© Kamla-Raj 2016 PRINT: ISSN 0972-0073 ONLINE: 2456-6802

Social Networking Sites Shaping Behavior

Maria Anjum^{1*}, Mariam Rehman², Hajra Waheed³ and Muhammad Asif Kamran⁴

^{1,2,3}Department of Computer Science, Lahore College for Women University, Lahore, Pakistan ⁴Nuclear Institute for Agriculture and Biology, Faisalabad, Pakistan E-mail: *<maria.anjum@gmail.com>, ²<dr.mrehman13@gmail.com>, ³<w.hajra@gmail.com>, ⁴<agriecorn.niab@gmail.com>

KEYWORDS Technology Acceptance Model (TAM). User Behavior

ABSTRACT User behaviors on Social Networking Sites (SNSs) are being studied largely in terms of intention to use. By employing Technology Adoption Model (TAM), the relation between user behavior and actual use of SNS can be investigated. To investigate the effect of characteristics associated with human behavior on the actual use of SNS by focusing on users having background in Computer Science, a framework was constructed by employing TAM along with external variables. Moreover, hypotheses were formed and evaluation was carried out by conducting statistical analysis. The results concluded that social influence, perceived control and hedonism are the elements found to be positively associated with the SNS use that represents user resistance for information sharing. It was also found that privacy is the only concern common in users having a background in computer science.

INTRODUCTION

Social Networking Sites (SNS) are virtual communities that enable interaction and communication among people by providing a venue for profile creation, information sharing in the form of posts, uploading of photos and statuses (Dogruer et al. 2011; Hughes et al. 2012). The use of SNS is an emerging trend that is gaining immense popularity in today's world. In a decade, many new SNSs have emerged notable among these are Facebook, Twitter, MySpace, Google Plus, LinkedIn and Flicker (Qiu et al. 2012; Ku et al. 2013; Bataineh et al. 2015; Mouakket 2015). All of these provide a platform for social interaction and help in maintaining social connections with family, friends or even with the colleagues at workplace.

Because of the growing trend of SNS use at personal and professional level, the study of SNS user behavior has become an important area of research. Studies conducted to evaluate SNS user behavior include both positive and negative trends associated with SNS usage. Kirschner and Karpinski (2010) conducted a study on Facebook use and concluded that students spend more time in chatting, commenting and communicating with their friends. In addition, teachers and students befriending each other on SNS can have a negative influence on teachers' credibility. Facebook bullying is another norm that is taking place in the society especially common among students (Kwan and Skoric 2012). SNSs are an open and easy to access medium with poor privacy concerns (Yang et al. 2012; Ku et al. 2013), involving self-disclosure (Handel and Shklovski 2012; Kaplan and Haenlein 2010; Hollenbaugh and Ferris 2013; Shen 2015). Apart from youth and teenagers, employees and professionals also use SNSs for professional interaction (Archambault and Grudin 2012).

The motivational factors that derive SNS use include social consciousness, acquiring social presence (Hew 2011), avoiding loneliness (Hughes et al. 2012), leisure and entertainment (Xu et al. 2012; Shi et al. 2010; Bataineh et al. 2015; Mouakket 2015), acquiring the feeling of connectedness (Constantinides et al. 2013; Xu et al. 2012; Grieve et al. 2013), extending one's social circle (Kim et al. 2010) and to voice one's opinion (Mangold and Faulds 2009; Kaplan and Haenlein 2010).

In existing literature, various models and behavioral theories are used to explore and understand the influential factors associated with SNS user behavior. The prominent theories discussed include the Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT). Both TPB and TAM are derived from Theory of Reasoned Action (TRA). TAM is adapted from TRA and explains a system's usage behavior particularly in terms of computer usage. TAM explains the adoption and acceptance of a new technology and the subsequent usage behavior.

TAM comprises of two main constructs that is, perceived usefulness (PU) and perceived ease of use (PEOU). The first construct that is, PU is defined in terms of the belief of an individual that using a particular system will aid in improving one's performance. While relating PU to SNS, it can be addressed in terms of the belief of a person that SNS usage will help the individual to socialize, communicate and interact with others. The second construct that is, PEOU is defined in terms of the effort required to use that technology (Davis et al. 1989; Venkatesh and Davis 2000). TAM not only highlights the adoption factors for a technology but is also used to address and predict user behavior (Venkatesh and Bala 2008). TAM partially covers the behavior elements through PU and PEOU. These two constructs form the basis for evaluating a user's intention and attitude to use a technology. Intention can be described as a motivational factor that solidify and strengthen one's decision to enact a particular behavior (Ajzen 1991). In this research, a framework is constructed by employing TAM and features associated with human behavior to evaluate their impact on the actual use of SNS users having background in CS.

The paper is divided into six sections. In the next section, previous work conducted in this area is discussed, section III explains proposed framework, section IV provides analysis performed on the proposed framework, section V presents results and findings, and finally, section VI provides the conclusion.

