Students' Intention to Use Social Media for Academic Purposes: A Study of South Eastern University of Sri Lanka

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Abstract. In education, social media is increasingly being used to promote creative instruction. This quantitative study utilized the theoretical foundation of social constructivism, connectivism and the Unified Theory of Acceptance and Use of Technology model 2 (UTAUT 2). Research questions investigated the effect of 6 UTAUT2 predictors on behavioural intention on social media and the impact of behavioural intention on the use of social media behaviour. The research used a convenience sample of 291 students from South Eastern University, Eastern Province, Sri Lanka. Survey data was analysed using descriptive statistics, measurement model and structural model, and hypothesis testing. The findings revealed that performance expectancy, social influence, facilitating conditions, hedonic motivation and habit have a significant effect on behavioural intention on social media whilst effort expectancy has a negative effect on behaviour, and that behavioural intention significantly influences usage behaviour. Better understanding may promote social media adoption in education, and thus enhance learning for students at South Eastern University of Sri Lanka.

Keywords: Social Media, Students' Intention, Academic Purpose, UTAUT, Sri Lanka

1   Introduction

The topic of this study is students' intention to use social media for academic purposes, focusing specifically on the educational context in South Eastern University of Sri Lanka. Today, social media is deemed as the primary medium of communication amongst students particularly those in higher education institutions, gaining widespread acceptance and usage. Social media and all other novel technologies have substantially changed the local educational innovation landscape, with social media in particular facilitating innovative instruction and improving the 21st century skills needed by students worldwide [1]. Social media is widely utilized as a communication tool in learning. For online and direct classrooms, course management systems and virtual groups are being integrated with mixed media tools such as web links as well as video and audio materials [2].

Due to governmental interventions, the usage of social media among students in South Eastern University is highly detached from the network environment, much unlike the situation for their counterparts in Western countries. Past studies did not sufficiently address the matter of social media opinion and usage; hence, this current paper aims to address that gap by focusing on the topic of social media usage among students in South Eastern

University. By collecting and analysing data in an empirical manner, this current work intends to enrich the body of knowledge concerning social media acceptance and usage in local educational milieus specifically in South Eastern University. A more in-depth insight of social media acceptance amongst students in the selected university may improve its overall usage.

2   Literature Review

This study investigates the influencing factors of social media acceptance and usage amongst South Eastern University students. Undergraduate students around the world are increasingly using social media by accessing it via computers, smart phones, iPads and other mediums. The latest medium is via smart watches. With rapidly changing technologies, there are always new ways developed to conveniently access social media.

Apart from widening their knowledge via active interactions, social media can also facilitate students in their educational activities albeit certain accompanying challenges. Students use some specific media, but academics fail to update the source material needed to promote their learning skills [3]. For educational purposes, social media can innovatively facilitate students' learning. Students need to learn how to use it effectively, beyond just for messaging and obtaining the latest news. Student collaborations in terms of quality and rate can be improved with the usage of social media. It facilitates effective interactions and information sharing via numerous popular platforms including Instagram and Facebook [4]. The extent to which students, instructors and institutions achieve their educational objectives is measured by their academic performance.

Effective use of social software support students [5]. In her study, she said that most students now use social media to connect with friends. But they also had a great opportunity to learn and engage with a lot of things via social media. She also said that most of the part-time students who receive course tips and additional information on social media. She uses the Technology Acceptance Model (TAM) to collect all data and information from students. At the end of her research, she outlined some suggestions for effective social media usage by teachers and students for academic performance and engagement purposes.

Social networking has a meaningful effect on students' educational programs [6]. The authors also highlighted the unconventional ways that students use certain social media sites. The study suggested that universities and colleges in Malaysia would find it useful to take advantage of these sites for educational purposes, which can positively impact their academic performance. Another researcher emphasized that students are highly driven by social media. To some extent, it completely impacts the lives of college students who rely on grades. Social media is attractive because it gives university students another world to make friends with and a great way to relieve stress [7]. There is also a need to effectively bridge the usage of social media with academic research. As a result, university students need to think more about the balance of social media and academics.

This current study is built upon the theories of constructivism [8], connectivism [9] as well as the Unified Theory of Acceptance and Use of Technology (UTAUT) model [10]. The UTAUT model served as the foundation for collecting and analysing the quantitative data and the questionnaire. Connectivism provides the basis for theories on social media application in education, whether on its own or along with other relevant theories. Connectivism is considered suitable for studies on social media and social network as it highlights the significant elements of a network environment namely connectivity and communication as well as pattern recognition and creation. A community made up of people who come together for the purpose of sharing information and co-creating knowledge is known as a network

environment. Connectivism of Principles guides social media-based learning and knowledge [11] [12].

