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ACADEMIC USE OF SOCIAL MEDIA TECHNOLOGIES AS AN INTEGRAL ELEMENT OF INFORMATICS PROGRAM DELIVERY IN MALAYSIA

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ABSTRACT

Higher education institutions are currently examining how the current emerging technologies and social media applications can be integrated with the appropriate teaching pedagogies adopted by higher education institutions to provide students with learning experiences that take advantage of these new affordances. Due to the continuous and pervasive exposure to emerging technologies, it is being claimed that students in this generation tend to behave and learn differently from the previous generations. The technologies used to support their learning must be able to help them to find the right content for their learning, connect them with the right people, and to motivate or incentivize them to learn (Vassileva, 2008). The study reported here sought to investigate the digital status of Informatics academics who teach in undergraduate programs in Malaysia, their engagement with Social Media Technologies (SMTs) for teaching and learning activities in class, and the challenges that they face in integrating SMTs into their classes. Informatics programs are technological-oriented in nature; hence students and academics themselves would arguably be quite adept at using SMTs. The study has indicated that the use of these technologies by Malaysian academics is very much focused on individual academic initiatives, with communication as the key use of the technologies and this use is very limited.

KEYWORDS

Social Media Technologies (SMTs), Social Media, Academics, Informatics Programs, Higher Education Institutions

1. INTRODUCTION

Higher Education in the 21st Century is heavily driven by digital technology as it plays the role as a catalyst for pedagogical change and engagement (Lim, Agostinho, Harper and Chicharo, 2013). A significant amount of literature is now appearing arguing that technology is changing learners with terms like 'digital natives' (Prensky 2001) gaining prominence, and authors such as Coates (2007) arguing that these 'millennial learners' learn in different ways to their predecessors. Most young people in modern societies, both Western and Eastern, make routine use of the Internet and email, text messaging and social software, we are seeing evidence that their familiarity with these forms of communication are being carried over into their learning. Personal web pages, blogs, podcasts, instant messaging, chat spaces, twitter and wikis are changing the creation of information. Social software, facilitated by Web 2.0 is allowing participation in online communities that define and share the information they need for themselves. Personal mobile and wireless devices are increasingly integrated with the global computer network to provide seamless, location-independent access to information services

This paper reports specifically on an investigation of the acceptance, exposure and engagement of social media technologies by academics teaching in Malaysia Undergraduate Informatics Programs. In essence the paper is one in a sequence of reports on a larger study. Aspects of this work on students' engagement with Social Media Technologies (SMTs) such as Twitter, Facebook, Ning, etc. for teaching and learning in Informatics undergraduate programs in Malaysia have previously been reported in (Lim 2013; Lim, Agostinho, Harper and Chicharo 2013; Lim, Agostinho, Harper and Chicharo 2014).

SMTs have great potential to create the learner-centered environments which fit the learning approaches of the digital natives in this 21st Century. Since students in this digital era have the advantage of having access to digital devices and digital content, the question then is how can they make full use of these advantages to support and enhance their learning experience.

Cullen, Hadjivassiliou, Hamilton, Kelleher, Sommerlad, and Stem (2002) cited by Harper, Lockyer, Bennett, Agostinho, and Jones (2011) argued, "Governments worldwide have started to implement policies within which learning has been explicitly identified as the main catalyst for economic competitiveness and growth" (p.12). They added that many countries have also moved towards supporting academics in incorporating digital technologies as part of the teaching and learning tools. The Malaysian government sees education as a major plank in the development of the country and has aspirations to become an education hub in South East Asia. This will require its education system to move toward modern pedagogies including the effective use of technology to support and supplement learning settings.

One of the current challenges facing higher education institutions is how social media can be used effectively to integrate the current teaching and learning pedagogies to give students a more effective learning experience. The subsequent challenge would be how to encourage and support academics to explore, consider and design their courses that make use of SMTs as a tool to enhance the teaching and learning activities in class. Most research reported to date has focused on the quantitative data collected from universities in United States and Australia (Deborah Lupton 2014, Babson Survey Research Group and Pearson 2013, JISC 2009) in which the use of SMTs in teaching and learning are more mature. In Malaysia, especially in the field of Informatics, very little research has been reported on educator's perception and usage of SMTs to support teaching and learning activities. Shittu, Madarsha and Tunku Ahmad (2011), have called for more research to examine how SMTs are perceived and accepted by both students and educators in Malaysia.

