

Analysis of Personal Information Sharing Behaviors of Students from UCS(Taunggyi)

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Abstract

Online social networks (OSNs) are more popular in today's and privacy concerns is also growing in a daily basis. University students, especially for computer university students must understand their privacy and security of personal information sharing on the OSNs. Most students are not fully understand what are personal information and how to prevent them from misusing it. Personal information sharing behaviors of students via OSNs are determined in this paper and it is the initial study to help the policy maker to establish or develop different types of information security law to protect information of individual on social networking sites. It can also study what type of student personal information are shared in OSN. A survey questionnaire was used to collect data from 201 students.

Keywords: personal information, information sharing, privacy, Taunggyi, computer university

1. Introduction

The online published information can be easily abused by stalkers and crooks, bullies, or even friends. Moreover, personal information of OSN users also provide opportunities to third parties to take advantages from it and use it without taking permission from owner of that information for their different business purposes such as customer segmentation, data mining, direct communication and online advertising. [4] [8] [9].

OSNs have become an integral part of communication and life style of people in today's world. Because of the wide range of services offered by OSNs mostly for free of cost, these sites are attracting the attention of all possible Internet users. Most importantly, users from all age groups have become members of OSNs. Since many of the users are not aware of the data thefts associated with information sharing, they freely share their personal information with OSNs. According to UN there is more than 3 billion people around the world using internet and the majority of them are but not limited in developed country, and the vast majority of internet users are between 16 and 24 years old [10] and OSNs site are some of the most frequently used.

Users often without knowing the audience accessing their private information, share the personal identifying information about themselves. Graham Cluley (Senior Technology Consultant at UK tech security firm- Sophos) says: "Social networks are great

fun, and can be advantageous but people really need to understand that it is a complicated world, and you need to step wisely" [12]. Protecting personal information privacy has become a controversial issue among online social network providers and users. Most social network providers have developed several techniques to decrease threats and risks to the users' privacy. These risks include the misuse of personal information which may lead to illegal acts such as identity theft.

Most internet users are age between 16 and 24. So their personal information sharing behaviors are an interesting topic in privacy issues. Moreover, most students are more interested in using OSNs like Facebook, Twitter, LinkedIn and etc. Their personal information are shared in OSNs without knowing how valuable their private information is. This paper aims to provide what kind of personal information has been shared on OSNs among computer university students of Taunggyi. More importantly, this paper will inform the student that how much their personal information they are revealing while using OSNs consciously or unconsciously.

2. Related Works

Most research regarding online social networks such as Facebook, MySpace, LinkedIn and Friendster has looked at these networks in terms of activity within the online network, such as profile management and friending behavior. Because students lead nomadic lives, they find Facebook a particularly useful tool for initiating and managing social gatherings, and as they adopt mobile technologies that can access online social networks, their ad-hoc social life is further enabled.

Louise Barkhuus and Juliana Tashiro emphasize that the use of online social networks must be viewed from perspective of use that involves both mobile and stationary platforms and that it is important to relate online and offline social practices. [5]

Since many of the users are not aware of the data thefts associated with information sharing, they freely share their personal information with OSNs. Therefore, OSNs may be used for investigating users' character and social habits by familiar or even unknown persons and agencies. Pallavi I. Powale and Ganesh D. Bhutkar focus on privacy in SNSs'. Different ways of Personally Identifiable Information (PII) leakages from SNSs, information revelation to third-party domains without user consent and privacy related threats

associated with such information sharing are discussed in the paper. The sensitive information like user's personal photo, name, gender and location are more prone to leakage until proper privacy settings are applied by user. Due to the information leakage, threats related to digital dossier aggregation, face recognition and CBIR can harm users privacy. [12]

Nahier Aldhafferi, Charles Watson and A.S.M Sajeev measure the awareness of users on protecting their personal information privacy, as well as the suitability of the privacy systems which they use to modify privacy settings. Because most users use their mobile phones for Internet services, privacy settings that are compatible with mobile phones need to be developed. Results of the study can be used to develop a new privacy system which will help users control their personal information easily from different devices, including mobile Internet devices and computers. [7]

Little research has been conducted to determine the behavior of sharing personal information by university students via Social Networking Sites(SNSs) and Internet. Previous studies only focus on the students under 18 (teenagers) and does not fully understand how students share their personal identifiable information (PII) in online SNSs [1] [4] [11]. Therefore, it is needed to determine the personal information sharing behavior of university students via SNSs and Internet by identifying the types of personally identifiable information shared and the traits of students who share personally identifiable information.

