

Personal Information Disclosure in Facebook: The Awareness of UiTM Pahang Students

Mohd. Ikhsan Md. Raus, Ikmal Hisham Md Tah, and Saadiah Yahya

Abstract—As the use of computers and the internet become more popular and emerging from time to time, the issue of protecting personal information has become more vital and crucial. In order to protect the personal information, several organizations and countries have issued legislation, laws and rules which should be followed in order to protect personal information. Furthermore, there is no awareness among the Malaysians who use Facebook especially about their rights and protections by the law. Thus, a set of questionnaire has been distributed to 274 of UiTM Pahang students randomly to measure their perceptions on the data visibility via Facebook and suggested the precaution that should be taken to prevent any unintended issues such as cybercrime, suicide, sexual harassment, identity theft, copyright infringement involving videos and pictures. The analysis findings revealed that 68.6% of respondents were aware of the risks occurring once they disclose their private information in Facebook and 69% of them were aware that they have the rights on the personal information provided under a law. Through education and awareness, users will be more willingly and effectively utilize privacy and security settings available on SNS.

Index Terms—Facebook, privacy concerns, social networking, data protection.

I. INTRODUCTION

New social technologies have altered the underlying of architecture of social communication and information circulation. Nowadays, social networking site (hereinafter as SNS) like Facebook, MySpace and Friendster are ubiquitous and today's youth are spending a lot of time using these sites to access public life. SNS also becomes a new Information Communication and Technology (ICT) tools for people to communicate with each other at different geographical areas. The present research will focus on Facebook as it has the most users recently, gaining rapid popularity [2] nowadays, yet we also have other famous SNS such as Twitter, LinkedIn, Foursquare, MySpace, Friendster and so forth. Statistic until December 2011 show that Facebook has 800 million users among the worldwide [3], and only 12, 159, 260 among them are Malaysian users who have Facebook account [4].

Facebook is a social communication tool designed to allow users to contact and communicate with other users [3]. They are connected together to communicate, collaborate, sharing ideas and keep updating with the entire friend's matter

without boundaries. Facebook allows their users to send messages, upload photos, update status and locations and describe the personal interests such as favorite movies, books, dramas and so forth. In addition, Facebook provides a "wall" where users can post any messages to user's profile and attach any linkages, photos and videos. Facebook also provides a function where users can create a group for any invited users based on their same schools, same interest, same class or anything. Many things can be utilized by using Facebook as a primary communication tools as Facebook has upgraded its services and facilities to ease users social life such as uploading photos, set to different languages, use the games or useful applications, use Facebook platform in other website, link users phone to Facebook and beneficial for other third party companies to link their website with Facebook.

A. Background and Motivation

As SNS is type of online communities that have grown tremendously in popularity over the past years [5], privacy issues have become the major concern for users, especially youth. The disclosed information may somehow expose them to several of cybercrime and cyber-attacks, such as sexual harassment, unauthorized use of data, suicide, producing obscene material, and infringement of copyright [6]. People seem to forget that they are revealing their personal information to those who are not in their circle of friends as Facebook has become a part of daily life for many people because of the easy and convenient communication.

There are several legal provisions dealing with the using of SNS. In most cases, Facebook users will find that their identity or data might be stolen by others, cyber porn, sexual harassment, copyright infringement involving videos, pictures which lead to breach of the terms used. The Computer Crimes Act 1997, Communication and Multimedia Act 1998 and Penal Code are dealing with the issues involving cybercrime in Malaysia. However the focus of this paper will be on data protection and privacy which is the main concern among young generation when using SNS. In protecting their personal data and privacy when using SNS, law has become important mechanism either looking for statutory obligation or case decided by judges. Currently, Malaysia has passed the Personal Data Protection Act 2010 (hereinafter known as PDPA 2010) which was gazetted in June 2010 and expected to enforce soon. The act covers personal data used for commercial purpose under Section 4 and must fulfilled three requirements; (a) is being processed wholly or partly by means of equipment operating automatically in response to instructions given for that purpose; (b) is recorded with the intention that it should wholly or partly be processed by means of such equipment; or (c) is recorded as part of a relevant filing system or with

Manuscript received October 20, 2012; revised November 18, 2012. This work was supported in part by the Excellence Fund funded by Research Management Institutes (RMI) UiTM Shah Alam, Malaysia.