Proposed Framework and Hypotheses

The proposed framework is developed by employing constructs taken from TAM and elements of user behavior identified from previous studies on SNS (Al-Debei et al. 2013; Bao et al. 2011; Braun 2013; Dhume et al. 2012; Jiaa et al. 2010; Lallmahomed et al. 2013; Lin et al. 2013; Bataineh et al. 2015; Mouakket 2015; Shen 2015). Figure 1 provides the proposed framework and hypothesis.

The study by Venkatesh and Davis (2000) reported that Social Influence (SI) has a significant effect on PU. This effect is moderated by voluntariness of use. SI is an important predictor of usefulness where the technology or system is considered to be mandatory. In systems where usage is on voluntary basis, SI might not prove to be effective. In another study, SI was found to be a significant predictor in SNS adoption (Venkatesh and Davis 2000). Also, it might be an important construct in the initial stages of SNS use. Since, SNS are thought to be addictive, after initial use, the user might like to use it again (Qi and Fu 2011).

Disclosure on SNS is related to both PU and PEOU (Jiaa et al. 2010). Disclosure means the information revealed by an individual on SNS. Disclosure is an individual's own willingness to

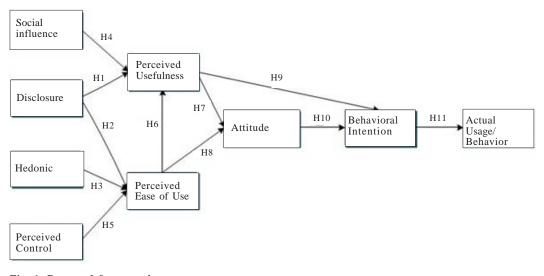


Fig. 1. Proposed framework *Source:* Author

498

SOCIAL NETWORKING SITES SHAPING BEHAVIOR

disclose information on SNS. In the proposed framework, disclosure is taken in terms of trust and information divulged. A user will disclose and share information on SNS only when the site is trustworthy. In few studies, disclosure also has a significant effect on the user's intention to use SNS (Braun 2013; Thomas et al. 2013; Shen 2015).

Hedonic (HDN) is described as fun, pleasure and enjoyment that one experiences while using SNS. PEOU has a significant and positive influence on Hedonism (Jin, 2013). The study describes hedonic behavior in terms of playfulness. Users will enjoy using SNS when an individual perceives it to be easy to use, which will consequently have a positive effect on intention to use SNS (Jin 2013; Lallmahomed et al. 2013; Bataineh et al. 2015; Mouakket 2015).

Perceived Control (PC) is described in terms of privacy like the power and control an individual has over information (Lin et al. 2013). The more control a user feels over shared information, more chances are to disclose information on SNS. Therefore, it is hypothesized that PC will have an impact on the perceived disclosure of a user on SNS. Control is taken in terms of user interface features that SNS provides to control shared information. PC verifies how the interface features compel an individual to disclose and share information on SNS. PC is related to PEOU in terms of how the interface settings impact PEOU.

The four external variables that is, SI, HDN, PC and Disclosure have significant effects on the PU and PEOU of SNS. PU and PEOU form attitudes for SNS that may be positive or negative. Based on this attitude, a person intends to use SNS. This intention subsequently leads to actual behavior (Jiaa et al. 2010).

Disclosure refers to the extent of information that user reveals on SNS. Frequent disclosures are related to the level of trust that a user has on SNS. Further, if users will perceive SNS as useful for interaction or socialization, then they will aspire to disclose information (Jiaa et al. 2010; Shen 2015).

Since, SNS are all about communication and sharing, the level of information revealed depicts a persons' perception about SNS. In this context, the following hypotheses are being formed.

H1: Disclosure on social networking sites will be positively correlated to the perceived usefulness of social networking sites.

The level of information disclosed on a particular SNS is related to ease of use of that SNS. The easier an SNS is to operate and use, the more a user will indulge in sharing one's personal information (Jiaa et al. 2010; Shen 2015). In this scenario, PEOU not only includes the "free of effort" factor but understandability to operate that SNS is also included. Hence, in this context the following hypothesis is put forth.

H2: Disclosure on social networking sites will be positively correlated to the perceived ease of use of social networking sites.

Hedonism is described in terms of the level of enjoyment and pleasure that a user experiences while using a particular system (Van der Heijden 2004; Shen 2015). In this research, the literal meaning of hedonic is perceived in terms of involvement and attachment that is the level of enjoyment or fun that one experiences, which ultimately makes an individual completely involved in its usage. The easier an SNS is to use the more likely a user is to enjoy that experience. Therefore, the following hypothesis is put forward.

H3: Hedonic will be positively associated with the perceived ease of use of social networking sites.

Social influence is defined as the extent to which an individual perceives what others think about using that particular system (Venkatesh et al. 2003; Bataineh et al. 2015; Mouakket 2015). This construct depicts the influence of family, friends and other key people who are using the same technology. A user will consider a system to be useful if his social circle thinks positively about it. In the context of SNS, contradictory results have been found about the impact of social influence. Therefore, there is still a room for research in this context. Hence, it is hypothesized as follows.

H4: Social influence will be positively associated with the perceived usefulness of social networking sites.

