

Learning Can Be Fun – Exploring the Intention to Use Social Media among University Students

Vimala Balakrishnan¹

¹ Faculty of Computer Science and Information Technology,
University of Malaya, 50603 Kuala Lumpur, Malaysia

^avimala.balakrishnan@um.edu.my

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Abstract. This paper investigates the use of social media among the youth, especially the perceptions of university students in using social media in learning. To be specific, the paper (i) explores the factors that may affect the use of social media in learning, (ii) investigates if age affects the use of social media in learning, and (iii) determines the social media intention to use predictors for social media experience and frequency. The objectives were accomplished by administering a self-report questionnaire survey which was prepared based on an integrated model – the Social Media Acceptance Model (SMAM). The final sample of students were 300 ($M_{age} = 25.9$, $SD_{age} = 4.28$). The data gathered were analysed using exploratory factor analysis, multivariate analysis and multiple regressions. Regression analysis revealed six significant factors that influence the use of social media in learning, that is, Self, ICT Infrastructure, Social Media Culture, Communication Functionalities, Effort/Influence, and Performance. Participants' age was found to significantly affect Self and Effort/Influence, with the older participants emphasizing more importance on Self and Effort/Influence than the younger ones. Multiple regression analysis revealed Performance to significantly predict social media frequency, indicating that the more benefits one obtains from using social media and the more flexible they are, the more time one spends in using the social media. Similarly, the analysis also revealed ICT Infrastructure and Self to be significant predictors for social media experience. This indicates that when the ICT infrastructure is available and reliable, more people tend to use social media in learning. Self also plays an important role whereby having positive attitude and confidence in using social media results in the participants to use more social media in learning. The findings of the study could prove to be beneficial to academics and also fellow researchers who are interested in using social media to teach or to promote the use of social media in learning. As age was found to affect the intention to use, different tailored approaches may be necessary in using the social media in learning.

1. Introduction

Social networking, listening to music, watching You Tube and surfing, the Internet are some of the popular online activities among students today. Social media such as Facebook, YouTube, Blogs, Google+, MySpace, Wikis, Podcasts, etc. may improve the relationships and communications between people and information they share in an interactive environment [1]. Today youths are media oriented, interactive and creative, and they make use of social media in their daily affairs. As such the

use of social media in schools, colleges and universities would result in better engagement and preparation [1]. Social media enables collaboration, sharing, and participatory practices. According to Rodrigues [1], learning can only be possible through the process of sharing knowledge. Lecturers may involve interaction, activities and dialogue during lecture period, but majority neglect it, and for those who entertain interaction, is mostly for a short period of time and this has prompted some students to show preference to online discussion in comparison to face-to-face interaction [2]. Social networks media is one of the available and suitable platform for both students and lecturers to meet and discuss issues related to academia. The use of online social media increases visibility in students' work and that will aid in improving social interactions with their lecturers and peers [1].

Studies on the use of social media among students are many, and results indicate mixed feelings among students and lecturers. For example, a study revealed that 88% of students admitted that they enjoyed interacting with their lecturers on the Facebook and only 18% admitted feeling uneasy with their lecturers on their friends list in Facebook [3]. In contrast, another study found that although 77% of faculty members engaged in personal uses of social media, only 4% reported using Facebook in class, suggesting that the faculty members may not be ready to engage with students via social media [4]. The educational sector today is very much geared towards "student-centered" learning approach, which is basically an approach to education focusing on the needs of the students. As social media is popular among the students, it would be interesting to explore if they are open to the idea of using the media as part of their learning activities. The current study was therefore undertaken to investigate the factors that may affect the use of social media in learning among university students. The specific goals of this paper are to *first*, explore the factors that affect the use of social media in learning, *second*, to determine if age affects the use of social media in learning and *third*, to determine the social media intention to use predictors for social media experience and social media frequency.

The remainder of the paper is structured as follows: the next section elaborates on the related work, followed by the research methodology which briefly explains the theories, variables and framework used in the study. The results and discussion follows next, before the paper is concluded.

2. Related work

Social media can serve as a teaching agent, for instance with problem-based learning [5, 6], and it also helps in improving relationships between people [5]. People tend to seek assistance of others who are domain experts, who are willing to contribute in problem solving and also can be reached easily [7]. Additionally, social interactions play a vital role during web search as pointed out by other researchers as many information seekers need assistance when searching for information [7].

