Social Media Adoption in Higher Education: A Case Study of Universiti Utara Malaysia

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Graphical abstract
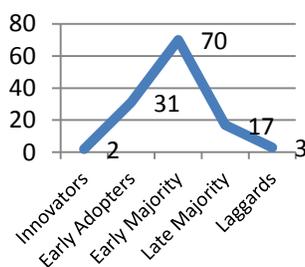
Abstract

The use of social media within higher learning institute has resulted positive impacts on students engagement in teaching and learning activities. Current studies have acknowledged the importance of social media as one of the facilitating tools that promotes active participations among students. Although higher learning institution is introduce to new innovation, but when it comes to adopting they are always considered as late adopter. Thus, these studies examine the level of social media usage among lecturers for teaching purposes. Besides that, this study also examines the motives and barriers that hinder lecturers from using social media for teaching purposes. This study adopts a quantitative research method approach. The finding of this research found that 70% of UUM lecturers used social media for teaching purposes and most of them are categorized as early adopters.

Keywords: Social media, adoption, higher institution

1.0 INTRODUCTION

The advancement of technologies for the past 10 years has dramatically changed the way people communicate and interact between each other. It helps people to communicate with each other using various channels of communication platform. Besides increasing communication ability, information communication technology (ICT) has provided better opportunity for people to learn and get better education. The use of ICT has extended the teaching and learning beyond the four walls of classroom. Recently, researchers are giving more attention towards examining the use of social media in supporting teaching activities. In this study, social media refers to a collection of Internet website services that support collaboration between people, building a community using online platform and sharing of information [1]. Social media emphasizes the use of Internet as a channel for communication, collaboration, and creative expression by people [2]. There are many social media platformsavailable for teaching and learning purposes such as web forums, blogs, social networking platforms, social bookmarking sites, and content sharing sites.

The use of social media in higher learning education is very important, as it is able to promote better participation from students. Social media act as a supporting platform that provides students to informally interact with not only lecturers but also fellow friends beyond their formal learning hours [3]. According to [3], social media can help students to be more proactive and participate in class activities. This vibrant interaction can prevent teaching activities from become boring. A study by [4] indicated that through social media students are able to achieve better grades as it promotes informal

learning and at the same time increase student engagement in collaborative learning.

In addition, social media is also important to facilitate collaborative learning when group members are geographically separated. Using social media students are able to work together without being in the same room at the same time. Besides that, the synchronize nature of most of social media platforms can help students retrieved the conversations posted within the application and allow them to go through the discussions at their own time. Furthermore, through social media, students are able to get first hand opinion or review from experts that participated within their collaborative learning network. For instance, [5] explained that using YouTube students are able to interact with an expert that shares their knowledge through recorded video.

2.0 PROBLEM STATEMENT

Despite universities are exposed to new technologies and innovations (i.e., social media), but when it comes to adopting them, universities are labeled as laggard [6] and to some extend they are late adopters [8]. According to [7], laggard is defined as users who are skeptical about changes and usage of new innovations.

Students will not be enthusiastic to use social media for learning purposes if their lecturers are not integrating social media platforms in their teaching activities [9]. A recent study by [10] found that most of the students hope their educators or lecturers use social media in teaching activities.

Although previous studies have acknowledged the importance of social media for teaching purposes, the understanding about its adoption level among lecturers at higher learning institution is very limited [11] especially in Malaysia. Previous studies that examined this topic are more directed towards presenting the percentage, demographic analysis of lecturers using social media for teaching purposes [12]. To the best of our knowledge, there is no study that focuses on analyzing the level of social media adoption among lecturers in higher institution. Understanding the level of social media adoption is important because it can help university administrative design suitable strategies to promote better social media usage among lecturers.

Furthermorebased on the literature analysis, there is a limited understanding on what are the drivers and barriers that influence social media adoption among lecturers in higher education institution. Understanding the drivers and barriers that influence social media adoption is important as it can help university capitalized the full potential of social media in helping lecturer deliver better learning experiences. Not only that, social media is also capable to promote dynamic teaching activities where this platform is important to support vibrant interactions between lecturers and students.

Therefore, this study aims to: 1) examine the level of social media adoption among lecturers in higher institution and 2) examine the drivers and barriers that influence lecturer's decision to adopt social media for teaching purposes.

3.0LITERATURE REVIEW

3.1 Social Media

Social media refers to the use of virtual communities and network to interact between people [13]. People use digital communication to communicate and interact between them without having to meet each other face-to-face. Social media allows people to create, share or exchange information and ideas with their friends or everybody virtually [14]. People will be able to share their knowledge and experience with other people from all over the world just by sharing it virtually in social media sites.

