



Students' Engagement of Social Networking Sites: An Evaluation of Perception, Gratification, Sociability, Academic and Generalized Usage Patterns

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Students' engagement of Social Networking Sites (SNS) has substantially influenced their social, personal, and academic lives. However whether students in Pakistani universities are aware of its roles and its respective influence has rarely been investigated. The aim of this study is to evaluate students' behavioral attitude (perceptions, gratification, awareness, usage patterns etc.) towards SNS. Using self-administered survey questionnaires, data were collected from a sample of postgraduate students at the University of Peshawar, Pakistan. The findings revealed a significant level of awareness of the role of SNS, of which YouTube, Facebook, and Flickr are widely used sites by the study participants. However, generalized use of SNS specifically, Wiki, RSS, Twitter, and MySpace is not considered academic or for research purposes, but for sheer gratification, and sociability. Further, laptops and smartphones were found to be the primary tools of access to SNS at university and/or homes. Additionally, entertainment and friendship were specified as the foremost prompts for using SNS. A primary obstacle indicated by participants is power failure. This study has manifold implications such as: a) *social implications*- parents and teachers should educate students about the inventive, academic, and safe use of SNS. This will impede the ills of SNS that have resulted in the reduction of learning and research capabilities; b) *practical implications*- authorities should make more precise



policies for the use of SNS in the universities. To this end class orientations are suggested to inform students about the academic use of SNS and; c) *theoretical implications*- as students' intention of using SNS are gratification, sociability etc., thus the theory of Uses and Gratification is supported.

Keywords: Social media; Web 2.0; Social Networking; Role of SNS; Awareness of SNS; Pakistan.

INTRODUCTION

Since its inception, the Internet has attracted billions of individuals and has facilitated them to access, retrieve, store, and disseminate information. Out of the abundant contributions of the Internet, an incredible one is the advent of social networking sites (SNS). SNS are cost-effective and innovative platforms for electronic communication. These have become virtual avenues for human interactions. As more than two-thirds the of the Internet users exploit SNS for social and professional connections, thus the users' virtual communities have been shaped (Helou et al., 2012). At the outset, SNS was adopted for leisure, linking peers, and profiles, but steadily its exploitation was broadened towards learning, teaching, research, and professional affiliations. According to Greenhow and Askari (2017), SNS has implications for teaching and learning and teacher education in the 21st century. In addition, commercial organizations, universities, and information centers equally benefitted from SNS to manage organizational and customers' demands. In the west, teachers and students are predominantly using SNS as virtual classrooms, such as Twitter and Google classroom that facilitate academic discussions and comments in groups with teachers and other students. SNS as virtual tools allow users' communication and effective use of information from diverse regions (Singh & Gill, 2015). It offers different services and tools that connect users and their organizations for a range of purposes.

Among researchers, the theory of SNS is debatable but majority of them have described it as an Internet-based environment for social interactions intended to promote connections, conversations, and resource sharing. According to Parker (2008), SNS are profile-based online sites that enable people to manage social relationships through observing, browsing, and distribution of social networking lists with others. These websites such as Facebook and MySpace expedite interactions among individuals (OCLC, 2007) and offer collaboration prospects through creating accounts and sharing profiles with peers (Boyd & Ellison, 2007). The current literature provides numerous types of SNS, however the predominant



are Facebook, YouTube, Flickr, Bebo, Hi5, LinkedIn, MySpace, Google+, Twitter, Ning, Orkut, WhatsApp, Link, Viber, Hangouts, Delicious, Instagram, LibraryThing, Research Gate, Academia, and Students Circle Network. Users on these sites share information, videos, audios, provide comments on projects, follow people relevant to their projects or areas of interest, and discuss cultural, social, and economic issues. In contrast to the benefits of SNS, researchers have also recognized that students' excessive use of these sites adversely affects their academic performance. For example, Mehmood and Taswir (2013) recognized that use of SNS during academic activities (multi-tasking students) has declined their academic grades as compared to the non-users of such sites. Their results further suggested that academic activities and use of SNS must be well-adjusted. Past researchers such as Atulomah and Onuoha (2011) indicated that a number of students are unaware of the academic worth of SNS.

The underlying assumptions of undertaking this study are varied. For instance, students must be mindful of the proactive roles of SNS in terms of knowledge formation and its diffusion. Accordingly, this study assumed that students in the University of Peshawar may not be aware of the benefits and academic applications of SNS. Additionally, the gap in existing literature is assumed in terms of evaluation of SNS, its awareness, role, and usage among university students. Further, the present study assumed that SNS are participative models for information sharing, a robust avenue for learners, and are widely utilized for diverse academic purposes, but still no comprehensive study was found in terms of the University of Peshawar. Hence, this study was undertaken to manage such gaps and evaluate the levels of awareness, roles, and usage of SNS in the context of the University of Peshawar. It is assumed that findings of this study will motivate academic utilization of SNS and may be beneficial for researchers. This study may be equally significant for librarians to understand students' dependence on SNS that may further motivate them towards its effective adoption. Optimistically, at a higher level, findings may encourage librarians to perceive challenges of SNS as opportunities that further facilitate their entry into the students' learning domains. Additionally, such entries may enable librarians to serve students successfully and sustain academic and social identities of libraries. The research objectives of this study in the context of Pakistani university students are:

1. To identify the level of awareness of SNS;
2. To understand generalized usage patterns of SNS;
3. To explore why university students are adopting SNS;



4. To ascertain how frequently SNS are used by university students in Pakistan;

To discover what kind of problems are faced by Pakistani university students in the use of SNS.

