FACTORS INFLUENCING SOCIAL MEDIA USAGE FOR LEARNING AND TEACHING PURPOSES

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ABSTRACT

In this study, adoption of Social Media for learning and teaching purposes (SL/T) has been analyzed based on a conceptual research model. Factors included in this study have been categorized under two empirical factors, namely, socio-demographic and utilitarian. A survey approach has been adopted for this purpose and the least square regression techniques is used to investigate the relationships among the variables included in the research model. The test results indicate that, except perceived awareness (PAW), all the remaining factors have significant effect on the actual usage of SL/T.

Keywords: Social media, learning, teaching, socio-demographic, utilitarian, regression.

INTRODUCTION

Social media has made a significant impact on different aspects of society over the past few decades especially in the way people communicate and share information. Through video sharing sites, wikis, forums, etc., social networking sites (SNS) provide an active, free and open platform for teaching and learning to any interested user regardless of their socio-demographic characteristics such as age or gender (Huang, Hood, & Yoo, 2013; Osatuyi, 2013). Furthermore, this platform provides the perfect medium for personalized informal learning in the domains that the user is interested in, and increases the motivation to continue the learning process.(Bull et al., 2008).

Yet, differences exist on SNS utilization in terms of users' sociodemographic attributes as well as their attitudes and behaviour towards social media platforms. For example, even though no major differences exist between different genders in the Internet usage, women prefer to use social media more whereas men prefer to use other Internet sources in larger numbers (Kim, Sin, & Tsai, 2014). Furthermore, in their study, Malesky and Peters (2012) show that significant disagreement exists between the faculty and students of higher-education instutitions regarding their interaction on SNSs, largely dependent on their beliefs and attitudes.

Even though there have been numerous research on the usage of social media, there have been only a few studies on the acceptance of social media tools in teaching and learning (Echeng & Usoro, 2014). In his research, Tess (2013) concludes that most of the previous studies have concentrated on the effectiveness of social media, but that there should be more empirical studies on this domain. In consequence, this study aims to empirically investigate the adoption of social media for learning and teaching from different socio-demographic viewpoints and perceptions. Age, gender and position constitute the socio-demographic perspectives, whereas the perceived ease of use, usefulness, social pressure and awareness are included in the utilitarian empirical category.

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The results of the study can provide feedback to the SNS providers in developing new social media platforms and to educators in incorporating social media into their formal learning environments The remainder of the paper is organized as follows. The next section explains the hypotheses development in terms of the socio-demographic and utilitarian categories followed by the research method. Then, the descriptive and test results are explained followed by the conclusion.

HYPOTHESES DEVELOPMENT

The present study was performed among academics and students from higher education institutions to investigate the impact of decision (independent) variables regarding the adoption of social media for learning and teaching purposes (SL/T). The decision variables are grouped under two empirical categories namely, socio-demographic and utilitarian (Figure 1). The empirical group, socio-demographic, contains gender, age and position, whereas perceived ease of use, perceived usefulness, perceived social pressure and perceived awareness constitute the utilitarian group. The justification of the factors in the analysis and their corresponding hypotheses are provided below.
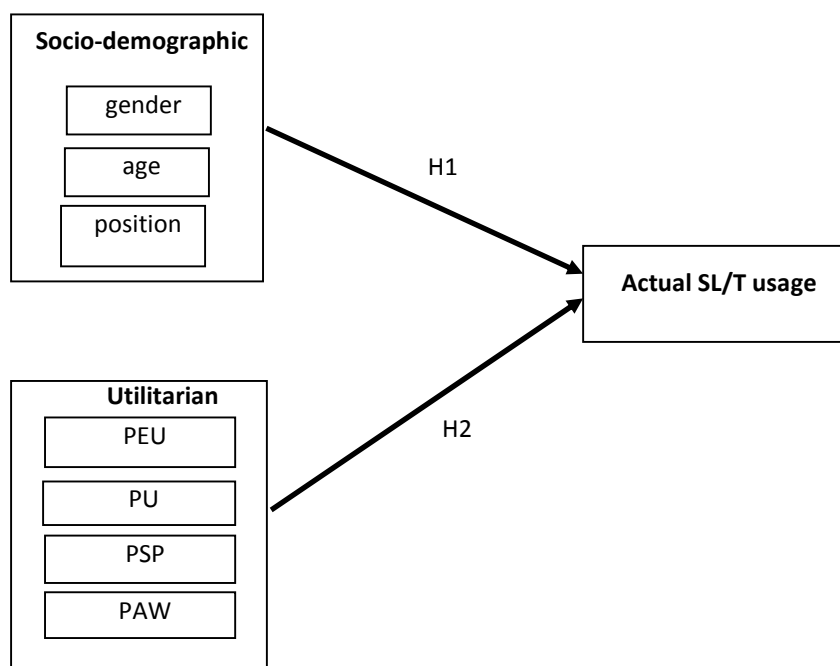