3.2 Types of Social Media

There are six types of social media site that is available over the Internet. They are: social network site, social bookmarking, social news, media sharing, micro blogging and web blog and forum [15]. Social networking is the most popular social media sites used by teenagers and adults people. For example, Facebook, YouTube, blog and Wikipedia provide a huge amount of information in any type of material that mostly can be accessed for free. Table 1 shows the examples of social media platform being used in teaching activities.

3.3 Social Media for Teaching Purposes

[16] and[17] stated that social media is an important ICT tool that can be used to support learning activities. Social media technology is considered as a supporting mechanism that is useful to enhance face-to-face learning outside the classroom [18]. Not only that, it's easy to use characteristics can help both lecturers and students to easily familiarize its technological functionalities. Besides that, social media can be used as a collaborative learning platform where it allows collaboration on a bigger scale compared to the use of traditional media (e.g., e-mail or learning management systems) [19]. Not only that, using social media it enables lecturers and students to exchange and share information in real time.

Social media has emerged as a highly useful personal communication technology that can give many advantages if being used in higher education [20]. Lecturers can use social media as a platform to communicate with their students as long it a professional communication. Putting the responsibility to student's shoulders to learn using social media technology was made students succeeding beyond

expectations [21]. Students can get a lot of benefits by using YouTube, one of the most popular social media sites, to learning some knowledge by watching videos from other expert or professional for free and without any time frame.

According to [21] integrating the use of social media in classroom activities can help lecturers to prepare their teaching activities more efficiently. An informal discussion before the class start can help students to prepare themselves. Not only that, based on student's feedback lecturers are able to have initial ideas on their students understanding on certain topics that they are going to teach. The use of social media in teaching activities can also give positive affect on collaborative learning and at the same time improve students' academic performance [12].

Table 1 Examples of social media platformbeingused in teaching activities

Name	Function
Facebook	Improve communication and collaboration with lecturers by enabling less formal communication. Sharing information and reviews works with peers or lecturers.
Twitter	Sharing information, news, and knowledge.
YouTube	Search for videos from the expert under specific topics to give lesson in more effective way.
LinkedIn	Social network websites for business and professional networking.
Wordpress	Blogging platform to share information or experience with others.
Google Plus	Life sharing site that include video, message, and image.
Flickr	Photo sharing websites that contain quality photo from experts.
Wikipedia	Online encyclopedias that provide many reliable information.

3.4 Level of Technology Usage

Adoption means a person do something new and different than what they had do previously [7]. The important key to IS adoption is the person must perceive the new idea or product as something new or innovative. Adoption of new innovation or idea does not happen simultaneously in an organization; it is a process of some people that adopt innovations over the others. Adoption of innovations could happen entirely in an organization if it could be promoted to the others in the population. It is important to understand the level of technology usage to determine whether a user will adopt innovations or hinder the adoption of innovations [7].

Higher rates on Innovators and Early Adopter in adopter categorization of innovations could occur if the innovations was routinely utilized and colleagues take their roles in making the innovation useful [22].

According to Roger's Diffusion and Innovation Theory, user behavior to adopt technology innovation can be categorized into five categories [7] and they are: laggards, late majority, early majority, early adopters, and innovators. Figure 1 illustrates the level of technology adoption among users.

This study adopts Roger's categories of innovation in order to examine the level of social media adoption among lecturers in higher education institution. For this study, lecturers from Universiti Utara Malaysia (UUM) were selected as sample for the case study. This university is selected over other public universities in Malaysia because: 1) this study is funded by UUM case study research grants. Thus the focus is given to UUM; and 2) to get involvement from all academic rank is sometimes difficult. Since the researchers are from UUM, it might help provide better representation of sample for this study.
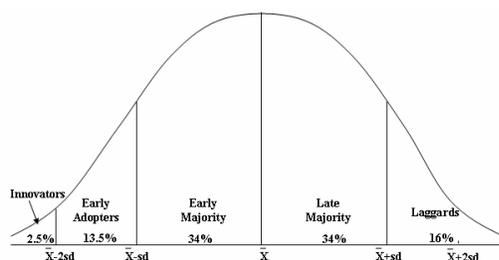

Figure 1 Level of technology adoption (Source: [7])

4.0 RESEARCH METHOD

4.1 Sampling and Data Collection

In UUM there are fourteen faculties which mainly focus on management domain. The fourteen faculties are: School of Computing, School of Education & Modern Language, School of International Studies, School of Government, School of Economics, Finance & Banking, School of Accountancy, School of Law, School of Business Management, School of Islamic Business, School of Multimedia & Technology Development, School of Quantitative Sciences, School of Social Development, School of Technology Management & Logistics and School of Tourism, Hospitality & Environmental Management.In this university there are 1200 academic staffs with four main academic ranks – Professor, Associate Professor, Senior lecturer and Lecturer. The number of academic staff varies according to their academic rank.