Ghulam Murtaza Rafique study the personal information sharing behaviours of university students. Quantitative approach was used and a survey questionnaire was solicited to collect the data from 250 out of 712 master's students of faculty of Economics and Management Sciences, University of the Punjab, Lahore, Pakistan. Equal sized stratified simple random sampling technique was used to select the required sample size. The study finds most of the university students shared their personal information like first name, last name, and the college they attended on OSNs. They rarely updated their profiles and labeled the uploaded photos/ videos with their own names. They mostly used their cell phones to use OSNs and female were conscious to disclose their personal information on OSNs as compared to male students. [13]

Information security is increasingly popular in these days and awareness of privacy is also important for OSNs user especially students from different cybercrimes related to the study. Despite an increase interest in OSNs and their usage, there is no study and survey on personal information sharing behaviours of university students through OSNs, especially from the perspective of Myanmar students.

3. Design and Procedures

Quantitative approach was used and a survey questionnaire was solicited to collect the data from 201 students of UCS(Taunggyi).

The population of the studies consists of currently enrolled computer science and computer technology students from second year to final year. Survey questions was used to collect data which was adapted by [13] in which survey was carried out for 250 out of 712 master's students of faculty of Economics and Management Sciences, University of the Punjab, Lahore, Pakistan. Questions are modified according to the needs of computer university students and local scenario. The survey was for Myanmar computer university student and there was a cultural, economic, religious and social differences between those two populations.

4. Results and Discussion

4.1. Demographic Information

The distribution of the respondents by gender is in favor of females with 75.1 percent compared to 24.9 percent for males. (Table 1)

Table 1. Respondents by gender

Gender	Frequency	Percentage
Male	50	24.9 %
Female	151	75.1 %
Total	201	100.0%

The distribution of the respondents by age group shows that a large majority (91.5%) falls in the age-group of 18-24. A very small number (8.45%) is in the age group of 'up to 18'. (Table 2)

Table 2. Respondents by age group

Gender	Frequency	Percentage
Up to 18	17	8.54
18-24	184	91.54 %
Total	201	100.0%

4.2. Personal information sharing via Online Social Networks (OSNs)

The students were asked about mostly used OSNs. Majority of the respondents (97.5%) replied that they frequently used Facebook. Out of the total respondents (201), only 3 used Twitter and only 1 used other social network like linkin (Figure 1).

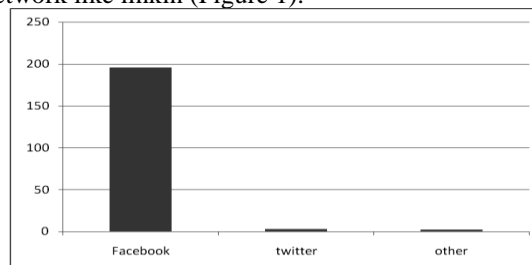


Figure 1. Most frequently used Online Social Network (OSN)

Most of the students (67.7%) used OSNs several times a day, while 45 (22.4%) used about once a day. Only 15 (7.46%) replied that they spent few time 1-2

days a week and 5 (2.49%) said that they used OSNs every few weeks. (Table 3)

The results revealed that mostly university students spent most of their time to use OSNs. There would be an interesting topic to study the purpose of student using social network, either educational purpose or infotainment. The use of social networking sites among students were increasing and they used these Web 2.0 technologies several times a day.

