptance or refusal in integrating social media into their courses, the

perceived effectiveness of the tools and student outcomes for their learning. The central outcome of this research will be the development of a design framework that will be used as a guide for Malaysian Higher Education Institutions and Informatics academics to engage students using Social Media Technologies (SMTs) in creating effective learning communities for Informatics Programs.

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