   Thus, in order to get an even representation of academic staff population, stratified random sampling approach is administered. The sampling frame is based on list of academic staff names gathered from university's Registrar Office. The name list was stratified based on their academic rank and then where randomly selected. A number of 125 academic staffs were selected from each stratum. A total of 600 academic members were randomly selected. Their email address information was gathered and invitation emails were sent to each of selected academic staff. The invitation email explained the aim of this study and also provide link to the online survey.

   Data for this study were collected using an online survey technique. The online survey was administered using Google Forms. The respondents were given 2 weeks to reply the survey.In total, the online survey was viewed 457 times. However only 155 surveys were answered and 123 data were complete and can be usedfor data analysis.

5.0 RESULTS

From 123 respondents who participated in this study, 87 respondents (70.7%) use social media for teaching purposes and 36 respondents (29.3%) did not used social media for teaching purposes. The 36 respondents who did not use social media for teaching purposes were asked to answer an open ended survey. These open ended questions asked about what hinder them from using social media for teaching purposes. Overall, this study managed to; gathered data from academic staffs from all fourteen faculties. It also managed to collect data from respondents from all academic rank.Table 2 shows the demographic information of the respondents.

Base on the survey finding, majority of the respondents (56%) were female and 44% of the respondents were male.Majority of the respondents were age between 36 to 40 years old (37.4%), 20.3% age between 41 to 45 years old, 13% age between 31 to 35 years old, 15.4% age between 46 to 50 years old, 12.1% age above 50 years old, and 1.8% age below 30 years old.

   As for academic qualification, 81.3% of the respondents have PhD, 17.8% have Master degree, and 0.9% of the respondents have Bachelor degree. Meanwhile, 64.2% of the respondents are Senior lecturer, followed by 17.8% of the respondents were Lecturer, 14.6% of the respondents were Associate Professor and 3.4% were Professors. In term of teaching experiences, 46.3% of the respondents have teaching experience between 11 to 15 years, 28.4%, below 10 years, 4.8% between 16 to 20 years, 19.6% between 21 to 30 years, and 0.9% with teaching experience more than 30 years.

   Based on the results, there are two popular activities conducted by UUM lecturers used social media for teaching purposes. They are: 1) upload lecture notes (26.5%) and 2) conduct discussions with students outside of lecture time (26.5%). This is then followed by updating students with new class information and activities (25.5%). UUM lecturers also used social media to conduct online teaching by engaging students withprofessional from industry (11.5%). During this activity, lecturer usually act as moderators to help students exchange idea and opinion related to subject matter. Further analysis shows that most of the professionals were friends of the lecturer. They used their personal connections to help students understand the subject matter better

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Table 2 Demographic statistics of respondents

Category	Type	Percentage
Gender	Male	44%
	Female	56%
Age	Below 25 years	0.9%
	26 -30 years	0.9%
	31 - 35 years	13.0%
	36 – 40 years	37.4%
	41 – 45 years	20.3%
	46 – 50 years	15.4%
	51 – 55 years	8.1%
	Above 56 years	4.0%
Qualification	Bachelor	0.9%
	Master	17.8%
	PhD	81.3%
Position	Professor	3.4%
	Associate Professor	14.6%
	Senior Lecturer	64.2%
	Lecturer	17.8%
Teaching experience	1 - 5 years	13.8%
	6 - 10 years	14.6%
	11 - 15 years	46.3%
	16 – 20 years;	4.8%
	21 – 25 years	11.4%
	26 – 30 years	8.2%
	More than 30 years	0.9%

From the analysis YouTube and Facebook wereidentified as the most popular social media sites being used by most of UUM lecturers.It is then followed by Wikipedia, LinkedIn, WhatsApp, Edmodo, Twitter, Flickr, and Pallet. The analysis also shows that 42.5% of UUM lecturers used social media once a week for their teaching activities followed by 26.4% of lecturers usedit every day. 12.6% of UUM lecturers used social media once every two weeks, 10.4% used it once every month, and the remaining used it less than once every two weeks (8.1%).

Table 3 Motives using social media in class

Reasons	Percentage
Ease to use	13 (15.0%)
Convenient	25 (28.7%)
Opportunity to connect with students	16 (18.5%)
Trend among lecturer to use social media in teaching activities	4 (4.5%)
Develop student interest during class	28 (32.2%)
Blended teaching method	1 (1.1%)

Table 3 shows the factors that influence UUM lecturers to use social media for teaching purposes. From the analysis 32.2% of the respondents use social media to developstudent's interest on subject matter during class, 28.7% of the respondents feel that social media as a convenient tool to support their teaching activities. The other reasons that influence their decision to use social media for teaching purposes are as follow: 18.5% of the respondents feel using social media it can help connect them with students

outside class session, 15% of the respondents feelthat social media is easy to use, 4.5% of the respondents used social media as it is a trend among lecturers used in teaching activities and 1.1% of the respondents feel it as a blended teaching method.