Social networking websites focus on more than just one social media platform [13]. According to the author, social networking websites offer contextual link activation. Dinas also explained the relationship between educational activities and link learning theory on social networking websites, as well as summarized some of the complexities concerning the connectivity of social networking websites and proposed the need for extended studies on the effects of connectivism. The author suggested that Connectionism exemplifies superior education via the usage of social networking websites. Among the examples of educational social networking websites are LinkedIn-Based Course Discussion [14], New Contact Establishment [15] and LinkedIn Knowledge Management.

Constructivism as developed by Vygotsky [8] suggests the complexity of instructional conditions entailing pertinent learning environments and social interactions as well as collaborative learning in teaching methods (group learning), problem scaffolding (students facilitated by teachers in problem solving), public domain hardware (publicly available and Internet-equipped software) and course management tools (software running on the Internet for handling learning activities) [16].

UTAUT2 model: Widely employed for testing technology acceptance and usage in different contexts. Today, there are three UTAUT extensions and integrations: new contextual and organizational applications of UTAUT, new construct additions to the UTAUT model, and inclusion of exogenous predictors [10]

Social media: People worldwide are increasingly becoming dependent on social networking sites and applications. There is a rapid evolution of social media platforms and such developments are affecting a larger portion of the world population [16] [17].

3   Theoretical Framework

This paper used UTAUT2 model to examine social media acceptance and usage among university students in Sri Lanka. UTAUT2 is said to be a novel model that explores this particular model in different technologies and different systems such as the user group. Also, this paper included six factors into the UTAUT2 model to serve as independent variables.

- Performance Expectancy: The extent to which social media usage can help students achieve the benefits of carrying out academic activities.
- Effort expectancy: The degree to which the usage of social media brings benefits.
- Social Influence: The extent to which social influence shapes the behaviours of students.
- Facilitating Condition: Individual perception about the extent to which a technical infrastructure can facilitate the usage of social media.
- Hedonic Motivation: This refers to an individual's fundamental psychological and emotive experiences elicited by individual characteristics and cognitive conditions.
- Habit: This refers to the attitudinal and behavioural link, whereby behavioural intention can determine the behaviour of students.
- Behavioral Intention: The extent to which an individual consciously strategizes to conduct or not conduct certain future behaviours.

In this current work, six out of the seven UTAUT2 model factors are used as the independent variables. Price Value was not included as it did not fit in the research environment. One past research utilizing the UTAUT2 model in educational settings [10] had also excluded Price Value on similar grounds, and had acceptable validity and reliability [18].

In this current study, the dependent variables are behavioural intention and use behaviour. This research hypotheses are shown here;

H1: Performance expectancy has a significant and positive effect on the South Eastern University students' social media usage intention.

H2: Effort expectancy has a significant and positive effect on the South Eastern University students' social media usage intention.

H3: Social influence has a significant and positive effect on the South Eastern University students' social media usage intention.

H4: Facilitating conditions has a significant and positive effect on the South Eastern University students' social media usage intention.

H5: Hedonic motivation significantly and positively affects the South Eastern University students' social media usage intention.

H6: Habit significantly and positively affects the South Eastern University students' social media usage intention.

H7: The behavioural intention of the South Eastern University students to utilize social media significantly and positively affects their usage behaviour towards social media.
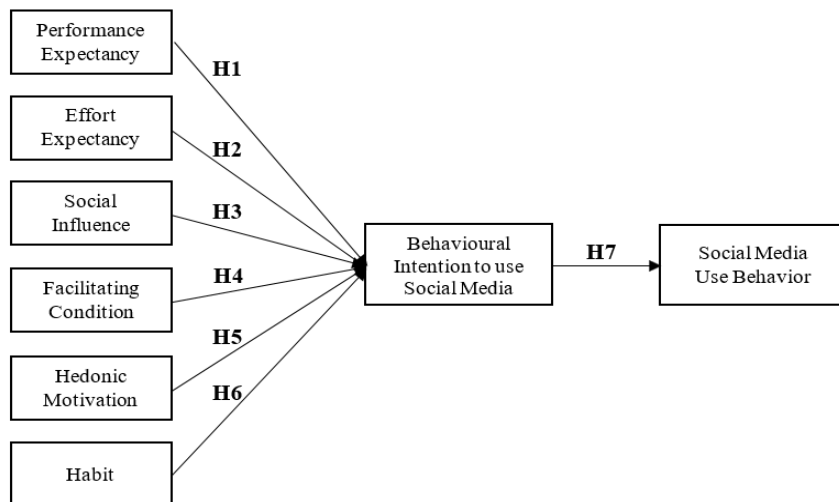
Figure 1. Research model (Adopted from Venkatesh et al. [10])

Based on the foregoing propositions, the model shown in Figure 1 is derived as the conceptual framework.