Mohd. Ikhsan Md. Raus and Saadiah Yahya are a Computer Science lecturer at Universiti Teknologi MARA (UiTM) Cawangan Pahang, 26400 Bandar Tun Abdul Razak Jengka, Pahang Darul Makmur (e-mail: mohdikhsan@pahang.uitm.edu.my, saadiah@tmsk.uitm.edu.my).

Ikmal Hisham Md Tah is a Law lecturer at Universiti Teknologi MARA (UiTM) Kampus Kuantan, Kuantan, Pahang Darul Makmur (e-mail: ikmal@pahang.uitm.edu.my).

the intention that it should form part of a relevant filing system, that relates directly or indirectly to a data subject, who is identified or identifiable from that information [7].

A person will face a fine not exceeding RM300,000 and/or imprisonment for a term not exceeding two years if convicted with breach of the above seven data protection principle under Section 5(2) PDPA 2010. Furthermore, Section 2(1) of PDPA 2010 however, stated that the processing of the data only applicable for commercial activities. These activities might include commercial nature like exchange of goods or services, agency, investment, financing, banking and insurance. However, there has been argued that the act itself does not include data protection over non-commercial activity. It seems difficult to draw a line between the personal data that had been use for commercial and non-commercial purpose [7]. The act itself has two types of exemption; total and partial. Any personal data processing from personal, family/household affairs and recreational purpose are exempted from the application in the act. Partial exemption is applicable when data processing involve crime and taxation, physical and mental health, research, statistic, journalism, literature and artistic [7],[18]. Assuming that the personal data has been used for commercial activities such as online shopping, promoting goods or services, the act may cover but not personal data used for other non-commercial area. The question here is that, did this non-covering of non-commercial activities would affect the using of SNS especially by young generation? Does their personal information or pictures stored in the SNS would be open to abuse and misuse by other parties?

Secondly, privacy becomes another issue when using SNS. one of the major concerns of internet users today is the privacy of personal data they release every time they visit a website. Tagging pictures and videos are another example of the privacy concern within Facebook. Even tough the user has the opportunity to restrict their privacy, there is no legal framework address this concern [19]. In Malaysia, Federal Constitution did not mentioned specifically on the right of privacy. However, in the case of *Sivarasa Rasiah v. Badan Peguam Malaysia & Anor.* [2010] 2 MLJ 333 recognized the right of privacy as including rights of life protected under Article 5 of the Federal Constitution. In statutory laws and regulations, several statutes that dealing with privacy are; Birth and Death Registration Act 1957, the Child Act 2001, the Law Reform (Marriage and Divorce) Act 1976, the Penal Code, the Private Healthcare Facilities and Services Act 1998, the Communication and Multimedia (Licensing) regulations 1999, Private Hospitals Regulations 1973, and the Bank Negara Guidelines on Data Management and MIS Framework [7]. Recently, there has been controversial issue regarding the amendment to Section 114A of the Evidence Act 1950 which mean a person who is depicted in a publication as owner or administrator is presumed to have published the contents [20]. This has been raised the concern of manipulation by others that concern with privacy. Unfortunately, the rights of privacy has not been considered actionable per se by court in the case of *Ultra Dimension v Kook Wei Kuan* [2004] 5 CLJ 285 that involve infringement of photo to the a group of kindergarten's pupils for the purpose of advertisement.

The only way our law concern with the breach of privacy was the infringement on the abusing woman photograph as decided in the case of *Maslinda bt Ishak v Mohd Tahir bin Osman & Ors* [2009] 6 MLJ 826. In this case the court allowed damages been given to the Appellant when her picture squatting and urinating in the truck had been taken without permission by enforcement officer in a raid. Even this case allowed the expansion of rights of privacy towards woman's photograph; however, there is much concern on the possibility of picture being posted in the SnS. Malaysian court should take positive approach in determining the concept of privacy pertaining to the cyberspace. Thus, the law of privacy in Malaysia needed to address within specific legislation and extend the rights of privacy to the use of SnS [17]-[19].