Perceived Control (PC) is defined in terms of the level of authority that one has to manage information on SNS (Lin et al. 2013; Bataineh et al. 2015; Mouakket 2015). This construct is specific to SNS and determines the control that one has over information on SNS. In addition, information available on SNS is accessible to all but its customization as well as making it visible to only a specific group, which is the basic theme behind this construct. Moreover, this construct is interlinked with the SNS interface. It is hypothesized that the easier it is to control and manage information on SNS, the more likely it is that users will aspire to use it. Therefore, the relationship is formed as follows.

H5: Perceived control on a social networking site will be positively correlated to the perceived ease of use social networking sites.

Consistent with the previous TAM studies, ease of use of a technology will be positively correlated with its usefulness (Venkatesh and Davis 2000). While discussing in the context of SNS, a social site that is easy to navigate and understand will have a positive impact over its usefulness. Thus, for an SNS the easier the technology is, the more likely it is that user will feel positive towards using that technology. Therefore, the following hypothesis is put forth.

H6: The perceived ease of use of a social networking site will be positively correlated to the perceived usefulness of that social networking site.

Consistent with the previous TAM studies, if a user finds a technology useful then this should proceed towards establishing a positive attitude towards using that technology or system (Davis et al. 1989; Venkatesh and Davis 2000). While mapping in the context of SNS, it can be hypothesized that if users consider SNS to be useful for a particular purpose, then this should lead towards having a positive attitude towards that SNS. Moreover, individual beliefs and perceptions about that network will form an attitude towards the usefulness of that SNS (Phillips and Shipps 2013). Therefore, the relationship is hypothesized as follows.

H7: Increase in perceptions of perceived usefulness of a social networking site will lead to an increasingly positive attitude towards using that social network site.

Considering the relationship between ease of use and attitude in the context of SNS, it can be hypothesized that the easier a user finds an SNS for interaction or communication purposes, the more likely the chances of having a positive attitude of an individual towards adoption of SNS. Therefore, the following hypothesis is put forth.

H8: Increase in perceptions of perceived ease of use of a social networking site will lead to an increasingly positive

attitude towards using social networking sites.

While implementing the actual TAM, perceived usefulness is found to have a significant impact on the intention to use a system or technology (Davis et al. 1989). While reviewing the literature on SNS, perceived usefulness is found to be positively correlated with the behavioral intention of users (Braun 2013). It is hypothesized that the more useful a user feels about SNS about communication, interaction or information sharing, the more likely that the individual will intend to adopt that SNS. Therefore, the following hypothesis is put forth.

H9: Perceived usefulness will have a positive impact on the behavioral intention to use a social networking site.

A positive or negative attitude towards a technology will lead to forming an intention to use that technology (Davis et al. 1989). If users will feel positive for an SNS then this will consequently lead towards forming a strong intention to use that SNS. In addition, the individual beliefs play a significant role in forming one's intention. If a user thinks that SNS is valuable for being socially active then this belief will aspire an individual to use SNS for that particular behavior. Therefore, keeping in mind the subsequent context, the following hypothesis is put forth.

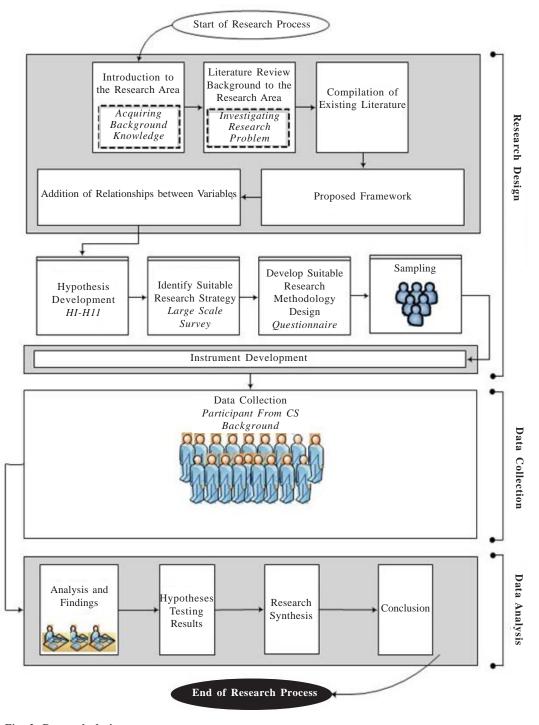
H10: Attitude will have a positive influence on the behavioral intention to use social networking sites.

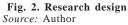
In TAM related studies, behavioral intention is defined as the extent to which a person plans to use or not to use a particular system or technology (Venkatesh and Bala 2008). Moreover, behavioral intention is termed as a precursor of actual behavior and it also envisages technology use (Venkatesh and Bala 2008; Ramayah et al. 2009). Therefore, keeping in mind the subsequent context, behavioral intention towards an SNS predicts its usage. Thus, the following hypothesis is put forward:

H11: Behavioral intention will have a positive influence on the actual use of social networking sites.

RESEARCH METHODOLOGY

The research design followed to conduct this research work is represented in Figure 2.