4   Methodology

The population of this study entailed all the undergraduate university students at South Eastern University of Sri Lanka. They are full-time students studying at the selected university throughout the academic year of 2016-2019. There are 4800 undergraduate university students at South Eastern University. Graduate students were not included. Data was collected from 300 respondents (from six faculties), of which 291 responses were returned. Out of that total,

eight responses were rejected due to being non-engaged or incomplete. Hence, a final count of 283 responses was used for data analysis.

The SmartPLS 3 was used for analysing the collected data. The structural equation modelling (SEM) enables unobservable variables to be studied using the indicator variables via indirect measures [19]. SEM methods are divided into two namely: the covariance-based SEM (CB-SEM) utilized for confirming or rejecting theories, and the partial least squares SEM (PLS-SEM) used for developing theories in exploratory studies [19]. Considering that this paper intends to develop a framework, PLS-SEM is more suitable as the statistical method. PLS-SEM, or PLS path modelling, uses diagrams to visually present the hypotheses and correlations between the variables whilst using the SEM [19].

5   Data Analysis and Findings

5.1   Indicator Reliability

Convergent validity was tested using the composite reliability (CR) and average variance extracted (AVE). The CR findings are presented in Table 1, with values ranging between 0.748 and 0.9 i.e., above the threshold value of 0.70 [20]. The AVE results are also presented in Table 1, with values ranging between 0.692 and 0.773 i.e., also above the cut-off point of 0.5 [19]. Additionally, the Cronbach's alphas values are also above the threshold value of 0.70 [21]. Meanwhile, all the item loadings are also higher than the threshold value of 0.70. Three items were omitted from the list of constructs for having low loading values so as to attain satisfactory values and to enhance the model.

5.2   Convergent Validity

This entails the degree to which a single item denotes the convergence of a construct as compared to other items that measure other constructs [22]. This current analysis assessed the convergent validity of the measurement model by inspecting the value of its average variance extracted (AVE). Constructs with an AVE value approximating 0.5 or greater denotes adequate convergent validity. All the constructs in this study have AVE values of between 0.692 and 0.773 as shown in Table 1, thus suggesting that the measurement model exhibits acceptable convergent validity.

5.3   Discriminant Validity

The discriminant validity of the measurement model is determined via three measures: (1) Fornell and Larcker's criterion [23] i.e., the AVE square root is above the correlations between the measure and all other measures, (2) Heterotrait-Monotrait Ratio i.e., criterion via comparison to the initially established threshold levels, and (3) cross loadings. Acceptable discriminant validity is confirmed for the measurement model if: an indicator has a construct loading greater than that of any other constructs.

Table 1. Construct Reliability Analysis

Construct	Item	Loadings	Cronbach's Alpha	CR	AVE	RHO_A
PE	PE2	0.748	0.888	0.918	0.692	0.893
	PE3	0.85				
	PE4	0.849				
	PE5	0.869				
	PE6	0.839				
EE	EE1	0.794	0.896	0.923	0.707	0.898
	EE2	0.874				
	EE3	0.858				
	EE4	0.8				
	EE5	0.873				
SI	SI1	0.868	0.879	0.917	0.735	0.882
	SI2	0.838				
	SI3	0.897				
	SI4	0.824				
FC	FC1	0.816	0.802	0.882	0.715	0.831
	FC2	0.896				
	FC4	0.823				
HM	HM1	0.861	0.884	0.92	0.743	0.886
	HM2	0.877				
	HM3	0.88				
	HM4	0.829				
Habit	HB1	0.886	0.873	0.912	0.723	0.898
	HB2	0.9				
	HB4	0.793				
	HB5	0.817				
BI	BI1	0.839	0.902	0.932	0.773	0.904
	BI2	0.9				
	BI3	0.881				
	BI4	0.896				
UB	UB1	0.812	0.874	0.914	0.726	0.875
	UB2	0.862				
	UB3	0.872				
	UB4	0.862				

In this analysis, all the AVE square roots are beyond the off-diagonal elements of their respective rows and columns. As shown in Table 2, all the bolded values denote the AVE

square roots whilst the non-bolded values denote all the constructs' inter-correlation values. Table 2 also shows that all the off-diagonal values are less than the AVE square roots thus signifying the fulfilment of the Fornell and Larker criterion.