Thus, the present research will investigate the awareness of UiTM Pahang students towards their legal rights and data protection especially on personal data and privacy when surfing SNS. Through education and awareness, users will be more willingly and effectively utilize privacy and security settings available on SNS [1].

B. Related Work

The present research focuses on youth, as the majority of Facebook users are between the 18-24 years old [8]. Meanwhile from the other statistics (www.socialbakers.com) shows the same result as 34% of Facebook users in Malaysia are aged 18 to 24. Young adulthood is the time where individuals often learn new skills, experience new things and experiment with changes [9]. It has led to the issue on the protection on their personal data and privacy within cyberspace. Data protection law has been emerged as new area and many countries have enacted the legislative mechanism. [6], [7], [18]. A lot of previous studies has done and engaged on privacy concerns and risks taking when disclosed personal information in SNS, especially Facebook [5]-[15]. Mostly users are aware of the risks on disclosing too much information [11], but somehow they do not have much time to change the privacy settings [1], [5], [14] and feel comfortable to disclose the personal information [13]. General privacy concerns and identity information disclosure concerns are of greater concern to women than men [9]. The more the data exposed to the public, the less awareness of users towards the personal data and only less users change their privacy settings [8]. As a result, individuals with SNS account have greater risks taking than those who do not have an account and mostly women have the concerns on privacy and identity information than man [10]. Individuals who have the self-disclosed intentions exposed themselves to a negative impact on their social life and personal life [15]. Age and relationship statuses in Facebook account were important to determine the disclosure of information. As age increased, the disclosures are also decreased [10]. But it is contradicted to the research finding [12] as most of university students are concerned about their privacy.

II. RESEARCH METHODOLOGY

The preliminary step involved is library-based researches which analyze the legal position on data protection and

privacy through legislations, books, journal articles and websites. In order to look to the response from students, a survey has been conducted to 300 students. Unfortunately, it was 274 set of questionnaires are returned. The survey is adapted from [5]-[14] researches and modified by the author to make it suitable with Malaysian students in UiTM Pahang and strengthen the information available in survey. The questionnaires consisted of five main parts: 1) background information, 2) information disclosure, 3) student awareness on risks occurred once information disclosed, 4) Facebook terms and use and privacy policy, and 5) students awareness on the legal rights and data protection. Participants were 274 students among students the age of 18 – 24 from various field of study. Participants were approached and asked to complete a form of surveys.

III. FINDINGS AND ANALYSIS

This study aims at finding the awareness of UiTM Pahang students towards the legal rights and data protection. Samples of 300 students were selected randomly from different field of studies in UiTM Pahang. A net of 274 questionnaires were filled correctly and returned. 43.1% of the respondents were males and 56.9% of them were females. On the other hand, approximately 51.8% of the respondents were in the age of 20 years old. Regarding the field of study of the respondents, most of them were from Science and Technology field (66.8%), while from Social Science and Humanities field and Management and Business field were only 9.1% and 24.1% respectively.

Table I illustrates that the percentage of respondents who share their information in Facebook. 87.2% of the respondents include the picture of themselves on profile. Furthermore, almost 57.7% include their e-mail address on their profile. Approximately 35.4% include their instant messaging address. 67.5% use their real name on their profile. Interestingly, there is a few percentage of the respondents include their phone number and home address with 5.8% and 8.4% respectively.

TABLE I: THE PERCENTAGE OF RESPONDENTS WHO SHARES PERSONAL INFORMATION IN FACEBOOK

Category	Frequency	Percentage (%)
Picture of themselves	239	87.2
E-mail address	158	57.7
Instant messaging	97	35.4
Phone number	16	5.8
Home address	23	8.4
Real name	185	67.5

Overall, 68.6% of respondents were aware of the risks occurring once they disclose their private information in Facebook. See Table II. Table III describes that female are more concern on the risks of exposing personal information by 110 respondents compared to the male. This study suggested that male respondents are comfortable with how much the information they revealed in online social

networking site, supported by research conducted by Campbell et. al (2001), concludes even though individuals express concerned and awareness about internet privacy, they are still willing to engage in risky online activities.