Figure 1: Research Model

Socio-demographic

The role of the Internet has been increasing in the daily life of many people around the globe and the studies on the Internet widely use individuals' socio-demographic characteristics in explaining the nature of usage. For example, in an earlier study, Taylor, Zhu, Dekkers and Marshall (2003) reported that Internet usage pattern may have different dispersions for different gender groups. According to Kalmus, Realo and Siibak (2011) age, experience, education level are the significant predictors of adoption of social media. On the other hand, the nature of Internet has changed drastically with the rising popularity of social media especially during the last decade. This phenomena has attracted the attention of higher education institutions. More specifically, Calisir, Atahan and Saracoglu (2013) pointed that differences may be significantly explained by the demographic characteristics for the adoption of Social Network Sites (SNS). This means demographic characteristics should be taken into account, as the nature and consequences of SNS usage could be potentially different for different demographic groups. However, the SNS trend is a relatively new one and little research has been

reported on its acceptance and use in education . Furthermore, available literature generally recognizes the obstacles and challenges for using SL/T (Elases et al., 2016) but does not pay much attention on the socio-demographic differences in higher education. Therefore we propose the following hypotheses.

$H1_1$: Socio-demographic factor gender does not have any influence on Actual Usage of SL/T (AU)

$H1_2$: Socio-demographic factor age does not have any influence on Actual Usage of SL/T (AU)

$H1_3$: Socio-demographic factor position does not have any influence on Actual Usage of SL/T (AU)

Utilitarian

The measures perceived ease of use and perceived usefulness have been extensively used in research related to acceptance of technoloy (Davis, 1989; Malhotra, Heine, & Grover, 2001). With regard to the ease of use and usefulness technology dimensions, more autonomous users seem to find the social networking platform more difficult to use (Lane & Coleman, 2012). According to Lane and Coleman (2012) one's personal traits are related to one's perceptions of technology usefulness and ease of use, and ultimately how intensely the SN platforms are used. This also seems to be logical for the usage os SN platforms for teaching and learning purposes. Therefore we propose following hypotheses.

$H2_1$: The utilitarian factor Perceived Ease of Use (PEU) does not have any influence on Actual Usage of SL/T (AU)

$H2_2$: The utilitarian factor Perceived Usefullness (PU) does not have any influence on Actual Usage of SL/T (AU)

Available empirical research has shown that awareness goes along with attitude and "positive attitude towards ICT is widely recognized as a necessary condition for the effective implementation" (Lane & Coleman, 2012; Woodrow, 1990). In their study, Michaelidou, Siamagka, and Christodoulides (2011) also support this view by stating that awareness is the most prominent reason for adopting SNS, which justifies the increased importance of awareness as a reason for using SNS for educational purposes. According to previous empirical studies, SNS use behaviour tend to be motivated by various aspects of factors including social ones (Chin, Evans, Choo, & Tan, 2015). Mazman and Usluel (2009) studied individuals' usage purposes of social networks with a focus on the possible differences between genders and reported subjective norms to be one of the social factors having significant indirect influence on adoption of SNS. Furthermore, according to Theory of Reasoned Action, humans are rational enough for their attitudes and subjective norm (i.e. social pressure) affect their behavioral intention, which in turn results with a high correlation to actual behavior (Fishbein & Ajzen, 1975). This implies, influence of subjective norm on usage of SNS is worth investigating. Against this backdrop, the below hypotheses are proposed.