Majority of the students 198 (89.9%) used smart phones or other digital devices to use OSNs, only 3 (1.49%) used laptop computers for this purpose. Mostly students used smartphones due to the ease of access to these devices and to send an image to other students.

Table 3. Frequency of using online social network (OSN)

Use of OSN by student	Frequency	Percentage
Several times a day	136	67.7 %
About once a day	45	22.4%
1-2 times a day	15	7.46
Every few weeks less often	5	2.49
Total	201	100.0%

4.3. Mostly Posting and Uploading on OSNs

Some respondents did not answer the questions about mostly uploaded on OSNs and so there was only 197 out of 201 respondents. Majority of the students 114 (57.8%) mostly uploaded photos, while 76 (38.5%) posted status and only 7 (3.5%) uploaded videos that is very small amount. (Figure 2) The respondent labeled their uploaded photos or videos with the place it was taken are 89 (46.11%). Among 197 respondents 46 (23.8 %) labeled with their name and only 6 (3.1%) labeled with their friends names. Interestingly, 52(26.9%) labeled using emoji and their feelings.

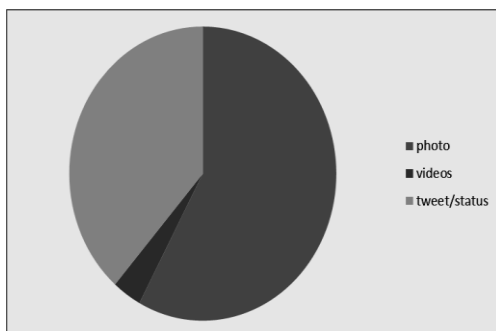


Figure 2. Mostly uploading and posting on Online Social Network (OSN)

4.4. Types of Personal Information Shared

The students were also asked about their personal information shared via OSNs. 166 of students replied that they shared their name, 184 shared their university name, 142 shared their birthday and 152 shared their home town address. Whereas, of the total respondents, 157 responded that they don't share their cell/ mobile

phone number, 173 don't disclose their class schedule and 177 don't reveal their height/weight onto OSNs (see Table 4).

Table 4. Types of personal information shared (n=201)

	n	Yes	No	Don't know
a. Your name	201	166	27	7
b. Your cell/ mobile number	201	44	157	0
c. Your home phone number	201	27	173	1
d. university you attend	201	184	14	3
e. Your birthday	201	142	55	4
f. Your high/weight	201	14	177	10
g. Your class schedule	201	20	173	8
h. Your Instant Messenger screen name	201	38	146	17
i. Your email address	201	61	136	4
j. Your blog/ link to your blog	201	16	160	25
k. Your home town address	201	152	46	3

4.5. Types of Personal Information Shared on OSNs: Gender-wise Cross Tabulation

The results of Table 5 showed that 115 female students did not share their personal cell numbers, 129 did not share their home phone numbers, 130 did not disclose their heights and weights related information, 131 did not unveil their class schedule, 110 did not show their Instant Messenger screen name and 106 did not share their email address onto OSNs. Nearly the same percentage of male did not share the above personal information on OSNs. There is no gender differences between personal information sharing habits in University of Computer Studies (Taunggyi). Due to the cultural and social constraints and religious factors, number of female who did not share their personal information than male in previous studies of students in University of the Punjab, Lahore, Pakistan [13].

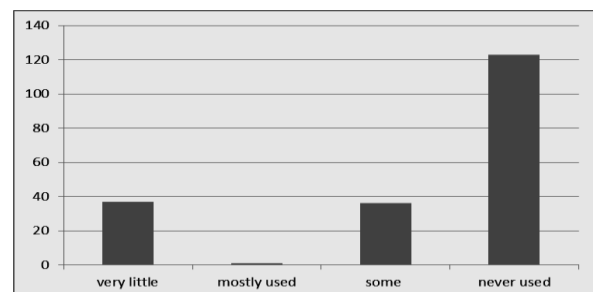


Figure 3. Used of faked information on Online Social Network (OSN)

4.6. Use of Fake Information on OSNs

The respondents were asked about the usage of fake information instead of real information shared via

OSNs. Of the total respondents, 123 (62.4%) replied that they never used fake information on OSNs. The respondents 37 (18.7%) used very little and 36 (18.2%) used fake information on OSNs. Only 1 (0.51%) mostly used fake information. (Figure 3) Sometimes due to prevent from the consequences of using real information on OSNs like cyber stalking, information theft or other cybercrimes, they should not disclose their real information.