TABLE II: RESPONDENTS WERE AWARE THE RISKS OCCURRED ONCE INFORMATION WAS DISCLOSED

Category	Frequency	Percentage (%)
Yes	188	68.6
No	86	31.4

The percentage of websites that currently included statements about their privacy and personal data practices are growing. These statements are documented and called as privacy policy. User need to follow the privacy policy stated in the websites and their personal information will be protected.

TABLE III: NUMBER OF RESPONDENTS WHO WERE AWARE OF THE RISKS OCCURRED ONE INFORMATION DISCLOSED CATEGORIZED BY GENDER

Category	Gender		Total
	Male	Female	
Are you aware the risks occurring once you disclose your personal information in Facebook?			
Yes	78	110	188
No	40	46	86

TABLE IV: THE PERCENTAGE OF RESPONDENTS WHO READ THE FACEBOOK PRIVACY POLICY AND THOSE WHO DID NOT READ

Category	Frequency	Percentage (%)
Yes	123	44.9
No	151	55.1

TABLE V: REASONS WHY RESPONDENT DID NOT READ THE FACEBOOK PRIVACY POLICY

Category	Frequency	Percentage (%)
Take too much effort	119	43.4
Lack of awareness	54	19.7
Trust Facebook so much	8	2.9
Difficult to understand	92	33.6

Table IV demonstrates the percentage of respondents who read the Facebook privacy policy and those who did not read before. To begin with, 44.9% of respondents read the Facebook privacy policy while 55.1% did not read it. There are several reasons identified why respondents did not read the Facebook privacy policy. See Table V. 43.4% of respondents agreed that it takes too much effort to read the Facebook terms of use and privacy policy and 33.6% of them decided to choose that the Facebook privacy policy were difficult to understand. The other respondents stated that they were not aware of the policy and they trust Facebook so much so that they did not have to read the policy. About 0.4% of the respondents were missing. This finding was supported by the research done by Ofcom [16] where the lack of the awareness, trust the online social networking site so much and low level of confidence in manipulating the privacy settings are the factors why people are unconcerned about the risks occurred.

Table VI describes the possibility of risks where respondents are more concern on after they have published or exposed their personal information via SNS. 214 respondents agree that identity theft or personal information theft are the highest risk they may face once the personal information are disclosed in SNS, followed by unauthorized use of access with 67% and cyber-porn with 59% of 135 respondents. The lowest risk may faces by the respondents are suicide with 43 respondents respectively.

TABLE VI: RISKS CONCERNED ONCE THE PERSONAL INFORMATION DISCLOSED

Category	Frequency	Percentage (%)
Identity theft/Personal information stolen	214	78
Defamation/Humiliation	120	44
Sexual	131	48
Unauthorized use of access	185	67
Infringement of copyright	83	30
Internet fraud/credit card stolen	77	28
Cyber-bullying	58	21
Suicide	43	16
Cyber-porn	135	49

Around the world, one of the fastest growing crimes is the crime of identity theft [21]. In the beginning of 2005, there are a lot of major security breaches reported in the United States of America and this case has increased the attention of several organizations on the issue of data privacy and security which resulted in adoption of new laws and proposed laws.

Table VII describes that 69% of respondents were aware that they have the rights of their personal information under a law from being manipulate and misuse by third party, especially in internet or social networking site. Unfortunately, only 31% of respondents were aware that Malaysia has PDPA 2010, the act that protect personal data processing by others in commercial transactions either stored or recorded or managed automatically or as a file system to avoid them from being misused.

TABLE VII: THE PERCENTAGE OF RESPONDENTS WHO WERE AWARE THEY HAVE THE RIGHTS OF DATA UNDER A LAW AND AWARENESS TOWARDS PDPA 2010 IN MALAYSIA

Category	Frequency	Percentage (%)
Aware have the rights of data under a law	189	69
Aware Malaysia has PDPA 2010	85	31

At the end of the survey, respondents were asked on changing the privacy settings in Facebook after done this survey. Fortunately, 83.2% agreed to change the privacy setting especially on the personal information in Facebook. This indicates that increasing awareness of privacy might result in more careful behavior in online social networking.

IV. CONCLUSION

Online social networking offers new opportunities for interaction, collaboration, communication in an easy and inexpensive way to maintain the existing relationship. It is apparent that from this study that security of information is taking on growing importance. The adoption and enforcement of existing laws in Malaysia are necessary in order to protect people personal information from being misused by irresponsible party.