SIGNIFICANCE OF THE STUDY

Since students devote precious time excessively on SNS, the intended study was undertaken to examine the manifold aspects of the adoption of SNS and technological gadgets in the context of Pakistani university students. Thus, results of the study will be significant for authorities that formulate policies, administer universities, implement, and facilitate adoption and access to technologies respectively to limit the influence of these technologies on university students. This specific study is valuable to design a more appropriate policy to manage the hazards of SNS in the interest of safeguarding students from their evils (pessimistic perspective) or to utilize these technologies for augmenting students' academic performance (optimistic standpoint).

LITERATURE REVIEW

Abundant research studies have undertaken on the perceptions, roles, usability, and benefits of SNS. Majority of them have reported SNS as a worldwide phenomenon started as a leisure pursuit and gradually occupied its position as a social norm (Mehmood & Taswir, 2013). It is the consolidation of high-tech innovations used in collaborative environments that augment cognition and address current societal demands (Chu, 2009). SNS offers novel approaches to Internet utilization (McLean et al., 2007) and delivers information sharing channels (Boroughs, 2010). It preserves users' academic, personal, and professional profiles that allow them to build complimentary pages, and exchange information in the form of images, text, and symbols. In the context of social exchange theory, SNS are the tools that facilitate individuals in resources sharing and enable them to observe costs incurred on the overall procedure and consequently symbolize human social behaviors (Chu & DU, 2016). Boyd and Ellison (2007) stated that SNS is a scheme of building profile and polls that support the exchange of data. However, different SNS have their own juxtapositions and restrictions in terms of membership and characteristics. For instance, some sites allow sharing of audio/visual resources while others permit textual data. Prior researchers have recognized that SNS empowers socialization, exhibit human interactions, and assists in making an intelligent decision (Passy, 2003). It is composed of tools that facilitate learning,



provides content sharing facilities, and permits users' interactions (Burkhardt, 2010, Seyama and Momeen, 2017). Madge et al. (2009) and Kalra and Manani (2013) further elaborated that SNS positively affect the academic performance of students, that is students using SNS for academic discussions and file sharing achieve higher grades. Likewise, Madge et al. (2009) elaborated that students use SNS for discussions about their academic activities and assignments with their teachers.

A substantial amount of research on SNS have reported three stages of its applications (Zohoorian-Fooladi & Abrizah, 2013) namely; *early stages* (demarcate what type of SNS should be adopted); *intermediary levels* (explain that how SNS should be used) and; *late periods* (define issues attached with the adoption of SNS). Likewise, Colaliacovo (2015) provided three eras of the emergence of SNS; 1) primitive; 2) medieval and; 3) golden period. The history of SNS indicates that its use started with the advent of web 2.0 technologies. However, individuals with a moderate level of technology skills can build knowledge repositories on these sites. A detailed historical timeline is provided in Figure 1, displaying the emergence of different kinds of SNS.

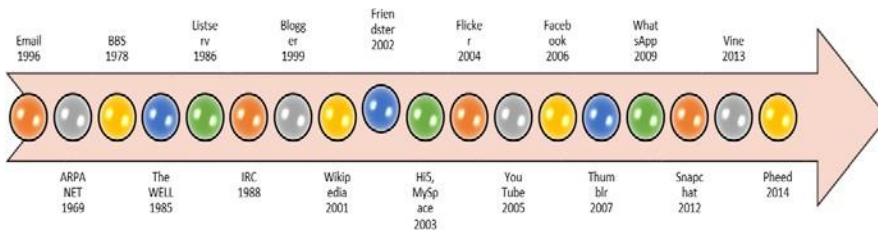


Figure 1: Historical timeline of the evolution of SNS

The above timeline indicates that today SNS has become a significant part of human lives and probably influence them. Students must be mindful of its diverse characteristics because it augments performance, saves time, manages online privacy, and enhances patterns of communication, socialization, and knowledge management. In academic institutions, researchers have observed intensification in the use of SNS among students (Gross & Leslie, 2008). Baro, et al. (2014) indicated that students, teachers, and librarians are using Facebook, YouTube, Flickr, Delicious, MySpace, Hi5, Twitter, RSS, Wikis, and Blogs for different academic and professional purposes. Although, numerous researchers affirm that SNS are increasingly adopted, but the kind and level of its usage is different among individuals. In the context of Nigeria, findings indicated that ninety-eightpercent of the users are aware and utilize SNS especially Facebook as the most popular site



(Atulomah & Onuoha, 2011). Further, Sadeh (2007) elaborated that librarians' escape from the adoption of technological innovations can weaken the noble image of libraries. According to Maness (2006), librarians and students can use Wikis to communicate and share files. Also, Bicen and Cavus (2010) informed that students believe the use of SNS significant for their personal, academic, and social lives. Their findings revealed Facebook and MySpace as the most frequently used sites among the students. Further, Lack et al. (2009) suggested students' orientation to create awareness and stimulate the pertinent use of SNS. Such orientation courses may enable students to manage the handling of privacy issues. Similarly, Boyd and Ellison (2007) suggested advanced research on SNS to inform students about its academic utilization.