Walking into a classroom today, academics could see more than half of their students focusing on their use of smart-phones, tables, laptops and other digital devices. Asking students to put aside their gadgets and concentrate on direct instruction in the class is a real challenge to most educators. Many educators are now willing to embark on the use of social media software for their courses in order to enhance students' learning experiences. Minocha, Schroeder and Schneider (2011) have reported that educators play a vital role in determining the success of social media implementation in higher education institutions. In the Malaysian context, currently social media initiatives are educators' own initiatives instead of institution wide initiatives. However, as the education market becomes more competitive and higher education institutions become more aggressive in standing out among the others in adoption of innovative teaching and learning pedagogy, the question now is shall SMTs initiatives be made compulsory by institutions or shall it be left at the discretion of the educator's initiative and creativity?

2. RESEARCH STUDY METHODOLOGY AND CURRENT STATUS

This study sought to develop an understanding of the adoption and use of social media by academics to engage students in Informatics programs in Malaysian higher education contexts. This study employed a mixed-method research methodology with a significant survey research component. A Mixed-method research methodology was considered to be most appropriate for this study as it allowed the authors to gather multiple forms of data from diverse audiences such as educators, administrators and students. The area of study is relatively new and both empirical and descriptive data will be needed to address the research questions because of the lack of underlying understanding of the use of SMTs in higher education.

The study focused on collecting and analyzing qualitative and quantitative data to better understand this type of methodology will help to answer questions that cannot be answered by qualitative or quantitative methods alone (Creswell, 2003). For this study, a Mixed Method Sequential Transformative Research Strategy based on a QUAN $\rightarrow$ Qual model was used in the data collection process. This strategy has two distinct data collection phases in which the main priority or emphasis was given to the quantitative phase, while the results from the qualitative data collection will be used to further informed the secondary data collection (Creswell, 2003). The Transformative Research Strategy has a theoretical lens overlaying the sequential procedures to guide the study (Lim et. al., 2013). In this QUAN $\rightarrow$ Qual model, quantitative data collection of data involved anonymous online questionnaires which were collected from students, educators and administrators from both Informatics and non-informatics programs in Malaysia to investigate their exposure and use of social media technologies for engagement, teaching and learning.

Subsequently, the data collection process continued through collection of qualitative of data in which the same voluntary Informatics educators, students and administrator of the institutions were interviewed to better understand their needs, usage and experiences in using social media technologies for their classes. Observations on the use of SMTs were also conducted based on the classes identified by the voluntary Informatics educators to better understand how social media technologies were being used for teaching and learning.

3. ANALYSIS OF THE RESULTS

In total, there were 38 Informatics educators and 33 Non-Informatics educators who responded to the online questionnaire. From the analysis, there was a slight difference in terms of the ownership and use of SMTs by educators from Informatics and non-Informatics background. Informatics respondent's ownership of smartphone and digital tablets was slightly higher (about 20%) compared to Non-Informatics respondents. In addition, the time spent to go on-line with the digital devices by the Informatics group was also 50% higher compared to the non-Informatics group. One explanation might be the age gap between the two groups of respondents (the majority of Informatics respondents belong to the age group of 31-40, while for non-Informatics respondents, the majority were from the age group of 41-50), in which the younger educators might be more receptive towards the exploring new technologies. In addition, it might be due to the disciplines involved by the Informatics group in which there are lots of involvement and exposures to technologies due to the nature of the evolving trend. Thus, the likelihood of Informatics educators spending longer hours (about 50% more) compared to the non-Informatics educators is justifiable since the preparation for teaching itself involves technologies and the Internet. Despite the differences in terms of the ownership and exposures, the percentage of respondents using SMTs for academic purpose and the categories of SMTs used are closely matched. The only difference was the ranking of the most preferred SMTs used and how SMTs were being used for teaching and learning activities with their students. 81.8% of the Informatics educators said they used SMTs for assignment or project collaboration and sharing of documents, while the non-Informatics educators said they were using it for knowledge or information sharing (90%). The most preferred SMTs used by Informatics educators for teaching and learning activities were Facebook, Dropbox, YouTube, Whats App, and Skype, while non-Informatics educators preferred YouTube, Facebook, Wikis, Blogs, and Dropbox. 21% of the respondents claimed that they have not been using SMTs for academic purpose in class. More than 50% of these respondents attributed this non-use to the concern about privacy issues as many academics would prefer to separate work from their personal context and 25% claimed that they were not interested in the use of SMTs, and they perceived SMTs as an informal interaction tool, thus not suitable for academic purposes.