This study found that majority of the UiTM Pahang students were aware of the issues on legal rights and concerned about their data protection. In addition, they continue to use Facebook by changing the setting of privacy setting in their profile after completing the survey. This might due to the publicity and education given on privacy concerns about online social networking though the previous cases happened in Malaysia and from the online and offline discussion by people in the surroundings.

The privacy policy of Facebook were largely took a lot of effort to understand by the respondents and the language used are difficult to understand. However, many of the respondents were awakened by the survey and decided to pay more attention to their privacy settings in the future. To polish the awareness among Malaysia, government should provide and hold a lot of program to raise the awareness of privacy and data protection.

Overall, this study is important because it provides the evidence on the awareness of users towards the PDPA 2010 and laws pertaining to privacy in Malaysia, which a new field to be explored as there are only a few of research done in relation to do with SNS.

ACKNOWLEDGMENT

The authors would like to thank Research Management Institute (RMI), UiTM Shah Alam, Malaysia for funding this project through Excellence Fund in 2011. We would also like to thank to the individuals for their comments and supports in creating this manuscript, especially the members of Faculty of Computer and Mathematical Sciences (FSKM) UiTM Cawangan Pahang.

REFERENCES

- [1] K. E. Vinson, "The blurred boundaries of social networking in the legal field: Just "Face" it," University of Memphis Law Review, 2010.
- [2] K. Yum, "Facebook says 'Thanks, Canada'," *National Post*, May 18, 2007.
- [3] Face book. [Online]. Available: www.facebook.com
- [4] Socialbakers. [Online]. Available: www.socialbakers.com
- [5] O. P. Tuunainen and V. K. N. Hovi, "User's awareness of privacy on online social networking sites – Case of Facebook," *22nd Bled eConference, eEnabement: Facilitating an Open, Effective and Representative e Society*, Bled, Slovenia, June 14 – 17, 2009.
- [6] A. B. Munir and S. H. M. Yassin, "Information and communication technology law state, internet and information legal and regulatory challenges," Petaling Jaya: Sweet Maxwell Asia, 2010.
- [7] A. B. Munir and S. H. M. Yassin, "Personal data protection act: Doing well by doing good," *Malayan Law Journal*, vol. 1, 2012.
- [8] R. Gross and A. Acquisti, "Information Revelation and Privacy in Online Social Networks (The Facebook Case)," ACM Workshop on Privacy in the Electronic Society (WPES) 2005.

- [9] J. Fogel and E. Nehmad, "Internet social network communities: Risk taking, trust and privacy concerns," *Computers in Human Behavior*, vol. 25, pp. 153-160, 2009.
- [10] A. Nosko, E. Wood, and S. Molema, "All about me: Disclosure in online social networking profiles: The case of Facebook," *Computers in Human Behavior*, vol. 26, pp. 406-418, 2010.
- [11] M. R. Hasan and H. Hussin, "Self awareness before social networking: Exploring the user behaviour and information security vulnerability in Malaysia," in *Proc. of 3rd International Conference on ICT4M 2010*.
- [12] L. A. Shafie, M. Mansor, N. Osman, S. Nayan, and A. Maesin, "Privacy, trust and social network sites of university students in Malaysia," *Research Journal of International Studies*, no. 20, September 2011.
- [13] T. Govani and H. Pashley, "Student awareness of the privacy implications when using Facebook."
- [14] H. O. Abdullahi, A. Said, and J. B. Ibrahim, "An investigation into privacy and security in online social networking sites among IIUM students," *World of Computer Science and Information Technology Journal (WCSIT)*, vol. 2, no. 2, pp. 57-61, 2012.
- [15] P. J. Bateman, J. C. Pike, and B. S. Butler, "To disclose or not: publicness in social networking sites," *Information Technology and People*, vol. 24, no. 1, 2011, pp. 78-100, 2010.
- [16] Office of Communication (Ofcom). (2008). Social networking: A quantitative and qualitative research report into attitudes, behaviours and use. [Online]. Available: www.ofcom.org.uk
- [17] Right to Privacy in Malaysia. [Online]. Available: <http://www.loyarburok.com/2011/02/21/right-to-privacy-in-malaysia-do-we-have-it/>
- [18] A. B. Munir and S. H. M. Yassin, "Personal data protection in malaysia: Law and practice," *Petaling Jaya: Sweet and Maxwell Asia*, 2010.
- [19] A. Marsoof, "Online social networking and the right to privacy: The conflicting rights of privacy and expression," *Int J Law Info Tech*, vol. 19, no. 2, pp. 110, 2011.
- [20] P. Gunasegaram. Why Section 114A should be repealed. [Online]. Available: <http://thestar.com.my/columnists/story.asp?file=/2012/8/23/columnist/s/questiontime/11898860&sec=questiontime>
- [21] S. A. Miller, "Privacy and security: Best practices for global security," *Journal of International Trade Law and Policy*, vol. 5, no. 1. 2006.