Table 5. types of personal information shared; Gendar -wise cross tabulation (n=201)

		Gendar		Total
		Male	Female	
Cell/mobile phone number shared on OSNs	Yes	8	36	44
	No	42	115	157
	Don't Know	-	-	
Home phone number shared on OSNs	Yes	6	21	27
	No	44	129	173
	Don't Know	-	1	1
High/weight shared on OSNs	Yes	2	12	14
	No	47	130	177
	Don't Know	1	9	10
Class schedule shared on OSNs	Yes	5	15	20
	No	42	131	173
	Don't Know	3	5	8
Instant messenger serene name shared on OSNs	Yes	11	27	38
	No	36	110	146
	Don't Know	3	14	17

4.7. Perception about Sharing Personal Information on OSNs

The students were asked concerning their perception about sharing personal information posted on OSNs. 129 (65.8%) of students slightly think about their personal information being shared by OSNs while 40 (20.4%) respondents did not think about it. Only 27(13.7 %) respondents think moderately about their personal information being shared.

The same percentage 87 (44.6) of respondents think slightly and also did not think about OSNs that share their personal information with other companies. Most respondent 108 (56.2%) slightly think about that other individual can share their personal information and 35 (18.2%) did not think about it. 95 (48.7%) slightly think about that the employee of the OSNs that can share their personal information but 77 (39.4 %) did not think about it.

Only a small percentage of respondents moderately think about their personal information being shared by OSNs, and shared with other companies and employee of the OSNs. Among the respondents 49 (25.5 %)

moderately think that their personal information can be used by other individual. (Table 6)

The findings show that most of the student did not care about their personal information being shared by other organization or OSNs. They slightly think about it. 108 (56 %) of the students worried about their personal information that might be used by other individual and they disclosed their personal information. In [13], it is found that the participants moderately think that their personal information which are shared by the OSNs or with other companies but their feeling is weak.

Table 6 Perception about sharing personal information

	N	S	M
To what extent do you think about your personal information being shared by OSNs (Facebook, Twitter, etc.)	40	129	27
To what extent do you think that OSNs (Facebook, Twitter, etc.) share your personal information with other companies?	87	87	21
To what extent do you think that other individuals use any information you provided on OSNs (Facebook, Twitter, etc.)	35	108	49
To what extent do you think about your personal information provided (Facebook, Twitter, etc.) being shared by employees of OSNs (Facebook, Twitter, etc.)?	77	95	23

N= not at all, S= slightly, M= Moderately

The findings unveiled that the university students thought their information on OSNs might be used by other people, other organizations or by the employees of OSNs. K. B. Anderson et al. [3] also found that the users of the OSNs are always threatened about the disclosure of their personal information to any other suspicious persons or organizations. Small amount of students concerned about their personal information so that the student must learn the important of their personal information and should not disclose their personal information.

4.8. Personal Information Shared by Respondents on OSNs

The students were also asked about revealing their personal information via OSNs. Majority of the students 184 had their own profile posted online that others could see; 135 allows anyone to see their profiles; 116 included a picture of themselves on their profiles; and 113 write or comment about other people page. (Table 7)

On the other hand, of the total respondents, 162 did not include their home address, 161 and 156 respondents did not include their hobby/interest and their personality in their profile. 149 respondents did not spent time in personalizing their profile.