Table 2. Discriminant validity with the Fornell-Larcker Criterion

Constructs	BI	EE	FC	HB	HM	PE	SI	UB
BI	0.879							
EE	0.612	0.841						
FC	0.542	0.487	0.845					
HB	0.611	0.522	0.476	0.85				
HM	0.646	0.596	0.505	0.549	0.862			
PE	0.602	0.592	0.463	0.533	0.557	0.832		
SI	0.514	0.486	0.424	0.506	0.434	0.403	0.857	
UB	0.854	0.576	0.431	0.482	0.522	0.519	0.421	0.852

*The diagonal denotes the latent variables' AVE square roots and specifies the highest values in any column or row.

On top of the Fornell-Larcker criterion, the Heterotrait-Monotrait Ratio (HTMT) was also used for measuring discriminant validity. The HTMT criterion is applicable by equating it to pre-established threshold levels, for instance, 0.85 [24]. Table 3 presents all the corresponding results whereby all the values, except for UB - BI 0.962, are lower than the 0.85 cut-off value. The said exception is lower than 0.90.

Table 3. Discriminant validity with the Heterotrait-Monotrait Ratio

Constructs	BI	EE	FC	HB	HM	PE	SI
BI							
EE	0.679						
FC	0.625	0.562					
HB	0.673	0.574	0.557				
HM	0.721	0.668	0.589	0.619			
PE	0.671	0.663	0.541	0.598	0.628		
SI	0.578	0.546	0.503	0.573	0.489	0.457	
UB	0.962	0.649	0.497	0.538	0.592	0.587	0.48

The second assessment for discriminant validity involves examining indicators and comparing them to all construct correlations. The assigned construct's factor loading value must be greater in comparison to all the other constructs' loadings. Table 4 presents the cross loadings' output as generated by the SmartPLS 3 algorithm function. All measurement items used in this research have higher loadings for their corresponding latent variables in comparison to that of the other variables.

Table 4. Discriminant Validity with indicator item Cross Loadings

Items	BI	EE	FC	HB	HM	PE	SI	UB
BI2	**0.900**	0.569	0.521	0.577	0.603	0.525	0.482	0.738
BI4	**0.896**	0.565	0.467	0.521	0.583	0.526	0.42	0.791
BI3	**0.881**	0.537	0.476	0.554	0.566	0.571	0.434	0.765
BI1	**0.839**	0.479	0.44	0.495	0.516	0.496	0.475	0.708
EE2	0.537	**0.874**	0.442	0.439	0.567	0.501	0.361	0.513
EE5	0.513	**0.873**	0.419	0.443	0.491	0.521	0.465	0.469
EE3	0.524	**0.858**	0.382	0.409	0.497	0.511	0.436	0.502
EE4	0.532	**0.800**	0.412	0.481	0.52	0.482	0.425	0.497
EE1	0.462	**0.794**	0.387	0.419	0.42	0.473	0.353	0.433
FC2	0.542	0.492	**0.896**	0.48	0.515	0.469	0.368	0.471
FC4	0.43	0.388	**0.823**	0.346	0.345	0.319	0.35	0.33
FC1	0.378	0.331	**0.816**	0.363	0.402	0.37	0.36	0.257
HB2	0.616	0.528	0.428	**0.900**	0.504	0.521	0.462	0.492
HB1	0.562	0.496	0.428	**0.886**	0.483	0.449	0.468	0.45
HB5	0.464	0.407	0.381	**0.817**	0.492	0.462	0.398	0.357
HB4	0.392	0.297	0.377	**0.793**	0.373	0.361	0.378	0.303
HM3	0.592	0.529	0.44	0.49	**0.880**	0.465	0.424	0.452
HM2	0.54	0.553	0.441	0.495	**0.877**	0.504	0.367	0.435
HM1	0.527	0.546	0.394	0.44	**0.861**	0.473	0.36	0.457
HM4	0.562	0.431	0.463	0.466	**0.829**	0.479	0.34	0.453
PE5	0.51	0.528	0.419	0.476	0.473	**0.869**	0.34	0.425
PE3	0.501	0.489	0.381	0.421	0.442	**0.850**	0.324	0.421
PE4	0.539	0.494	0.403	0.474	0.492	**0.849**	0.352	0.452
PE6	0.517	0.528	0.355	0.443	0.492	**0.839**	0.292	0.483
PE2	0.431	0.418	0.369	0.402	0.413	**0.748**	0.378	0.37
SI3	0.449	0.434	0.35	0.443	0.37	0.356	**0.897**	0.385
SI1	0.453	0.408	0.41	0.431	0.336	0.352	**0.868**	0.36
SI2	0.456	0.451	0.392	0.428	0.461	0.372	**0.838**	0.367
SI4	0.401	0.37	0.292	0.432	0.314	0.296	**0.824**	0.329
UB3	0.742	0.478	0.351	0.44	0.443	0.481	0.351	**0.872**
UB2	0.747	0.554	0.406	0.462	0.483	0.44	0.394	**0.862**
UB4	0.732	0.491	0.372	0.364	0.455	0.427	0.309	**0.862**
UB1	0.689	0.437	0.337	0.376	0.393	0.418	0.383	**0.812**