Mohd. Ikhsan Md. Raus was born in Kelantan in 1983 and received prior education from UiTM in Diploma in Computer Science, Bachelor of Science (Hons) in Information System Engineering and Master of Science (Hons) in Information Technology. He is a Computer Science LECTURER at UiTM Cawangan Pahang since 2009. He has an experienced working as a system analyst at ExxonMobil Corporation, Kuala Lumpur. He is certified in Microsoft Certified Professional and Microsoft Certified Application Developer. He has published 13 conference papers and one journal article regarding with the information system development and one of his publication is Attendance Registration System (ARS) in International Journal of Computer Science and Network Security (IJCSNS), VOL.9

No.10, October 2009. He is a gold medalist of several system development innovations in Invention, Innovation & Design (IID) such as Gold Award winner in ARS & Computer Problem Solver (COPS) product, silver for Academia Online, Folder Lock and Bronze for Online Malaysia Bumiputera & Aslian Language Researches' Database (OMBALRD) and Electronic-University Student Activity Registration (e-UStAR). Recently he has been entrusted with the university's grant for system development of an examination testing and evaluation equilibrium mechanism.



Ikmal Hisham Md. Tah from Seremban, Negeri Sembilan was born on 1982 and received prior education in Diploma in Public Administration, Bachelor of Laws (LLB Hons.), both from Universiti Teknologi MARA, and Master in International Law (LLM) from The University of Hull, United Kingdom. He is a law lecturer at the Faculty of Law, Universiti Teknologi MARA Pahang Kuantan Campus and currently is holding the position of Pre-Law Coordinator for UiTM Pahang Kampus Kuantan. His research interests are public international law especially on human rights law, international disability law, constitutional law, legal philosophy and cyber law. Currently, he obtained two grants funded by UiTM Excellence Fund to conduct research on law and policy involving disabled people as main researcher and legal awareness on the using of social networking sites as co-researcher.



Saadiah Yahya was born in 1956 and received prior education in BSc (Edu) (Hons) USM, 1982, Post Gd. Dip. (Microprocessor & Application) Essex, 1986, MSc (Comp Studies) Essex, 1987 and PhD (Comp Sc) UPM, 1999. Obtained her PhD in 1999 and promoted to Professor in 2010. She used to work as Research Assistant at RRI in 1997 before pursuing her career as a LECTURER in UiTM Shah Alam, Malaysia until currently. She is Cisco Malaysia Council Member, Certified Instructor Cisco Network Academy, member of Persatuan Matematik Malaysia (PERSAMA) and certified in Microsoft Certified Professional and Microsoft Certified Application Developer. She has published many books and papers in journal article such as e-Education Systems Implementation Success Model (ISSN: 1814-0556), Electronic Number Mapping in Malaysia – Design Framework (ISBN: 978-1-4244-2327-9) and Analysis of the CPU Utilization for P-to-P Communication Operations in a Cluster-based Parallel System (ISBN: 978-1-4244-2327-9). She has won Bronze Medal award in International Invention, Innovation, Industrial Design and Technology Exhibition 2007 (ITEX 2007) for Low-Cost High Performance Computing including Best Presenter for E-Education System Implementation Success Model in IID 2009, Halal Certification Information System (HCIS) and Supercomputing through Beowulf Cluster System.