Data Collection

A sample of 196 participants was collected in order to test the hypotheses. An online questionnaire was prepared using Google Drive. The questionnaire link was sent to the CS professionals, academics and students (at undergraduate, masters and PhD levels) in various institutes, and software companies. Snowball sampling was used to collect responses from target audience. The survey took three weeks, which was conducted in the month of April 2014. The dataset was reduced by removing erroneous, nonsensical and incomplete questionnaires. In the end, a dataset of 155 usable responses was retrieved on which the reliability analysis was performed using SPSS. Finally, regression analysis was carried out to find the influence of independent variables on the dependent variable that is, intention of users to use SNS.

FINDINGS

Descriptive Statistics

Age, gender, education and occupation were the demographics variables defined in the survey. Experience in SNS usage and the SNS used were the two descriptive statistics that denoted the understanding and knowledge of the participants regarding SNS. Table 1 provides a description of the demographics of valid responses. Participants were experienced users of SNS. Forty-five percent of the sample had been using SNS for 4-6 years whereas thirty-seven percent had an experience of 1-3 years. Only five percent had been using SNS for less than a year. This shows that the sample population had an experience in using SNS.

Measurement Model

Regression analysis was performed to validate the hypotheses. In addition, reliability analysis was performed to check the validity of the instrument used in this research study. Cronbach's α is used for accurate and reliable measuring of the constructs. In addition, standards for Cronbach's α have been defined according to which reliability of the data is assessed. Table 2 represents the reliability of the constructs. A description of the number of items defined in each constructs that is the number of survey instruments that were reflected for that construct.

Demographic factors	Frequ- ency	Respon- ses in percen- tage (%)
Gender		
Male	59	39
Female	96	61
Age (Years)		
18-25	120	77
26-33	23	15
34-41	09	6
42-49	02	1.3
50 and above	01	0.6
Education		
Undergraduate	62	40
Graduate	41	26.5
Post Graduate	46	29.7
Doctorate	04	2.6
Post-Doc	02	1.3
Occupation	02	1.5
Student	96	61.9
Academic	25	16.1
(Teacher)	20	10.1
Industry	29	18.7
(Professional)	2)	10.7
Researcher	03	1.93
Other	02	1.29
Experience	02	1.29
(Years)		
<1	08	5.2
1-3	58	37.41
4-6	70	45
7-9	14	43
	05	3
10 and above	03	5
SNSs Used	154	00.25
Facebook	154	99.35
Twitter	55	35.48
LinkedIn	50	32.25
MySpace	06	3.87
Flickr	05	3.22
Other	16	10

Another notable aspect was to take care of the reverse phrased items that is, items that have been asked negatively. These items were recoded, reliability analysis was performed and the values of Cronbach's α were noted.

Hypothesis Testing Results

Evaluating the regression model consists of a procedure of some assumptions that must be met. The significance of meeting these assumptions lies in the idea that a model tested with the assumptions produces more accurate results (Field 2006). In order to evaluate the regression model, the data was checked for six regression assumptions including linearity and homosce-

Table 1: Descriptive statistics

Table	2:	Reliability	analysis
-------	----	-------------	----------

Constructs	No. of Items	Cron- bach's α Coeffi- cient	Туре
Social influence	3	.716	Good reliability
Disclosure	4	.760	Good reliability
Hedonic	4	.714	Good reliability
Perceived control	5	.732	Good reliability
Perceived usefulness	6	.688	Acceptable reliability
Perceived ease of use	5	.706	Good reliability
Attitude	4	.658	Acceptable reliability
Behavioral intention	5	.676	Acceptable reliability
Actual use	5	.762	Good reliability

dasticity, normality of residuals, multicollinearity, independence of observation and outliers detection.

Outliers are the errors that exist in the data and these can be checked by making histograms and through skewness and Kurtosis. The skewness and kurtosis value is acceptable between \pm 2.58 for a significance of .01 (Fidell and Tabachnick, 2006; Al-Debei et al. 2013). The skewness and kurtosis values indicate that all values lied in the normal range. Therefore, data did not have skewness and kurtosis issues. In addition, multicollinearity is checked by examining the collinearity statistics, which constitute of the Variance Inflation Factor (VIF) and tolerance. Generally, VIF should be less than 10. Moreover, tolerance should be greater than 0.1 and less than 1. In this research, the tolerance values ranged between 0.659 and 1.000, and VIF values ranged between 1.000 and 1.518, indicating that all the values are acceptable. The data did not have any collinearity issues.

In the regression model, independence of observation must be guaranteed and the residual terms must be uncorrelated. This is checked by a simple test named Durbin-Watson Test. Its value ranges from 0 to 4. The value of this test should be closer to 2. This value indicates positive correlation. In this research work, the values for DW test ranged from 1.976 to 2.022, indicating that the residual terms are uncorrelated. Moreover, significant outliers were not detected within the data. Therefore, it is concluded that data in this research did not face any issues.

Figure 2 illustrates the significance of each hypothesis. From Figure 3 it is evident that all hypotheses were found to be supported excluding disclosure. Disclosure was found to be negatively associated with PU and PEOU. Table 3 provides summary of all the hypotheses.

H1: Disclosure on social networking sites will be positively correlated to the perceived usefulness of social networking sites.