According to Lerman [8], social media play a vital role in information spreading, searching, marketing, and influence discovery. Furthermore, other reasons given by the users for joining social media include entertainment, enjoyment, social support and finding friends [5]. It was also discovered that in online environment, many users apply face-to-face communication skills and further stated that frequent informal communications with students can enhance social presence in learning. Replying to emails, engaging in discussions, and direct communication with students can boost their morale. [9].

A study on the use of Facebook reported that extreme use of Facebook combined with learner's feeling of social belonging makes the students perform better academically [10]. A survey conducted in the United States (US) indicated that students share educational knowledge in social networks, with 60% of the students claimed to use social networks to discuss educational topics, and 50% said they discuss schoolwork matters only [11]. Use of social media is also believed to help student's social skills, resolve conflicts and improve reading and writing skills. On the other hand, social media such as YouTube enables the sharing of academic related materials in a form of video clips. There is no better way of understanding and exploring information than in pictorial form. When materials are

designed in visual form, students will easily understand the message and can also keep it for the benefit of other students. Students can also share related materials obtained from other sources by uploading it to their YouTube channels.

3. Research methodology

3.1 Theories and research framework

Fig. 1 shows the research framework used in this study - Social Media Acceptance Model (SMAM) which is based on the Unified Theory of Acceptance and Use of Technology [12] and also E-learning Acceptance Model [13]. UTAUT states that user acceptance and usage of technology is determined by four key factors - performance expectancy (i.e. perceived usefulness, extrinsic motivation, relative advantage, job-fit and outcome expectation), effort expectancy (i.e. perceived ease of use and complexity), social influence (subjective norm and image) and facilitating conditions (perceived behavioural control and compatibility). The E-learning Acceptance Model (ELAM) is also based on UTAUT, however it also includes factors that are related to e-learning. To be precise ELAM focused on performance expectancy (i.e. perceived usefulness, interactivity and flexibility), effort expectancy (ease of learning, perceived ease of use and self-efficacy), social influence (subjective norm and image) and facilitating conditions (institutional support). Using these two models as benchmarks, we integrated some of the key factors that are deemed appropriate to be used to determine students' intention to use social media in learning. To be specific, the factors are performance expectancy (perceived usefulness and flexibility), effort expectancy (perceived ease of use, ease of learning), self (social media efficacy and enjoyment), communication functionalities (collaboration, sharing and interaction), social influence (peer influence and social media culture) and ICT infrastructure. Apart from adapting some of these factors, we also added other factors that were deemed appropriate. Studies have begun employing cultural parameters to measure technology acceptances, with the majority employing Hofstede's framework and cultural dimensions. Therefore, the present study adapts culture into social media culture. Prior research has also showed enjoyment as a determinant of behavioral intention [14, 15], which is classified as a type of intrinsic motivation (i.e. "the performance of an activity for no apparent reinforcement other than the process of performing the activity per se."). Therefore, enjoyment was included as a determinant for self. Social media allows its users to communicate, interact, collaborate with experts and share materials, hence these were included as determinants for functionalities.