$H2_3$: The utilitarian factor Perceived Social Pressure (PSP) does not have any influence on Actual Usage of SL/T (AU)

$H2_4$: The utilitarian factor Perceived Awareness (PAW) does not have any influence on Actual Usage of SL/T (AU)

RESEARCH METHOD

This study uses a systematic analysis to investigate the impact of socio-demographic and utilitarian factors on adoption of SL/T. A survey approach was adopted for this purpose and the data was obtained by means of a questionnaire corresponding to the proposed hypotheses in the research model. A group of academics and students were interviewed to finalize the questionnaire. The questionnaire contains 12 items (Table 1). Eight of these items were grouped under 4 constructs. Each one of the four single items and four constructs reflects a discrete variable. Table 1 gives these variables along with their definitions. All of the factors in the utilitarian empirical group were measured by a 5 point Likert-type scale (Table 1). The sample was limited to groups of academics and students from universities since these groups are believed to have higher concern on the issues of usage of social media for educational purposes. A total of 142 completed survey questionnaires were obtained.

Table 1: Summary of Research Questions and Constructs/Variables

Construct/ Variable	Item
Gender	What is your gender? (Male, female)
Age	What is your age (years)? (21- 30, 31-40, 41-50, >50, 61 or more)
Position	What is your position at the university? (academic, student)
Perceived Ease of Use (PEU)	Do you think that it is easy for you to use SNS for your learning/teaching activities?
	Do you think that you never face problems in using SNS for your learning/teaching activities?
Perceived Usefulness (PU)	Do you think that using SL/T improves your work?
	Do you think that using SL/T meets your requirements?
Perceived Social Pressure (PSP)	Do you think most people who are important to you expect you to use SNS for your learning/teaching activities?
	Do you think most people who are important to you use SNS for their learning/teaching activities?
Perceived AWareness (PAW)	Do you think you are familiar with using social media for learning/teaching?
	Do you think you are familiar with using social media?
Actual Usage (AU)	Do you currently use SNS for learning/teaching purposes?

The independent variables were categorized into two empirical factors: (i) socio-demographic (gender, age, position); and (ii) utilitarian (Perceived Ease of Use (PEU), Perceived Usefulness (PU), Perceived Social Pressure (PSP), Perceived Awareness (PAW)). Fig. 1 demonstrates the model for research.

Least square regression technique was utilized to predict and explain the relationships between the dependent and independent variables.

Descriptive Results

Table 2: Profile of Respondents

Variable-description	Academics (N=57)				Students (N=85)			
	N	Percent.	Mean	SD	N	Percent.	Mean	SD
Gender		100.0	0.056	0.423		100.0	0.052	0.481
1=male	44	77.1			55	64.7		
2=female	13	22.9			30	35.3		
Age		100.0	0.127	0.957		100.0	0.625	0.068
1= <31	6	10.5			74	87.1		
2= 31-40	19	33.3			7	8.2		
3= 41-50	21	36.9			3	3.5		
4= >50	11	19.3			1	1.2		
Actual use of SL/T		100.0	0.187	1.410		100.0	0.145	1.341
1=str. disagree	16	18.1			10	11.8		
2=disagree	12	21.1			14	16.5		
3=average	12	21.1			20	23.5		
4=agree	10	17.5			19	22.3		
5=str. agree	7	12.2			22	25.9		

The number of male respondents appears to be slightly more (69.8%) in this study. Almost half (49.5%) of the male respondents were observed to be below 31 years of age and those between 31-40 and 41-50 years of age constitute 20.2% and 19.2% respectively. For female respondents these percentages were observed to be 72.1, 14.0, and 11.6. The distribution of gender shows similar nature for academics and students. However, as expected, the dispersion of age is diverse for academics and students. Interestingly, a close inspection of data showed that female usage of social media sites for educational purposes is more than the males. The percentage of males using SL/T more than average is 32.3%, whereas this percentage is higher for females (54.8%) and chi-square test results showed that this distribution is significant (Chi-Square = 9.535; DF = 4; P-Value = 0.049) in terms of gender. However, chi-square test results do not show a significant relationship (Chi-Square = 4.870; DF = 4; P-Value = 0.301) for the dispersion of academics' and students' SL/T usage.

Test Results

The proposed hypotheses were tested using the linear least square regression modeling approach and the results are given in Table 3.