This relationship was not found to be significant. It implies that users have concerns while revealing and sharing their personal information on SNS. This result is found to be consistent with the existing studies (Ntlatywa et al. 2012; Shen 2015). Conclusively, it implies that users

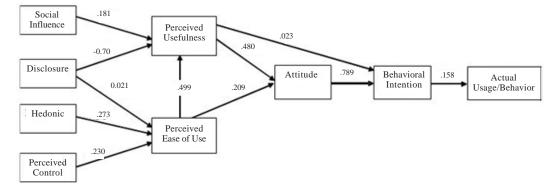


Fig. 3. Validated framework *Source:* Author

Hypothesized p	paths	Outcome	\hat{A} values	P values
H1	DIS→PU	Not supported	070	.330
H2	DIS→PEOU	Not supported	021	.779
H3	HDN→PEOU	Supported	.273	.001
H4	SI→PU	Supported	.181	.016
H5	$PC \rightarrow PEOU$	Supported	.230	.003
H6	PEOU→ PU	Supported	.499	.000
H7	PU→ ATT	Supported	.480	.000
H8	PEOU→ ATT	Supported	.209	.005
H9	PU→BI	Supported	.022	.000
H10	ATT→ BI	Supported	.789	.000
H11	BI→AU	Supported	.158	.049

Table 3: Summary of hypothesis tests

have less trust over SNS. In addition, they have fear while revealing their personal information on SNS.

H2: Disclosure on social networking sites will be positively correlated to the perceived ease of use of social networking sites.

This relationship turned out to be non-significant. However, a negative correlation was found between disclosure and perceived ease of use, which implies that users have disclosure concerns while interacting and communicating with SNS. In addition, they feel uncomfortable when revealing their personal information on SNS. This negative relationship indicates that low trust and the fear of information sharing will lead towards less ease of use for SNS. The relationship was found to be consistent with the existing studies (Ntlatywa et al. 2012; Shen 2015).

H3: Hedonic will be positively associated with the perceived ease of use of social networking sites.

This relationship turned out to be significant. The analysis found a positive relationship between hedonic and ease of use, which implies that if users are more involved and excited to use an SNS, then this involvement and fun will have a positive impact on its ease of use. Moreover, if an SNS is easy to use then users enjoy and have fun while using it and get more engaged in its usage. These results are found to be consistent with the existing studies of TAM and SNS (Jin 2013; Lallmahomed et al. 2013; Bataineh et al. 2015; Mouakket 2015).

H4: Social influence will be positively associated with the perceived usefulness of social networking sites.

A relationship was hypothesized between social influence and perceived usefulness. The

results indicate that social influence has a direct positive impact on perceived usefulness, which strongly supports the hypothesis. The relationship also shows that peer influence significantly impacts the usefulness of such social networking sites. The results were found to be consistent with the existing studies (Gefen and Keil 1998; Venkatesh and Davis 2000). Therefore, it can be concluded that friends, family and peers can significantly affect others in building an individual's attitude for behaving in a particular manner while making use of social networking sites.

H5: Perceived control on a social networking site will be positively correlated to the perceived ease of use social networking sites.

The results of the study prove that a significant relationship was found between perceived control and perceived ease of use. The construct of perceived control involves the interface features of an SNS and enable a user to control information sharing within their contacts circle, which implies that users will have a positive approach for SNS if they think that they can manage and control their information easily on SNS. Moreover, they can access control features, which are not difficult to handle or learn.

H6: The perceived ease of use of a social networking site will be positively correlated to the perceived usefulness of that social networking site.

The results highlight that the relationship between PU and PEOU was found to be significant and consistent with the existing studies (Davis 1989). These constructs were found to be significant contributors in building a positive attitude towards SNS usage. The relationship was built from the basic TAM model, which means that if the users perceive SNS to be useful then it is more likely that users will find the SNS easy to use for communication, interaction and socialization purposes.

H7: Increase in perceptions of perceived usefulness of a social networking site will lead to an increasingly positive attitude towards using that social network site.

The results of the study show a significant relationship between PU and attitude. In addition, the results were found to be consistent with the existing studies (Keil et al. 1995). The construct of PU was found to have a more significant effect on attitude than PEOU (Keil et al. 1995; Venkatesh 2000; Chau and Hu 2001). According to the previous studies, PU is found to have a more significant effect in deciding whether to use a technology or not (Venkatesh 2000; Chau and Hu 2001).

H8: Increase in perceptions of perceived ease of use of a social networking site will lead to an increasingly positive attitude towards using social networking sites.

The results show a significant relationship between PEOU and attitude. In addition, the relationship was found to be contradictory in relation with the existing studies where PEOU had minimal effect in formation of an attitude towards the adoption of SNS (Keil et al. 1995; Chau and Hu 2001; Chau 1996). From the results, it is concluded that PEOU had more influence on attitude than usefulness, which indirectly influences intention to use SNSs. The relationship implies that in SNS, apart from its usefulness, ease of use is also playing a significant role in the adoption. Moreover, users are more willing to make use of SNS if they believe in both characteristics.

H9: Perceived usefulness will have a positive impact on the behavioral intention to use a social networking site.