Meanwhile, 30.6% of UUM lecturers are not using social media because they think their privacy would be invaded if using social media during teaching activities, 27.8% lecturers stated that social media would distract students from educational purposes, 13.9% of the respondents think it requires more time and effort to learn how to use social media for teaching purposes, and remaining of the respondents believe that social media is not suitable to be used for teaching activities.

Based on the respondents' feedback, their level of social media adoption is measured using Scale for Measurement of Individual Innovativeness (SMII) [24].This measurement is designed to explain Roger's level of information system adoption. Adopter scores were calculated to categorize UUM lecturers into 5 main categories of technology adopters. Respondents with a score above 80 represent Innovators category; scores between 69 and 80 represent Early Adopters category; scores between 57 and 68 represent Early Majority category; scores between 46 and 56 represent Late Majority category; and scores below 46 represented Laggards.

Based on the data, 2% of the respondents represented innovators, 31% represented early adopters, 70% represented early majority, 13% represented late majorityand 3% represented laggard. Figure 2 shows the level of social media adoption among lecturers in UUM.
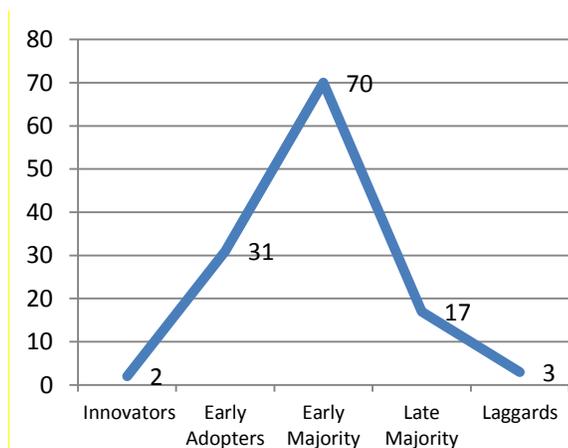

Figure 2 Categories of social media adopter among UUM Lecturers

6.0 CONCLUSIONS

The used of social media in higher education especially for teaching purposes give a huge benefits in term of communication between lecturer and student. According to [12], Facebook can help increase the potential for real-time information and face-to-face conversation that are rich with connection.

Hence, based on the finding of this study, social media have been used by UUM lecturers to informally communicate with their students. Facebook and Youtube were identified as among the most used social media platforms by lecturers in UUM.

In term of adoption level, majority (70%) of UUM lecturers are labeled as early majority. Early majority refers to group of people who have seen the success of social media for teaching purposes and the majority of follower. They are usually slow to adopt ideas but socially aware that others are using the technology and are afraid of rejection by not following others to use the technology (i.e., social media).Users at this level usually will hold back the idea of adopting a technology and will approach the technology with caution. They will observe people who have adopted the technology and will move to the next level after they have seen enough people adopted the technology.

Hence, in order to move the next level, UUM management team need to conduct awareness program on the usefulness of social media for teaching purposes. Hands-on workshop need to be conducted to train UUM lecturers. These workshop need to highlight the full potential of social media for teaching purposes.

Based on the research findings UUM lecturers are driven to use social media for teaching purposes because of its ability to build up student interest on the subject matter. The sharing of learning materials before classes help develop better learning experiences for the students. Not only that, social media is also seen as convenient as most of the students are on Facebook and it is easy to share information or new update with the students. Not only that, social media also provide an opportunity for the lecturer to know more about their students. The information available on the student's account can give lecturer better idea of who are their students.

On the other hands, this study has identified the barriers of UUM lecturers from using this social media for teaching purposes. Among the reasons are: lecturers are afraid that their privacy will be invaded when they start adding their students as friends. In addition, there are also lecturers who viewed the use of social media as a point of distraction and it is not good for students. UUM lecturer's decision not to use social media is also contributed by their lack of competency to operationalize the platform for teaching purposes

6.1. Limitation

The result of this study must be interpreted some caution. The limitations are (1) the results are not generalizeable as this study only collected data from one higher education instituteand (2) the number of lecturers involved in this study wassmall. Better

understanding of social media adoption among lecturers in higher education institution can be obtained if this study is replicated and involved lecturers from other universities in Malaysia. It might be helpful for future research to examine the the determinants factors that influence lecturer's decision to use social media for teaching purposes.

As a conclusion, social media is slowly being accepted as one of the facilitating tools to help lecturers conduct their class more effective and interactive. However, to be able to manipulate the full potential of this platform, awareness on how to operationalize the platform and control the risk of using this platform needs to be provided. Hands on training need to be conducted to educate the majority adopters of lecturers who are interested to use the platform for teaching purposes.

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