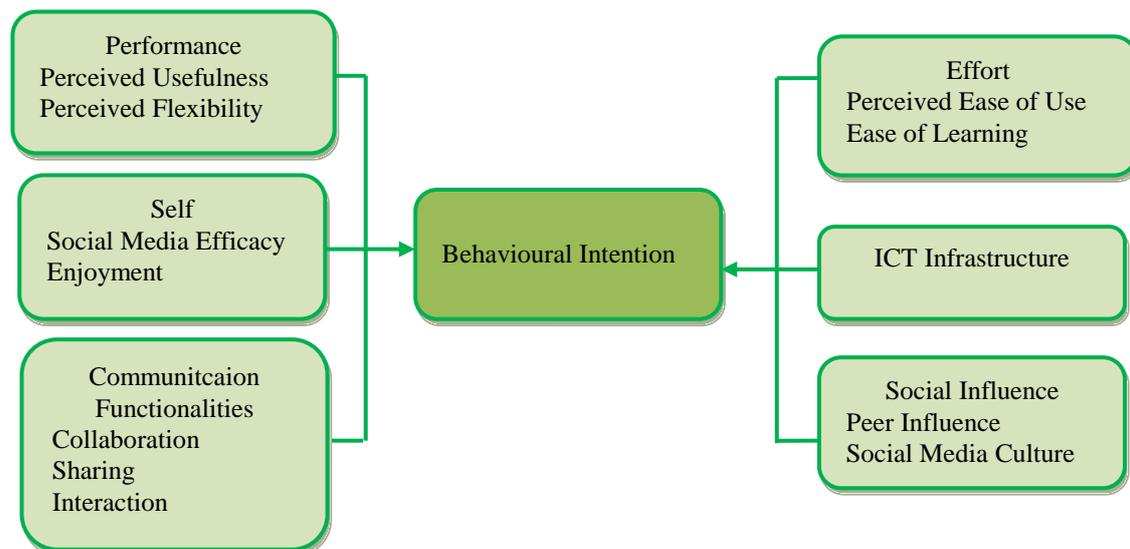


Fig. 1. Research Framework

3.2 Respondents

A total of 300 under-graduates and post-graduates responded to our survey (Table 1). The respondents were balanced in terms of the gender segregation with approximately 53% being male, and the remaining 47% were females. The respondents were aged between 18 – 42 years old ($M_{age} = 25.9$, $SD_{age} = 4.28$). They were then grouped into three categories as shown in Table 1. The majority of them (74.3%) were between 21 – 29 years old, followed by those more than 30 (17.3%) and less than 20 (8.3%). As for social media experience, slightly over 50% of the respondents had more than 10 years of experiences whereas the remaining 46.7% had less than 10 years of experiences. Finally, it can also be noted that the majority of the respondents in this study were active social media users, that is, using the media for more than an hour daily (76.3%).

Table 1. Demographic profiles of the respondents.

Items	Groups	Frequency	Percentage
Gender	Male	142	47.3
	Female	158	52.7
Age	Less than 20	25	8.3
	21 – 29	223	74.3
	More than 30	52	17.3
Social Media Experience	Less than 10 years	140	46.7
	More than 10 years	160	53.3
Social Media Frequency	Less than 30 minutes	18	6
	31 – 60 minutes	53	17.7
	More than 1 hour	229	76.3

3.3 Questionnaire

A questionnaire addressing all the identified factors was prepared and piloted among a group of students. No major changes were made to the questionnaire as overall it was well-received and understood. The questionnaire had two major sections: Section A gathered the demographic details of the respondents such as age, gender, years of using social media etc., whereas Section B contained statements related to the respondents' perceptions in using social media in learning. There were a total of 46 items in Section B, all measured using a five-point Likert scale item (1 – strongly disagree; 5 – strongly agree).

4. Results and Discussion

4.1 Factors affecting intention to use social media in learning

In order to achieve the first objective, which is to explore the factors that may affect the use of social media in learning, Exploratory Factor Analysis (EFA) was administered. A Cronbach's alpha test was used to evaluate the internal consistency of the survey items. The EFA yielded six factors explaining a total variance of 68.83% (eigenvalues more than 1), as depicted in Table 2.

Table 2. EFA factors for intention to use social media

Factors	Eigenvalues	Variance	Cronbach's Alpha
Self	20.70	16.57	0.931
Performance	3.02	15.52	0.930
Communication Functionalities	2.34	12.53	0.911
Effort/Influence	2.22	10.77	0.896
ICT Infrastructure	1.62	7.28	0.839
Social Media Culture	1.03	6.16	0.809

From the table, it can be noted that factors such as Self, Performance, Communication Functionalities and Effort/Influence contributed to a higher variance (i.e. more than 10%) to intention to use social media in learning among the sample in this study. The Cronbach's alpha values for all the factors were more than 0.8, clearly indicating high internal consistencies among the survey items.

4.2 The effect of age on intention to use social media in learning

Multivariate analysis was conducted to determine if age has any effect on intention to use social media in learning. When age was used as the main effect, it was found to significantly affect Self ($F(2, 296) = 4.224, p = 0.016$) and Effort/Influence ($F(2, 296) = 5.386, p = 0.005$). Tukey post-hoc was administered for further analysis, and results indicate significant differences between respondents who were less than 20 years old and those more than 30 for Self ($p = 0.014$) and also Effort/Influence ($p = 0.04; p = 0.05$). Table 3 depicts the findings of the Tukey analysis. Age had no significant effect on the rest of the factors.