Table 7. Personal information shared by respondents on OSNs

statements	Yes	No	Don't know
Do you have your own profile online that others can see?	184	0	17
Do you allow anyone to see your profile?	135	41	25
Do you include a picture of yourself on your profile?	166	32	3
Do you include your home address on your profile?	37	162	2
Do you include information about your interests and/or hobbies on your profile	36	161	4
Do you include information about your personality on your profile?	42	156	3
Do you write or comment about other people's profile pages?	113	86	2
Do you write or comment about other people's profile pages?	39	115	3
Do you spend time personalizing your profile page?	45	149	5

5. Conclusion

A side effect of using online social networks is beginning to emerge: people are losing their privacy. Many individuals freely share their information with companies, acquaintances, and the public via the Internet. As a result, they are giving up pieces of their identity. These pieces of information, more precisely called personally identifiable information, can help an identity thief create a profile of an individual(s). Examples of personally identifiable information include: name, address, city, telephone number(s), socialsecurity number, birth date, credit card number(s), school(s) attended, photos, and videos. [6]

This study has revealed multiple opportunities for future research. Many students used facebook several times a day with their digital or mobile devices. Many students shared their personal information such as their college name, birthday and their hometown address. Around 25% shared their cell or mobile phone number, instant messenger screen name and email address. So, there would be worthwhile to study if there is any threat such as phishing or cybercrime happen to them. The survey only focus on Taunggyi Computer University students

and survey questions are also limited. There must be more detail questions about their personal information. The survey would be administered in parallel at all the other universities. Finally, the results would be analyzed, per university, and compared with the other universities' results that are participating in the study.. Finally, a nationwide survey can be analyzed and this survey can help the policy maker to develop different information security law to protect individual information on social networking sites.

References

- [1] A. Lenhart, "Teens and social media: The use of social media gains a greater foothold in teen life as they embrace the conversational nature of interactive online media: Pew Internet & American Life Project", 2007.
- [2] G. M. Rafique, (2012) Privacy and Security Issues in Social Networking, available at <http://www.fastcompany.com/articles/2008/10/socialnetworkingsecurity.html?page=0%2C0>.
- [3] K. B. Anderson, E. Durbin, and M. A. Salinger, "Identity theft." *The Journal of Economic Perspectives*, 22(2), 171-192, 2008.
- [4] K. Naryshkin, Study on the Leakage of Private User Information Via a Range of Popular Websites, 2010.
- [5] L. Barkhuus, J. Tashiro, Student Socialization in the Age of Facebook, CHI 2010, April 10–15, 2010, Atlanta, Georgia, USA, 2010.
- [6] M. B. Flinn, Personal Information Sharing Behaviors of College Students via the Internet and Online Social Networks: A Case Study. ProQuest LLC, 2009.
- [7] N. Aldhafferi, C. Watson and A.S.M Sajeev, Personal Information privacy settings of online Social Network and their Suitability for Mobile Internet Devices, *International Journal of Security, Privacy and Trust Management (IJSPTM)* vol 2, No 2, April 2013
- [8] R. Gross, & A. Acquisti, Information revelation and privacy in online social networks. Paper presented at the Proceedings of the 2005 ACM workshop on Privacy in the electronic Society, 2005.
- [9] S. B. Barnes, A privacy paradox: Social networking in the United States. *First Monday*, 11(9), 2006.
- [10] S. Teltcher, E. Magpantay, L. Vallejo, L. Kreuzenbeck, D. Korke, V.Gray, D. Olaya, M. Hilbert, M. Minges, N. Delmas, O. Poupaert, M. Adolph and C. Zavazava, *Measuring the Information Society*. Geneva: International Telecommunications Union, 2012.
- [11] S. Hinduja, and J. W. Patchin, Personal information of adolescents on the Internet: A quantitative content analysis of MySpace. *Journal of Adolescence*, 31(1), 125-146, 2008.
- [12] P. I. Powale, G. D. Bhutkar, Overview of Privacy in Social Networking Sites (SNS), *International Journal of Computer Applications* (0975 – 8887) Volume 74– No.19, July 2013
- [13] G. M. Rafique, Personal Information Sharing Behavior of University Students via Online Social Networks, *Library Philosophy and Practice (e-journal)*, 1454, 2017.