Many researchers such as Coyle and Vaughn (2008) and Pempek et al. (2009) indicated that SNS especially Facebook is the most popular site among the students and is mostly utilized for communication and socialization. A study in terms of distance learning education Brady et al. (2010) stated that students designate SNS as preferred e-learning platforms because it facilitates their collaboration with teachers and other students. Khan and Bhatti (2012) specified that Pakistani librarians should not merely understand the benefits of SNS but also inform library patrons to take benefits of these sites. Regarding Flickr, Angus et al. (2008) stated that although it is a photo sharing website but can be used for images and videos of academic events. Luo (2010) also revealed that students use SNS for socialization and collaboration and understand its productiveness. These sites connect students with others for sharing profiles, information resources, and offer support in the accomplishment of academic objectives. However, students are facing selection issues because of numerous types of SNS. To address such issues teachers and librarians are advised to provide awareness and tutorials on specific characteristics of SNS to ensure its pertinent utilization and save students' valuable time. According to Helou and Rahim (2014), SNS can be used as a medium of learning and teaching and further suggested its adoption in the classroom activities. In addition, Boyd and Ellison (2007) indicated that SNS are capable of enhancing social capital and students' life satisfaction. Roblyer et al. (2010) further elaborated that students are the primary users of Facebook to communicate with friends rather than teachers to accomplish their academic tasks. However, Hargittai (2008) elaborated that since demographic characteristics have robust impacts on the adoption of SNS, thus different users groups use different SNS.



Theoretical Paradigm

This study defines the gratification from use of SNS and the need for SNS among the university students in Peshawar. Students use several SNS on the Internet using diverse approaches to achieve manifold objectives. This study assumes that students at the University of Peshawar are conscious of their personal and academic goals. To attain such goals these students exhibit diverse behaviors when they prefer one network over the other. The common drivers for using SNS include entertainment, socialization, academic and research purposes. . Thus, the researchers sought the assistance of the Theory of Uses and Gratification. It is a paradigm that explains users' selection of communication networks. This theory defines psychological factors that stimulate users to prefer, identify, use, and select a media on the Internet for personal, social, academic or research purposes. It explains the why, what, and how of using networks to fulfill personal, social, academic, and cultural needs.

METHODOLOGY

The intended study has manifold steps that are: 1) questionnaire construction; 2) development and validation of measurement scale; 3) data collection and 4) conducting statistical techniques. Each step is discussed in the succeeding sections.

Questionnaire Construction

For this study, we developed our own data collection instrument based on approaches adopted by the earlier researchers, for example, Karim (2010). To this end, previous scales identified from the past studies were modified in our own context. Each scale item integrates statements identified from the related literature review. These statements were then compared with the statements in other studies. The process aided in the removal of ambiguity about definitions, relative explanation, and assembling of concepts. The process was correspondingly noteworthy in carrying consistency in items. The process starts with the literature review and ends as a single item. The literature was helpful in the understanding of different aspects of the study constructs. Thus, based on literature review and previously validated measurement scales a structured questionnaire was designed. A five-point Likert scale was also used in the questionnaire. Before actual data collection, it is mandatory to assess the reliability and validity of the measurement scale. For validity, three approaches were used namely literature reviews,



pretesting and pilot study. For pretesting, the study instrument was reviewed by four experts for content and face validity. For internal consistency of the questionnaire (reliability test), a pilot study was undertaken on 50 students at the University of Peshawar who were not the part of the intended study and had access or used SNS. The Cronbach's alpha value is 0.719, which is greater than 0.7 (Nunnally, 1978). All suggested changes were incorporated into the final version of the measurement scale of this study.

Population, Sampling, and Data Collection

The intended study evaluated the roles, use, and extent of awareness of SNS among the students enrolled in different programs at the University of Peshawar. To this end, descriptive research design was adopted. Stratified random sampling was used.; Four faculties having different academic departments in the University of Peshawar were selected as the study population. Self-administered questionnaires were distributed to collect data from the students enrolled in four faculties of the University of Peshawar namely Faculty of Arts and Humanities (FAH; Academic Depts. =5; N=225), Faculty of Information and Management Science (FIMS- Academic Dept. =5; N=245), Faculty of Social Sciences (FSS; Academic Dept., =13; N=435) and Faculty of Numerical and Physical Sciences (FNPS; Academic Dept. =5; N=275). Thus, the total population in four faculties (twenty-eight academic departments) was calculated as N= 1177 students in the University of Peshawar. A sample of n=290 was selected based on Bartlett, Kotlik, and Hinggin (2001) sample size tables and Raosoft calculator (<http://www.raosoft.com/samplesize.html?nosurvey>). Thus, a total of 400 questionnaires were personally distributed among the sample, of which 386 were returned, having a response rate of 72.5 percent. Several researchers such as Neuman (2007), Creswell (2009), and Sekran (2013) have suggested the use of self-administered questionnaires for understanding individuals' behaviors towards any innovative ideas or social activities and for maximum response rate. Using SPSS (Ver. 20), descriptive and inferential statistics were utilized to process and analyze the data.

FINDINGS & DISCUSSION

Demographic Characteristics

Table 1 and 2 show questionnaire distribution according to the respondents' gender and age. Based on gender distributions, data shows the highest response



from the male (63.73%, n=246). Further, age distribution indicates that majority of the participants (62.69%, n=242) were in the age group of 26-30 years.