The results show that the relationship between PU and intention turned out to be significant. The construct of perceived usefulness was found to have a significant and positive influence on the intention to use SNS. This implies that if users find SNS useful for interaction, communication or socialization then this will have a positive influence on their intention to use SNS in that context.

H10: Attitude will have a positive influence on the behavioral intention to use social networking sites.

In the proposed model, the relationship was hypothesized between attitude and intention to use SNS. The results of the study prove that this relationship was significant. In addition, the construct of attitude was found to be the most significant factor in determining behavioral intention to use SNS. This finding highlights the crucial role of attitude in forming one's intention to use SNS in a particular context.

H11: Behavioral intention will have a positive influence on the actual use of social networking sites.

In the proposed model, the relationship was hypothesized between behavioral intention and actual usage. The results prove that the relationship was found to be significant, which implies that users having strong intention to use SNS in a particular manner will lead towards using SNS in a particular context. This finding was found to be consistent with the previous TAM base studies entailing that intention is a depiction of one's actual behavior on that system or technology (Davis 1989; Taylor and Todd 1995).

DISCUSSION

From the results, it can be concluded that perceived usefulness has a more significant effect on attitude than perceived ease of use. Consistent with the previous studies, perceived usefulness is an important determinant in forming one's attitude towards that technology. In contrast with the existing studies, the construct of PEOU was found to have a negligible influence on attitude. In this research work, PEOU does have a positive influence on attitude, which leads the researchers to the conclusion that in SNS both usefulness and ease of use move side by side. A user is more likely to use a social site that pertains to both being useful and easy to use. However, the predictive power of PU is much stronger than that of PEOU. The proposed framework explains 27.8 percent of variance in PU.

PU had a direct impact on behavioral intention through attitude whereas PEOU had a less significant effect on intention through attitude but a higher influence through usefulness. This implies that SNS users are more inclined to have a positive aspiration for SNS if they find it comfortable and easy to use. Moreover, SNS is useful enough for interaction and socialization. In contrast to the previous studies, PEOU is found to have a significant effect in building a positive attitude and intention for SNS usage. The value of beta (.480) indicates that PU had the largest impact on attitude. The model explains 15.9 percent of variance in PEOU.

Hedonic was found to be positively associated with PEOU. Users are more inclined to enjoy using them if they will find SNS easy to use. Moreover, users are more focused and immersed in their tasks if they are comfortable using the SNS. In addition, PC was found to have a significant effect on PEOU insinuating that users are more inclined to use access control features if they find it free of effort. Most SNS provide users with the feature of access control where one can manage their contacts within different groups and restrict their personal information to specific contacts. If these features are difficult to understand and use then it will require time to learn and become skillful in them. The positive relationship between PC and PEOU evaluates that users find the control features easy to use. Since, the sample data collected for this research was mainly from the CS background students, the finding implicates that SNS users from the CS discipline find the access control features easy to use. This may be due to the fact that CS people are more skilled and handy in using different kinds of software and systems. Additionally, they have a wide exposure to technology advancements. Therefore, they do not find control features or SNS interfaces difficult to handle and are more apt in using them.

Another important finding was related to the construct of disclosure. A negative relationship was found between disclosure and perceived usefulness, and perceived ease of use respectively. Users are found to have disclosure concerns in revealing their personal information on SNS. This finding highlights the level of trust that users have on SNS. Despite the fact that SNS provide many access control features for customizing the sharing options, users are still concerned about their personal information and location being collected by SNS providers. These fears of disclosing their personal information on SNS lead to its low usefulness and ease of use. Another justification for disclosure concerns may be attributed to the time factor. Users are so

busy to manage and control their disclosed content that they prefer not to divulge much. Therefore, they avoid disclosing personal information. Despite frequently using SNS, people are bounded by cultural and social norms, which resist them to share excessive personal information on SNS.

Social influence was found to be positively associated with usefulness. This finding is consistent with the previous studies on SNS, which implies that an individual is being influenced by its environment and what others think about using SNS. Users perceive SNS to be useful and an important communication tool if friends, family and colleagues consider it practical and valuable. Attitude was found to be the most important determinant in predicting one's intention to use SNS. The model explains 37.4 percent of variance on attitude. This finding may highlight a crucial and fundamental role of attitude in acceptance of a technology and its usage behavior. Eventually, it is the strong intention to use SNS in a particular context that will lead to an individual behaving in that particular manner. For instance, a strong intention to use SNS for information sharing will consequently form one's behavior in that context.

Consistent with previous studies, intention was found to be significantly correlated with actual usage. The model explains 64.3 percent of variance on behavioral intention. This finding explains that usage behavior can be implicitly determined by measures of behavioral intention (Davis et al., 1989). This means that the intention of users to use SNS for a particular behavior will be reflected in their usage. Furthermore, intentions to use SNS for information sharing, maintaining ones relationship or for broadening ones social circle will be reflected in the way a user uses SNS. Thus, behavior can be predicted by measures of intentions.

CONCLUSION

From this research, it can be concluded that the sample population found SNS interfaces easy to manage and use. They did not have much difficulty in understanding these platforms. They enjoyed using SNS and were completely immersed and involved in its usage. Moreover, they felt control over the information sharing on SNS. Also, they were well aware of using the privacy settings. The reason of awareness was due to the fact that all participants were from a CS background and they spent much time on computers. Therefore, they found SNS easy and also felt control over their information disclosure.