In the qualitative data collection, 10 out of the 38 Informatics academics who responded to the online survey earlier participated in the semi-structured interview sessions. They were asked to describe the differences between students in pre-social media era with students who are highly exposed to social media now. All of them believed that Informatics students in this social media era tend to learn in a faster speed compared to students in the pre-social media era, arguing they could easily gain access to large amounts of resources online. They do not have to wait too long to get the answers to their problems as they could get it within a very short period of time after they posted their problem to the social networking websites. In addition, there are many free Massive Open Online Courses (MOOCS) which are made available via Coursera, edX, iversity, etc. that could help them to gain additional knowledge outside the classroom. This also leads to the fact that students in the social media era tend to rely more on Internet resources instead of reading from their textbooks. In the classroom, students appeared to expect more interesting learning environment from their instructors as their attention span is shorter and they easily get distracted by the social media.

All respondents were quite new to the use of social media for academic purpose. They mainly use social media as a communication tools to connect to their students and to provide additional consultation online. So far, none of them used social media for classroom activities that involve assessment. They prefer to use the official learning management system provided by their institution as a formal tool for teaching and learning activities and deemed social media to be too informal for that purpose.

When asked about their views on why social media is not popularly used by academics in Malaysia higher education institutions especially in the Informatics discipline, the reasons given were the use of social media in classes increase their workload as they have to re-design their activities to fit the use of social media, extension of their consultation hours beyond normal working time, unfamiliarity with the social media tools and how to incorporate it to teaching and learning activities, perception on social media tool as informal tool and the distraction that it will cause to students, and the issue of privacy and security when social media is used for academic purpose.

4. KEY FINDINGS AND 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 educational settings. The use of social media in higher education is essential as the use of these tools and technologies have been part and parcel of 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. However, this initiative should be taken one step at a time and should not be rushed into. It has to be properly planned as this initiative might have great impact on the educators. Educators play a very important role in ensuring the efficient and sustainable usage of the Social Media Technologies.

The study has reflected that many of the educators in Malaysia especially in the field of Informatics have not effectively used SMTs for teaching and learning activities in class. So far, they have been using SMTs just as a communication tool to connect to their students. From the study, the top three SMTs used by the Informatics academics are Facebook, Dropbox and YouTube. Surprisingly, Twitter, which is popularly used by many educators in other countries as an instructional tool (Yakin and Tinmaz, 2013; Lewis and Rush, 2013; Birnholtz, Hancock, and Retelny, 2013; Szapkiw and Szapkiw, 2011) was not used by educators in Malaysia. Many educators perceived SMTs as an informal tool and thus, not too appropriate for academic activities. In addition, the unfamiliarity with the tools might also contribute to the lack of confidence to integrate SMTs to the teaching and learning activities.

Embarking on SMTs for teaching and learning in class is a big decision to be made by educators as it involves many issues that need to be considered and resolved. Some of the issues include the increase in their workload in designing or integrating SMTs to the curriculum; familiarity with the various SMTs, its functionalities and applicability to the courses taught; possible extension of their consultation hour to beyond office hour; lack of control over SMTs in the public domain; technological related issues such availability of Wi-Fi and strong network bandwidth in the institution; student's active participation and engagement in the collaborative activities; and student's willingness to share resources in the virtual communities. It is therefore critical for higher education institutions to bear in mind that the initiative to integrate social media into teaching and learning should not be forced on educators but should be considered as an institution-wide initiative as it doesn't only involve the vast number of social media applications available that could be easily tapped, but also needs to accommodate the changing role of educators' in a broader context and the issues that surrounded them. In the end, educators will still be the driving force for determining the success of implementation.

This paper reports on academic use of SMTs in the teaching of Informatics programs in Malaysian higher education, one aspect of a broader study. The outcomes of this component of the study will inform the next phase of the study in the development a design framework for implementing social media as supporting tools for student engagement and teaching and learning in higher education institutions in Malaysia.

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