Table 1

Gender of Respondents (n=386)

Gender	Number	Percentage
Male	246	63.73
Female	140	36.23
Total	386	100.0

Table 2

Age of Respondents (n=386)

Sr.No.	Age groups	Number	Percentage
1	21-25 years	92	23.83
2	26-30 years	242	62.69
3	31-35 years	36	9.32
4	> 35 years	16	4.14
Total		100	100.0

Table 3

Respondents' Qualification (n =386)

Faculties	BS Students	Master/MPhil Students	PhD Students	Total	%age
Arts and Humanities (FAH)	30	58	02	90	23.31
Information & Management Science (FIMS)	47	79	01	127	32.9
Social Sciences (FSS)	23	59	05	87	22.5
Numerical & Physical Science (FNPS)	21	54	07	82	21.24
Total	121	250	15	386	100.0

Table 3 shows the average scores of respondents' participation based on faculties of study. Data table shows that majority of the respondents were enrolled in master programs at the University of Peshawar. However, faculty-wise data distributions exhibit the highest participation from FIMS (n=127) while the lowest can be observed from FNPS (n=82). It indicates that students in the Faculty of Information and Management Sciences are the highest users of SNS at the University of Peshawar. A graphical representation of the data in Table 3 is provided in Figure 3.

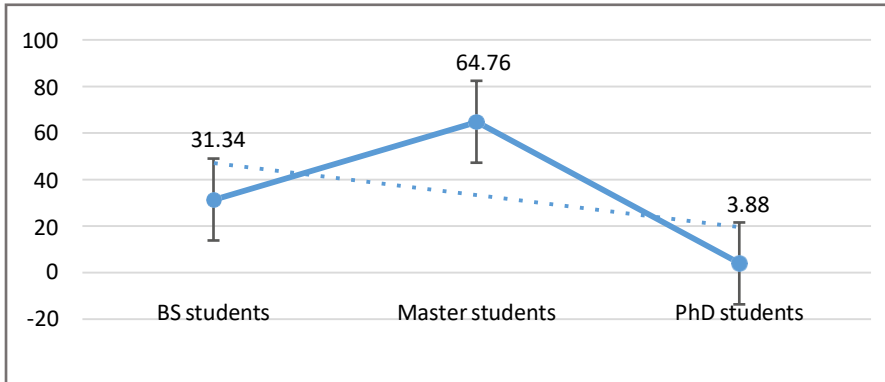


Figure 2: Qualification of the study participants

Table 4 exhibits the types and most frequently used SNS. Based on data analysis, YouTube (80.56%, n= 311), Facebook (73.31%, n= 283), and Flickr (30.56%, n= 118) are the three most frequently used SNS by the students at the University of Peshawar. However, no students are using Wiki for any purposes. Moreover, data indicate that RSS (n=1, 0.25 %), Twitter (n=6, 1.55%), Delicious (n=8, 2.07%), LinkedIn (n=26, 6.73%) and MySpace (n=12, 3.10%) respectively are the less used SNS at the University of Peshawar. A graphical representation of the data in Table 4 is shown in Figure 3.

Additionally, at-test was used to compare the generalized usage patterns scores for males and females. Table 5 shows that the responses of males and females students at the University of Peshawar statistically differ about their generalized usage patterns of SNS.

Similarly, Table 7 represents the generalized usage patterns of SNS with regards to age. The *p*-value 0.713 is greater than the significant value 0.05, which implies that mean scores are alike and there is no significant difference in the generalized usage of students of SNS within different qualification groups (*f*=.241, *df*= 3.383, *p*=0.674).



Table 4

Types of SNS Frequently Used by the Study Participants

Sr.No.	SNS	No	Percentage
1	YouTube	311	80.56
2	Facebook	283	73.31
3	Twitter	6	1.55
4	MySpace	12	3.10
5	LinkedIn	26	6.73
6	Flicker	118	30.56
7	Delicious	8	2.07
8	Wiki	0	0
9	RSS	1	0.25
10	Slide share	15	3.88
11	Blogs	42	10.88

Table 5

Analysis of T-value About Respondents Generalized Usage Patterns Based on Gender

Generalized usage patterns of SNS among the study participants	Gender	n	Mean	t	df	Sig.
	Male	246	3.82	-.153	.383	.0000*
	Female	140	3.81			

* Significant at 0.05 level

Table 7

ANOVA Score of About Respondents Generalized Usage Patterns with Regards to Age

Usage of SNS	Mean				f	df	Sig.
	21-25	26-30	31-35	> 35			
Generalized usage patterns of SNS with regards to age	3.76	3.78	3.81	3.75	.241	(3.383)	0.674*

* Significant at 0.05 level

Table 8 and Figure 4 present data on equipment used by students to access SNS. It is revealed that major electronic equipment used by the students is laptops (46.11%, n=178) followed by smartphones (43.26%, n=167). Similarly, iPad (n=2, 0.5%) has the lowest use among the students of University of Peshawar. Further, desktop computers and iPad are not used by the students in the Faculty of Arts and Humanities and Faculty of Numerical and Physical Sciences.