Despite this control and satisfaction from privacy settings, some users still showed concerns over the disclosure of their personal and location information. These concerns might have an influence on a user's cultural values and norms. The cultural norms and social values might be a hindrance in the sharing of personal information. It could also be attributed to the fact that having background in CS, participants were well aware of the downside of information disclosure. Therefore, their concerns for disclosure were valid.

RECOMMENDATIONS

Due to the technical background of participants, they did not face any difficulty in interacting with Social Networking Sites rather they were completely immersed in its usage. Therefore, it depends on the background profile of participants that how comfortable they feel while interacting with SNS.

Being even technical, participants showed their concerns over the disclosure of personal and location information. Therefore, disclosure is found to be concern of significant importance especially by keeping in mind the context of Pakistani Society. In this research, participants having background in CS felt more control over their information. Therefore, control was also encountered as a significant contributor in interacting with SNS in any circumstances. From this research, it can also be concluded that friends, family and peers can significantly affect others in building an individual's attitude for behaving in a particular manner while making use of social networking sites.

LIMITATIONS

The study is conducted by focusing on actual use of SNS by CS community. The participant's cultural background is not considered in the research. Also, all participants were either involved in work or studies full-time. This time restriction might have an effect on the use of SNS. In terms of gender balance, survey responses were dominated by female participation. However, in this study the main emphasis was to investigate actual use of SNS in CS participants rather than how actual use varies in gender or culture.

REFERENCES

- Ajzen I 1991. The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50: 179-211.
- Al-Debei MM, Al-Lozi E, Papazafeiropoulou A 2013. Why people keep coming back to Facebook: Explaining and predicting continuance participation from an extended theory of planned behaviour perspective. *Decision Support Systems*, 55(1): 43 - 54.
- Archambault A, Grudin J 2012. A Longitudinal Study of Facebook, LinkedIn, and Twitter Use. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. Austin, TX, USA, 5-10 May. ACM.
- Bao Y, Wang X, Deng D 2011. Applying Modified TAM to Privacy Setting Tools on SNS. In Sixth IEEE International Conference on Networking, Architecture, and Storage. Dalian, Liaoning, 2011. IEEE. 28-30 July.
- Bataineh AQ, Al-Abdallah GM, Alkharabsheh AM 2015. Determinants of continuance intention to use social networking sites SNS's: Studying the case of Facebook. *International Journal of Marketing Studies*, 7(4): 121-135.
- Braun MT 2013. Obstacles to social networking website use among older adults. *Computers in Human Behavior*, 29(3): 673-680.
- Celik H 2011. Influence of social norms, perceived playfulness and online shopping anxiety on customers' adoption of online retail shopping: An empirical study in the Turkish context. *International Journal* of Retail and Distribution Management, 39(6): 390-413.
- Chau PY 1996. An empirical assessment of a modified technology acceptance model. *Journal of Management Information Systems*, 13(2): 185-204.
- Chau PY, Hu PJH 2001. Information technology acceptance by individual professionals: A model comparison approach. *Decision Sciences*, 32(4): 699-719.
- Davis FD 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3): 319-40.
- Davis FD, Bagozzi RP, Warshaw PR 1989. User acceptance of computer technology: A comparison of two theoretical models. *Management Sciences*, 35(8): 982-1003.
- Davison HK, Maraist C, Bing MN 2011. Friend or foe? The promise and pitfalls of using social networking sites for HR decisions. J of Bus Psychol, 26: 153-159.
- Dhume SM, Pattanshetti MY, Kamble SS, Prasad T 2012. Adoption of Social media by business education students: Application of Technology Acceptance Model (TAM). In *Technology Enhanced Education (ICT-EE), International Conference*. Kerala, 3-5 January 2012. IEEE.
- Dogruer N, Menevis I, Eyyam R 2011. What is the motivation for using Facebook? *Social and Behavioral Sciences*, 15: 2642-2646.