Table 3. Tukey post-hoc analysis

Dependent Variable		Multiple Comparisons				
		(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	<i>p</i>
Self	< 20	21 - 29		.2313258	.20871490	.510
		> 30		-.4290135	.15242233	.014*
	21 - 29	< 20		-.2313258	.20871490	.510
		> 30		-.1976877	.24078263	.690
	> 30	< 20		.4290135	.15242233	.014*
		21 - 29		-.1976877	.24078263	.690
Effort/Influence	< 20	21 - 29		-.1094026	.20792256	.859
		> 30		-.5855190	.23986856	.040*
	21 - 29	< 20		.1094026	.20792256	.859
		> 30		-.4761165	.15184369	.005*
	> 30	< 20		.5855190	.23986856	.040*
		21 - 29		.4761165	.15184369	.005*

* - significant at $p < 0.05$

The negative mean differences indicate that those who are older emphasize more on Self and Effort/Influence than those in their twenties. This is probably because older respondents may lack skill, knowledge and even self-confidence when it comes to using social media compared to the younger respondents who are more social media savvy. Therefore, the older respondents may emphasize more on their Self than the younger ones. Similarly, they also had a higher level of agreements in terms of effort and influences, meaning they feel that it is important for social media to be easy to use and learn if one wishes to use it in learning. A similar sentiment is shown towards peer influence whereby they agree that families and friends influences matter in using social media in learning. The younger users however had lower level agreements as they are already adept in using social media, and many other cool technological tools.

4.3 The predictors for social media frequency and experience

Multiple regressions were carried out to determine the predictors for social media experience and frequency. In both the regressions, social media experience and frequency were used as the dependent variable, whereas the six factors were the independent variables.

Table 4. Predictors for social media experience

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
Constant	1.532	.028		53.783	.000
Self	.058	.029	.115	2.019	.044*
Performance	-.047	.029	-.094	-1.642	.102
Communication Functionalities	-.002	.029	-.005	-.084	.933
Effort/Influence	.027	.029	.055	.961	.337
ICT Infrastructure	.068	.029	.135	2.370	.018*
Social Media Culture	.037	.029	.073	1.280	.202

* - significant at $p < 0.05$, $F(6, 292) = 2.493$, $p = 0.023$

Table 4 shows Self ($\beta = 0.115$, $t = 2.019$, $p = 0.044$) and ICT Infrastructure ($\beta = 0.135$, $t = 2.370$, $p = 0.018$) to significantly predict social media experience. The positive associations between these variables show that the more confident and skillful a person is, the more the social media experience he/she has. Similarly, the better the ICT facilities the more people tend to use social media. The overall model above was also found to be significant ($F(6, 292) = 2.493$, $p = 0.023$). The majority of the respondents in this study are in their twenties; therefore they would have started using social media much earlier. This generation is also considered to be more technological savvy, and hence their levels of knowledge and skill would be higher in using social media. This indicates that they are confident in using social media resulting in more experience. Similarly, social media is totally dependent on the Internet, meaning a reliable and proper Internet connection is a must. This probably explains why ICT Infrastructure predicts social media experience.

Finally, Table 5 shows that only Performance significantly predicts social media frequency ($\beta = 0.130$, $t = 2.250$, $p = 0.025$). The overall model was found to be significant $F(6, 292) = 1.931$, $p = 0.037$. The association between Performance and social media frequency indicates that the more benefits one obtains from social media, and the more flexible it is, the more people tend to use it for learning. It is a common knowledge that people use tools, devices or services for their benefits obtained. Social media such as Facebook and YouTube allows people to communicate, share and discuss ideas, materials etc., therefore the frequency of usage increases. Additionally, these social media are also flexible - allowing the users to filter their friends, updates, and materials, among others and thus, people enjoy using the media more often.

Table 5. Predictors for social media frequency

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
Constant	2.702	.033		81.431	.000
Self	-.020	.033	-.035	-.601	.548
Performance	.075	.033	.130	2.250	.025*
Communication Functionalities	-.001	.033	-.001	-.017	.986
Effort/Influence	-.012	.033	-.021	-.369	.713
ICT Infrastructure	.016	.033	.028	.485	.628
Social Media Culture	-.039	.033	-.068	-1.169	.244

* - significant at $p < 0.05$, $F(6, 292) = 1.931$, $p = 0.037$.

5. Conclusion

This study was carried out to explore the factors that affect the use of social media in learning among university students. Six factors were revealed, namely, Self, Performance, Effort/Influence, Communication Functionalities, ICT Infrastructure and also Social Media Culture. Age was found to significantly affect Self and Effort/Influence. Tukey post-hoc analysis revealed the older respondents to have emphasized more on Self and Effort/Influence than the younger ones. This indicates that the younger users are more knowledgeable and confident in using social media in learning. They also perceived it is easy to use social media as opposed to the older users. Performance was found to significantly predict social media frequency, whilst ICT Infrastructure and Self significantly predict social media experience. Overall it can be concluded that self-confidence coupled with the myriad benefits of social media encourages people to use it more in learning, provided a reliable ICT infrastructure is available.

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