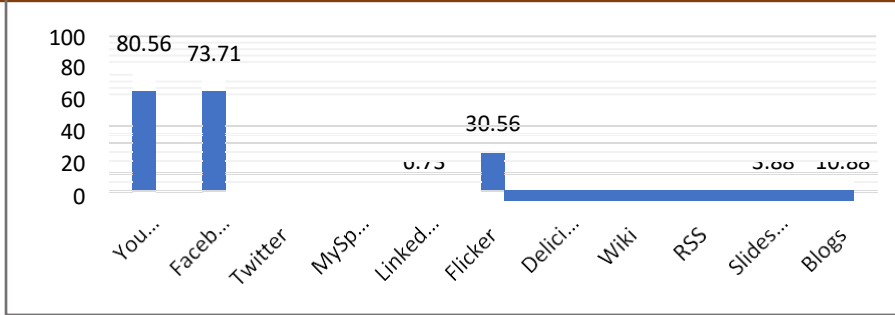


Figure 3: Types of SNS Frequently Used by the Study Participants

Table 8

Equipment Used for Accessing SNS

Equipment	FAH (%)	FIMS (%)	FSS (%)	FNPS (%)	Total (%)
Laptop	23(25.55)	79(62.20)	55(63.21)	70(85.36)	178(46.11)
Desktop	4(4.44)	11(8.66)	2(2.29)	0	17(4.40)
Smart Phone	53(58.88)	30(23.62)	28(32.18)	7(8.53)	167(43.26)
Tablet	10(11.11)	6 (4.72)	1(1.14)	5(6.09)	22(5.69)
iPad	0	1(0.78)	1(1.14)	0	2(0.51)

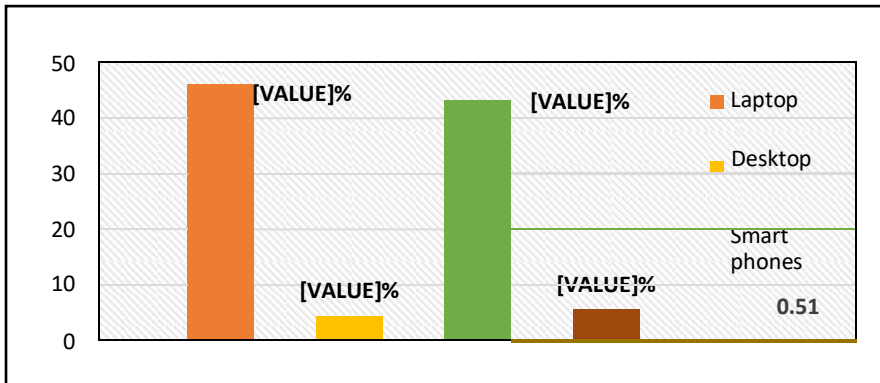


Figure 4: Equipment Used for Accessing SNS

According to Table 9 and Figure 5, students are using SNS for a range of purposes. However, the three most important purposes are information seeking (41.45%, n=160), socializing (31.34%, n=121), and friendship (29.27%, n= 113). Further, only 15.80% (n=61) of the students are utilizing SNS for academic purposes.

It is further observed that a small number of students (5.69%, n=22) use SNS for playing different games.

Table 9

Purposes of the Use of SNS

SNS	FAH (%)	FIMS (%)	FSS (%)	FNPS (%)	Total (%)
Information	55(61.11)	47(37.00)	22(25.28)	36(43.90)	160(41.45)
Gratification	7(7.77)	54(42.51)	34(39.08)	9(10.97)	104(26.94)
Socializing	11(12.22)	31(24.40)	54(62.06)	25(30.48)	121(31.34)
Discussion	22(24.44)	24(18.89)	13(14.94)	7(8.53)	66(17.09)
Academic	5(5.55)	34(26.77)	4(4.59)	18(21.95)	61(15.80)
Friendship	30(33.33)	9(7.08)	29(33.33)	45(54.87)	113 (29.27)
Games	2(2.22)	1(0.78)	7(8.04)	12(14.63)	22(5.69)
Announcements	14(15.55)	5(3.93)	11(12.64)	4(4.87)	34(8.80)
Family	2(2.22)	17(13.38)	23(26.43)	7(8.53)	49(12.69)

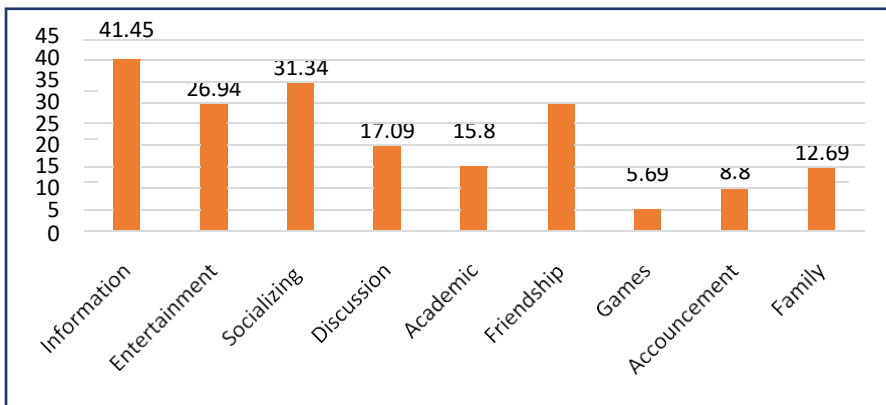


Figure 5: Purposes of Using SNS

Table 10 and Figure 6 show the time that students spend daily the use of SNS. From the descriptive data it is evident that most of the students use SNS for at least 30 minutes daily (32.64%, n=126). However, 30%(n=11), 19%(n=74) and 18%(n=70) of the students are daily using SNS for one hour, two hours, and more than two hours respectively.

Table 11 and Figure 7 indicate the time when students in different faculties of the University of Peshawar first started the use of SNS. Results indicate that majority of the students (43.78%, n=169) have adopted SNS in the last one year.