Table 3: Test Results

Emp. Factor			Hyp.	Test results	
	Indep. var/const.	Dep.. Var.		Coeff.	p-val[*]
Socio_Demographics					
	Gender	AU	$H1_1$	0.495	0.048*
	Age	AU	$H1_2$	-0.368	0.002*
	Position	AU	$H1_3$	0.039	0.000*
Utilitarian					
	PEU	AU	$H2_1$	0.145	0.010*
	PU	AU	$H2_2$	0.244	0.000*
	PSP	AU	$H2_3$	0.144	0.007*
	PAW	AU	$H2_4$	0.074	0.096

* indicate statistically significant at 5%.

Socio-Demographic: The tests results for this empirical category are as follows:

- Interestingly, the regression results (Table 3) reveal significance for the variable "gender" (coeff= 0.495, p-value=0.048) and hence $H1_1$ is rejected. This means, there is significant difference between males and females regarding the actual usage of social media sites for learning and teaching purposes in higher education. Considering positive coefficient for the variable gender, this interestingly means, females intend to use SNS more for educational purposes in higher education.

- As expected, examining p-values in Table 3 shows that the significance for the variable "age" is of similar nature to gender (coeff= -0.368, p-value=0.002). In other words, there is significant age diversity for "Actual Usage" of social media towards teaching and learning, and therefore $H1_2$ is rejected. This means different age groups have different views regarding the adoption of social media for educational purposes. It is important to note here that the younger respondents have more tendencies to use SL/T since the coefficient was observed to be negative.

- Surprisingly, inspection of Table 3 shows rejection of $H1_3$ because we observe strong significance for the variable "position" (coeff= 0.039, p-value=0.000). In other words, academics and students have different attitudes towards using SNS for learning and teaching. This can also be interpreted as, based on the positive coefficient found for "position", students show more tendency to adopt social media for learning and teaching purposes in higher education institutions.

Utilitarian: The tests results for utilitarian empirical category are given below.

- Interestingly, the regression results (Table 3) reveal significance for the variable "PEU" (coeff=0.145, p-value=0.010) and hence $H2_1$ is rejected. This means, there is significant difference in perceptions of users towards easiness regarding the actual usage of social media sites for learning and teaching purposes in

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higher education. Considering the positive coefficient for the variable PEU, this interestingly means that the respondents, who find it easier, intend to use SNS more for educational purposes in higher education institutions.

- As expected, examining p-values in Table 3 shows that the significance for the variable "PU" is of similar nature to PEU (coeff=0.244, p-value=0.000). In other words, there is significant diversity among the respondents who find usage of SNS to be useful or not useful for teaching and learning purposes, and therefore $H2_2$ is rejected. This can also be interpreted as perception of usefulness regarding SL/T has significant influence on its usage. It is important to note here that the respondents, who find using SNS easier show more intention for its adoption for educational purposes in higher education institutions since the coefficient was observed to be positive.

- Surprisingly, inspection of Table 3 also shows rejection of $H2_3$ because we observe strong significance for the variable "PSP" (coeff=0.144, p-value=0.007). Therefore we reject $H2_3$. In other words, perceived social pressure has significant positive influence on using SNS for learning and teaching. The more respondents feel social pressure the more tendency they show for using SL/T. This can also be interpreted as, based on positive coefficient found for "position", academicians and students perception about others' views has significant importance regarding the adoption of social media for learning and teaching purposes in higher education institutions.

- The only utilitarian variable, which does not have a significant impact on the adoption of social media sites for learning and teaching purposes in higher education institutions is "PAW" (coeff=0.074, p-value=0.096). This means test results supports the corresponding hypothesis and therefore we accept $H2_4$. In other words, the level of awareness regarding the usage of SNS for educational purposes does not influence its adoption.

CONCLUSION

This study uses a systematic analysis to investigate the impact of socio-demographic and utilitarian factors on the adoption of SL/T. The analyses show that all the socio-demographic factors (i.e. gender, age and position) considered in the analysis were found to have significant influence on the users behavior in adopting social media sites for learning and teaching purposes in higher education institutions. Test results also indicate that except for perceived awareness, all the remaining factors (i.e. perceived ease of use, perceived usefulness and perceived social pressure) in the utilitarian category were found to have significant influence on the adoption of SNS for learning and teaching purposes in higher education institutions.

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