- Fidell LS, Tabachnick BG 2006. Using Multivariate Statistics. Boston: Allyn and Bacon.
- Field A 2006. *Discovering Statistics Using SPSS*. London: SAGE Publications.
- Gefen D, Keil M 1998. The impact of developer responsiveness on perceptions of usefulness and ease of use: An extension of the technology acceptance model. *ACM Sigmis Database*, 29(2): 35-49.
 Gu JC, Fan L, Suh YH, Lee SC 2010. Comparing utilitar-
- Gu JC, Fan L, Suh YH, Lee SC 2010. Comparing utilitarian and hedonic usefulness to user intention in multipurpose information systems. *CyberPsychology, Behavior, and Social Networking*, 13(3): 287-297.
- Handel MJ, Shklovski I 2012. Disclosure, Ambiguity and Risk Reduction in Real-Time Dating Sites. ACM. New York, 22-31 October.
- Hew KF 2011. Students' and teachers' use of Facebook. Computers in Human Behavior, 27(2): 662-676.
- Hollenbaugh EE, Ferris AL 2013. Facebook self-disclosure: Examining the role of traits, social cohesion, and motives. *Computers in Human Behavior*, 30: 50-58.
- Hughes DJ, Rowe M, Batey M, Lee A 2012. A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior*, 28(2): 561-569.
 Jiaa Y, Zhaob Y, Linc Y 2010. Effects of System Char-
- Jiaa Y, Zhaob Y, Linc Y 2010. Effects of System Characteristics on Users' Self-disclosure in Social Networking Sites. In *IEEE Seventh International Conference on Information Technology*, 12-14 April, 2010. ACM.
- Jin C 2013. The perspective of a revised TRAM on social capital building: The case of Facebook usage. *Information and Management*, 50: 162-168.
- Kaplan AM, Haenlein M 2010. Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1): 59-68.
- Keil M, Beranek PM, Konsynski BR 1995. Usefulness and ease of use: Field study evidence regarding task considerations. *Decision Support Systems*, 13(1): 75-91.
- Kirschner PA, Karpinski AC 2010. Facebook and academic performance. Computers in Human Behavior, 26(6): 1237-1245.
- Ku YC, Chen R, Zhang H 2013. Why do users continue using social networking sites? An exploratory study of members in the United States and Taiwan. *Information and Management*, 50(7): 571-581.
- Ku YC, Chu TH, Tseng CH 2013. Gratifications for using CMC technologies: A comparison among SNS, IM, and e-mail. *Computers in Human Behavior*, 29(1): 226-234.
- Kwan GCE, Skoric M 2012. Facebook bullying: An extension of battles in school. *Computers in Human Behavior*, 29(1): 16-25.
- Lallmahomed MZI, Ab Rahim NZ, Ibrahim R, Rahman AA 2013. Predicting different conceptualizations of system use: Acceptance in hedonic volitional context (Facebook). *Computers in Human Behavior*, 29(6): 2776-2787.
 Lin X, Li Y, Califf CB, Featherman M 2013. Can Social
- Lin X, Li Y, Califf CB, Featherman M 2013. Can Social Role Theory Explain Gender Differences in Facebook Usage? In: 46th Hawaii International Conference on System Sciences. Wailea, Maui, HI, 7-10 January, 2013. IEEE.
 Lu HP, Yang YW 2013. Toward an understanding of
- Lu HP, Yang YW 2013. Toward an understanding of the behavioral intention to use a social networking

site: An extension of task-technology fit to socialtechnology fit. *Computers in Human Behavior*, 34: 323-332.

- Mangold WG, Faulds DJ 2009. Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4): 357-365.
- Mouakket S 2015. Factors influencing continuance intention to use social networking sites: The Facebook case. Computers in Human Behavior, 53: 102-110.
- Ntlatywa P, Botha RA, Haskins B 2012. Claimed vs observed Information Disclosure on Social Networking Sites. In: *Information Security for South Africa* (*ISSA*), 2012. South Africa, 15-17 August 2012. IEEE.
- Phillips B, Shipps B 2013. Social networks, interactivity and satisfaction: Assessing socio-technical behavioral factors as an extension to technology acceptance. Journal of Theoretical and Applied Electronic Commerce Research, 8(1): 35-52.
- Qi Y, Fu C 2011. The Effects of Flow and Attachment on the e-Loyalty of SNS Websites. In: International Conference on Management and Service Science (MASS). Wuhan, 12-14 August 2011. IEEE.
- Qiu L, Lin H, Ramsay J, Yang F 2012. You are what you tweet: Personality expression and perception on Twitter. Journal of Research in Personality, 46(6): 710-718.
- Ramayah T, Rouibah K, Gopi M, Rangel GJ 2009. A decomposed theory of reasoned action to explain intention to use Internet stock trading among Malaysian investors. *Computers in Human Behavior*, 25(6): 1222-1230.
- Shen GC 2015. How quality of life affects intention to use social networking sites: Moderating role of selfdisclosure. *Journal of Electronic Commerce Research*, 16(4): 276 -289.
- Taylor S, Todd P 1995. Assessing IT usage: The role of prior experience. *MIS Quarterly*, 19(4): 561-670.
- Thomas L, Briggs P, Little L 2013. Location Tracking via Social Networking Sites. In: *Proceedings of the* 5th Annual ACM Web Conference., 2013. ACM.
- Van der Heijden H 2004. User acceptance of hedonic information systems. MIS Quarterly, 28(4): 695-704.
- Venkatesh V 2000. Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research*, 11(4): 342-365.
- Venkatesh V, Bala H 2008. Technology acceptance model and a research agenda on interventions. *Decision Sciences*, 39(2): 273-315.
- Venkatesh V, Davis FD 2000. Theoretical extension of the technology adoption model: Four longitudinal field studies. *Management Science*, 46(2): 186-204.
- Venkatesh V, Morris MG, Davis GB, Davis FD 2003. User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3): 425-478.
- Yang Y, Lutes J, Li F, Luo B, Liu P 2012. Stalking Online: On User Privacy in Social Networks. In: Proceedings of the second ACM conference on Data and Application Security and Privacy., 7-9 February 2012. ACM.

Paper received for publication on October 2015 Paper accepted for publication on April 2016