Table 10

Time Daily Spent on the Use of SNS

SNS	FAH (%)	FIMS (%)	FSS (%)	FNPS (%)	Total (%)
30 minutes	24(26.66)	39(30.70)	11(12.64)	52(63.41)	126(32.64)
One hour	37(41.11)	27(21.25)	45(51.72)	7(8.53)	116(30.05)
Two hours	10(11.11)	33(25.98)	22(25.28)	9(10.97)	74(19.17)
> 2 hours	19(21.11)	28(22.04)	9(10.34)	14(17.07)	70(18.13)

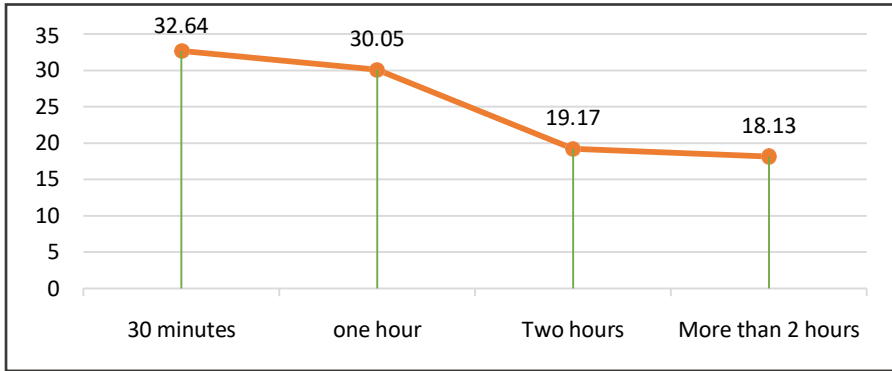


Figure 6: Time spent on using SNS

Table 11

Students' Period of Starting the Use of SNS

SNS	FAH (%)	FIMS (%)	FSS (%)	FNPS (%)	Total (%)
> a month	2(2.22)	8(6.29)	3(3.44)	1(1.21)	14(3.62)
Last 6 months	13(14.44)	25(19.68)	7(8.04)	21(25.60)	66(17.09)
From 1 year	54(60.00)	41(32.28)	34(39.08)	40(48.78)	169(43.78)
1-2 years	17(18.47)	38(29.92)	39(44.82)	17(20.73)	111(28.75)
< 2 years	4(4.44)	15(11.81)	4(4.59)	3(3.65)	26(6.73)

Table 12 and Figure 8 provide information about the locations from where students access SNS. Findings revealed that academic departments are the preferred places by the majority of the respondents (34.35%, n=133) to use SNS followed by homes (30.56%, n=118). However, results additionally show that net cafe is a less used place by the students and even not used by students in the Faculty of Arts and Humanities for accessing SNS.

Table 13 and Figure 9 provide information about the major problems encountered by students in the use of SNS. Results revealed power failure as the



primary problem faced by the study participants (32.21%, n=124) followed by the lack of facilities (22.53%, n=87) in the use of SNS.

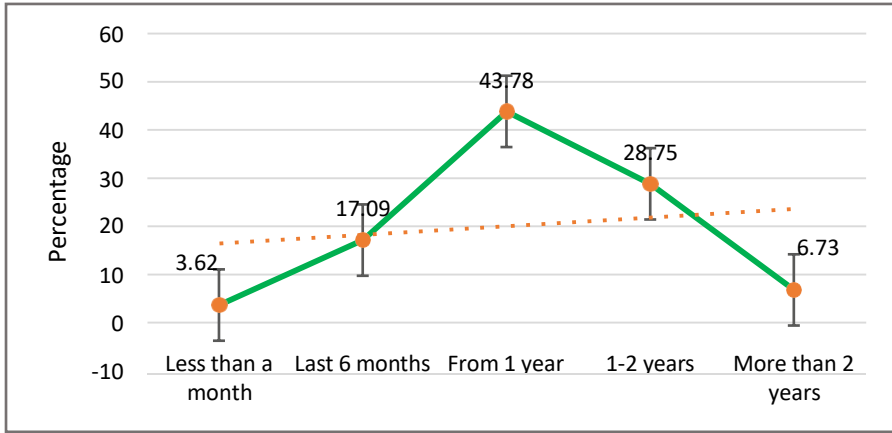


Figure 7: Students' Period of Starting the Use of SNS

Table 12

Students Preferred Places of Accessing SNS

SNS	FAH	FIMS	FSS	FNPS	Total
Department	34(37.77)	41(32.28)	27(31.03)	31(37.80)	133(34.45)
Library	5(5.55)	11(8.66)	3(3.44)	3(3.65)	22(5.69)
Computer lab	7(7.77)	20(15.74)	17(19.54)	4(4.87)	48(12.43)
Net cafe	-	2(1.57)	5(5.74)	7(8.53)	14(3.62)
Home	29(32.22)	44(34.64)	24(27.58)	21(25.60)	118(30.56)
Hostel	15(16.66)	9(11.81)	11(12.64)	16(19.51)	51(13.21)

Table 13

Problems Faced by Students in the Use of SNS

Sr.No.	Problems	Mean	SD
1	Lack of information	3.51	.717
2	Security and privacy	3.48	.831
3	Controlled access	4.11	.763
4	Advertisements	3.35	.841
5	Computer skills	4.21	.764
6	Time consuming	3.61	.608
7	Lack of facilities	4.11	.635
8	Power failure	4.78	.793