5.4   Evaluation of the Structural Model

The indicators' loadings and weights (path coefficients) were estimated by performing the PLS Algorithm on the model. Next, bootstrapping was performed to assess the structural model's strength using 283 samples. The ensuing sub-sections present the outcomes.

Table 5. Direct relationship for hypothesis testing

	Relationship	Std Beta	Std Error	t-value	P Values	Results
H1	PE -> BI	0.173	0.069	2.521	0.012	Supported
H2	EE -> BI	0.153	0.103	1.433	0.152	Not Supported
H3	SI -> BI	0.113	0.048	2.467	0.014	Supported
H4	FC -> BI	0.129	0.038	3.375	0.001	Supported
H5	HM -> BI	0.241	0.071	3.406	0.001	Supported
H6	HB -> BI	0.188	0.048	3.880	0.001	Supported
H7	BI -> UB	0.855	0.041	20.859	0.001	Supported

According to Table 5, we can come into the conclusion that, the conducted research indicates the following influence placement for the complete students' survey data: The use behaviour has the greatest impact on the Behavioural Intention, the Hedonic Motivation are localized on the second place, followed by Habit on the third place, then in order to Performance Expectancy, Effort Expectancy, Facilitating Condition and Social Influence are respectively classified next places

6   Discussion

Based on the results, the correlation between Performance Expectancy has a major positive impact on the South Eastern University students' intention to use social media is important ($\beta= 0.173$, t= 2.521, p < 0.05), hence the model supports H1. The SEM study also reveals important pathways from social control to behavioural intention ($\beta= 0.113$, t= 2.467, p < 0.05), facilitating condition ($\beta= 0.129$, p < 0.05), hedonic motivation ($\beta= 0.241$, t= 3.406, p < 0.05), and habit ($\beta= 0.188$, t= 3.88, p < 0.05). This means that the layout supports H3, H4, H5 and H6. However, the effort expectancy does not have any substantial paths towards the goal of using social media for learning ($\beta= 0.153$, t= 1.433, p > 0.05). Therefore, the model does not support H2. Finally, however, the association between behavioural intention and use behaviour was found to be important ($\beta= 0.855$, t= 20.859, p<0.05), which suggests that the model supports H7.

The variables of performance expectancy, effort expectancy, hedonic motivation, and habits were revealed to significantly predict behavioural intention [10]. Hence, it is assumed that these structures would have similar correlations in the current study's model. Despite that, effort expectancy was revealed to have no significant correlations with usage intention. And the findings are somewhat at odds with previous literature. However, it is worth noting that the research context differs from preceding research as the structure has been changed to include learning. Which may explain some of the outcome differences.

7 Conclusion

The researcher used the UTAUT 2 model to comprehend the actions of undergraduate students at each of the faculties in South Eastern University in terms of their social media usage intention. Performance expectancy, social influence, facilitating conditions, hedonic motivation and habit were found to have a significant and positive effect on social media usage intention, whilst effort expectancy was revealed to have a negative effect on the same. Social media usage behavioural intention significantly affects actual social media usage. The outcomes revealed further evidence of the applicability of the UTAUT 2 model for technology implementation. Also revealed are other trends including the pervasiveness of social media mobile applications. This study's outcomes offer an understanding of the social media usage trend among the undergraduate students at South Eastern University. Universities, policy, and educational practitioners should use the effects of innovation as a guide for social media usage and education innovation.

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