Note: 5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly disagree

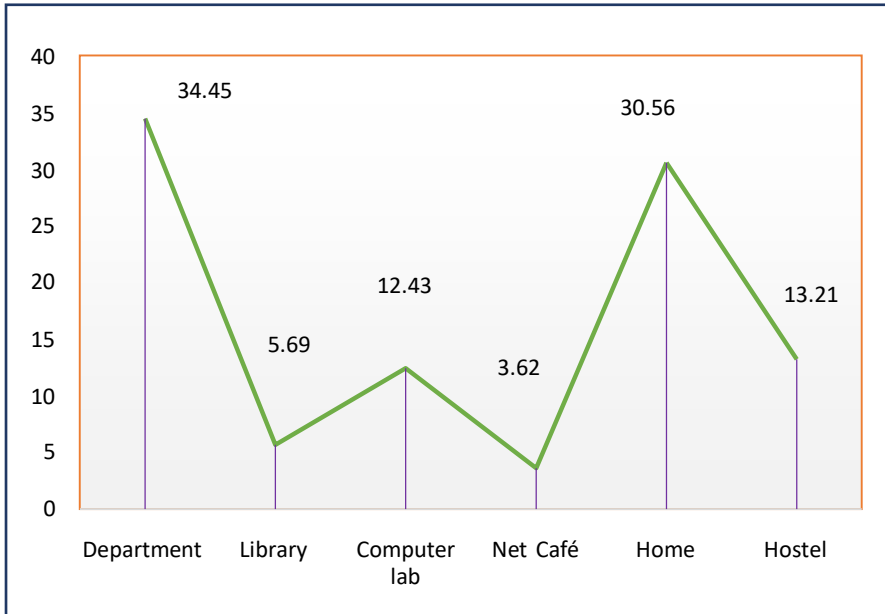


Figure 8: Students Preferred Places of Accessing SNS

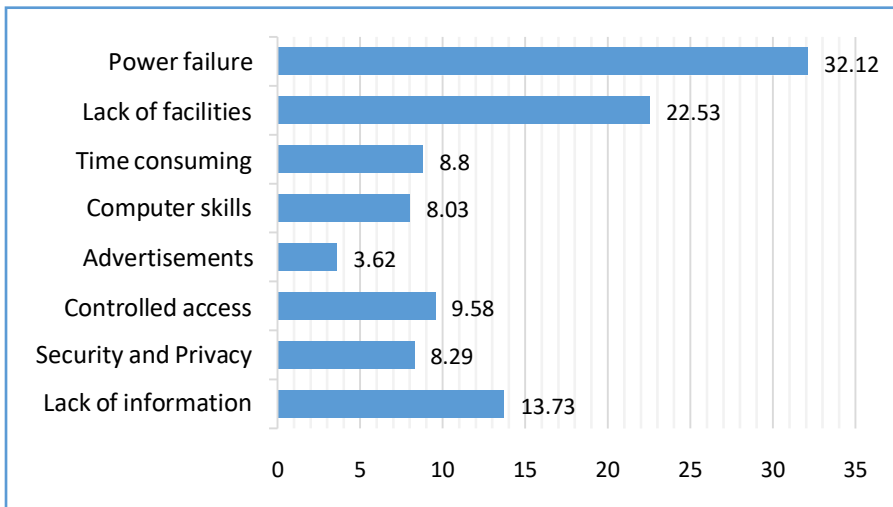


Figure 9: Problem faced by students in the use of SNS



DATA ANALYSIS & DISCUSSION

The present study was conducted on a sample of students enrolled in different programs of the University of Peshawar. To this end, data were collected from the students enrolled in four different faculties namely Faculty of Arts and Humanities, Faculty of Information and Management Sciences, Faculty of Social Sciences and Faculty of Numerical and Physical Sciences. Results showed the highest participation from students enrolled in different master level programs, out of which majority of the students were male. Further, results revealed that study participants were mostly in the age group of 26-30 years. The intended study also categorized respondents' participation by their respective faculties. Out of four faculties, the majority of the respondents were from the Faculty of Information and Management Sciences. The overall findings show that students of the University of Peshawar are aware of the roles and diverse functions of SNS and hence are its consistent users.

Regarding the most frequently used SNS, YouTube (80.56%, n= 311), Facebook (73.31%, n= 283), and Flickr (30.56%, n= 118) are the three frequently used SNS by the students in different faculties of the University of Peshawar. These results support several other researchers such as Singh and Gill (2015), indicating these sites as the most popular among the students. From the results, it is affirmed that students are using these SNS for various purposes such as information sharing, collaboration, photos, socializing etc. It is suggested that the University of Peshawar should adopt multiple strategies to ensure academic (healthy) utilization of such sites. Equally, results suggest that librarians in the University of Peshawar should incorporate these sites into their daily professional activities to reach students with the intention to promote library services and assist users in the pertinent utilization of information resources. The teaching community may also collaborate on these sites with their students to augment learning, teaching, and research processes. Since results report YouTube as the frequently used site by students, thus academic videos on YouTube probably facilitate teaching and learning processes. The utilization of such SNS may significantly improve learning outcomes and safe use of information resources. In addition, results also showed that majority of the students are not aware of the roles of few SNS such as RSS and WIKI. These students should be motivated through orientation courses by teachers and librarians.

In the context of tools regularly used for accessing SNS, this study identified laptops (46.11%, n=178) and smartphones (43.26%, n=167) as widely used.



Nonetheless, few students indicated interest in the use of desktop computers and iPad enrolled in the Faculty of Arts and Humanities and Faculty of Numerical and Physical Sciences. These students are mostly dependent on their laptops and smartphones to access SNS for information sharing. One of the probable reasons for this dependency of students on laptops may be the Prime Minister Laptop scheme that provides students with free laptops. However, advanced research in the context of students is required to recognize causes of rejection or acceptance of other tools of accessing the SNS. Librarians can also promote the idea of less used tools that probably assists in the pertinent utilization of information resources offered on SNS.

Results of the present study further indicated that students at the University of Peshawar are using SNS for three major purposes that are, information sharing (41.45%, n=160), socializing (31.34%, n=121), and friendship (29.27%, n= 113). These results are similar to the findings of Luo (2010) who indicated that students use SNS for information seeking, socializing, and friends making. It is assumed that students need counseling to comprehend the significant use of SNS. Too much use of such sites for friendship and socialization may negatively affect the academic performance of these students. Although, SNS are very significant instruments to communicate and collaborate with others but its excessive use for chatting and building friendships may spoil students' valuable time and reduce their academic and research capabilities.

Further, results demonstrate that sixteen percent of the students are using SNS for academic and research purposes, which is an alarming situation. Thus, concerned authorities should take tangible measures to embolden educational use of SNS that perhaps keep them informed and expedite the espousal of innovative ideas applicable to effective learning progressions. In terms of time, results confirm that students' average time of use of SNS is from thirty minutes to one hour. These results are parallel with the findings of Singh and Gill (2015) who stated that students exploit SNS for diverse time interludes. However, in comparison with the past findings, the span of time allotted to SNS usage is not very distressing. Likewise, results indicated that majority of the students have been adopting SNS for the last one year, indicating their level of awareness regarding the roles and functions of SNS. However, these students firstly access SNS from their departments and then from homes. It established that the University of Peshawar provides internet facilities to the students, but orientation courses are recommended to inform students about the positive and negative influences of



SNS. Regarding impediments faced by students in the use of SNS, this study explored power failure as a key obstacle. Relevant authorities are informed to take tangible actions to resolve such issues.

Based on the preceding discussions, the present study suggests to the university authorities; 1) to manage power failure to ensure utilization of SNS; 2) to organize suitable orientation and training programs to inform students about the academic use of SNS; 3) to instruct librarians to integrate SNS on their website to facilitate interactions and collaborations with students in their academic pursuits; 4) to direct teaching faculty to use SNS in teaching-learning process that probably stimulates positive utilization and; 5) training needs on students' technological skills should be assessed to determine the current skill levels and/or needed skill levels that further prompt to pertinent and safe utilization of SNS.

IMPLICATIONS OF THE STUDY

The results of this study revealed that students are aware of diverse roles of SNS. Students use SNS more for personal gratification and sociability but less for academic and research purposes. These students use SNS for long hours irrespective of age, gender, and qualification. In this regards, findings of this study have the following implications for students, university authorities, parents, and librarians in social, practical, and theoretical perspectives:

Social Implications

This study will inform people in the society about the good, the bad, and the ugly aspects of the SNS that possibly facilitate adopters to identify what type of SNS is valuable in terms of healthy use, productivity, societal image, information sharing, and interactive communication. The study also informs the parents and teachers to educate students in the inventive, academic, and safe use of SNS. This attitude will impede the ills of SNS that have resulted in the reduction of learning and research capabilities. A positive and educational adoption of SNS in the educational institutions may augment students' social, cultural, and organizational image.

Practical Implications

Since students are using SNS for personal gratification and entertainment and not for academic purposes, informing university authorities to take tangible actions towards sustainable policies that motivate positive and academic utilization of SNS. Teachers are also informed to fully utilize SNS in the classroom activities.



Institutional (universities) and personal (teaching faculty) can create memberships on SNS to share academic materials/information for students' needs. Besides that orientations courses, workshop, seminars, conferences, or symposiums can be organized to educate students about the healthy use of SNS that will enhance their academic performance and may probably save their precious time. Besides the above, librarians can use SNS on their website to provide information about diverse activities in libraries such as library news, job postings, seminars, fresh arrivals, students community engagement programs, digital reference services etc.

Theoretical Implications

This study extended the applications of Theory of Uses and Gratification towards SNS in the context of Pakistani university students.

FUTURE RESEARCH

Based on this research the following few suggestions/areas are provided for future researchers.

- In this study, we investigated only SNS but further research may be required on other aspects of the web 2.0 technologies;
- This study was carried in the context of University of Peshawar, Pakistan but other researchers may examine the same or additional constructs in their own context;
- A study at the national level on the use of SNS may be significant;
- This study was limited to the university students, however, it will be more beneficial if the same study is conducted at the college level;

CONCLUSION

The findings of this study established that SNS are famous and powerful tools on the Internet that can be utilized for academic and research purposes. It provides several tools that perhaps enhance students learning outcome and teaching competence especially, YouTube and WIKI. The positive utilization of YouTube enables students to understand multiple and complex concepts in the form of videos. Teaching faculty may motivate usability of SNS in their classroom activities. Likewise, results indicated that students rarely use WIKI at the University of Peshawar. It indicates that these students are not aware of its academic role, and that can be used as a technology for interactive communication. The findings establish that SNS especially Facebook is extensively used by the students. Students are not using SNS for academic and research purposes. It is therefore suggested to



provide orientation programs to inform students about the ills and benefits of SNS. University authorities should inform students about SNS as significant a way of communication, collaboration, and information sharing. Although, students are the frequent users of SNS and aware of its diverse roles, they tend to use it for gratification and socialization or to enhance the social relationships and not for academic purposes. The university authorities, teachers, and parents should guide students through guidance, counseling, mentorship, and orientation courses about the academic roles of SNS. It is equally critical for university authorities to manage power failure and motivate generalized, academic and research use of SNS.

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