A FRAMEWORK OF PRIVACY IN SOCIAL NETWORKING: A CASE OF INSTAGRAM

ELIZA JOANNE A/P MARIANATHAN

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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JUDUL: A Framework of Privacy in Social Networking: A Case of Instagram

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A FRAMEWORK OF PRIVACY IN SOCIAL NETWORKING: A CASE OF INSTAGRAM

ELIZA JOANNE A/P MARIANATHAN

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Computer Networking)

FACULTY OF INFORMATION AND COMMUNICATION TEKNOLOGY
UNIVERITY TEKNIKAL MALAYSIA MELAKA
2015

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DEDICATION

To my beloved parents for their care and support throughout my bachelor‟s degree and for words of encouragement which helped me complete my final task successfully

To my supervisor, evaluator and lecturers for molding me into a knowledgeable person

To my friends and course mates for sharing information and giving support throughout my education at university

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ABSTRACT

Social networks are expanding fast with the advance of latest technologies. Social networking has enormous benefit and is an influential and superior tool in communication but if they are not used with caution these sites can be harmful or bring harm to an individual. The intense use and revelation of information on social networking leads to certain privacy issues. The objective of this study is two-fold. Due to no privacy framework in social networking, this study is carried out to investigate the elements that influence privacy in social networking. Next, a privacy framework is designed for students based on Instagram as case study and the results obtained are evaluated. The study is conducted using quantitative methodology. The research instrument used for this study is structured questionnaire. Analysis is carried out based on the data collected from 252 respondents. Kaiser-Meyer-Olkin (KMO) and Cronbach Alpha techniques are used for construct validation while Pearson correlation and multiple linear regression analysis are used to design the framework for privacy in social networking. The finding of this study is a framework for privacy in social networking is constructed. From the results, it is found that concern of data, risk, protection of identity, awareness and attitude variables are all positively related to privacy. Modifying factor site experience is positively related to attitude. The limitation of this study is that it is a single case study and thus the results cannot be generalized. To the best of knowledge, no other studies have incorporated all elements of privacy in social networking based on Instagram users.

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ABSTRAK

Rangkaian sosial berkembang cepat dengan kemajuan teknologi terkini. Rangkaian sosial mempunyai banyak manfaat dan merupakan alat yang berpengaruh yang unggul dalam komunikasi tetapi jika tidak digunakan dengan berhati-hati laman-laman ini boleh memudaratkan atau membawa kemudaratan kepada seseorang individu. Penggunaan kerap dan pendedahan maklumat di rangkaian sosial membawa kepada isu-isu privasi tertentu. Objektif kajian ini adalah dua kali ganda. Oleh kerana tidak ada rangka kerja privasi dalam rangkaian sosial, kajian ini dijalankan untuk menyiasat elemen-elemen yang mempengaruhi privasi dalam rangkaian sosial. Seterusnya, rangka kerja privasi direka untuk pelajar dengan menggunakan Instagram sebagai kajian kes dan keputusan yang diperolehi dinilai. Kajian ini dijalankan dengan menggunakan kaedah kuantitatif. Instrumen kajian yang digunakan dalam kajian ini adalah soal selidik berstruktur. Analisis dijalankan berdasarkan data yang diperoleh daripada 252 responden. Kaiser-Meyer-Olkin (KMO) dan Cronbach Alpha teknik digunakan untuk pengesahan konstruk manakala korelasi Pearson dan analisis regresi linear digunakan untuk mereka bentuk rangka kerja untuk privasi dalam rangkaian sosial. Dapatan kajian ini adalah satu rangka kerja untuk privasi dalam rangkaian sosial dibina. Daripada keputusan, didapati bahawa elemen bimbang mengenai data, risiko, perlindungan identiti, sikap dan kesedaran berkait positif dengan privasi. Faktor pengubahsuai iaitu pengalaman laman berkait positif dengan sikap. Batasan kajian ini adalah kajian ini merupakan satu kajian kes tunggal dan dengan itu keputusan tidak boleh disamaratakan. Tidak ada kajian lain telah memasukkan semua elemen privasi dalam rangkaian sosial berdasarkan pengguna Instagram dalam pengetahuan.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Social networks are expanding fast with the advance of latest technologies. Social networking sites play a big role in communication and socialization through the Internet, where the Internet is world‟s largest social network (Mohamed & Ahmad, 2011). As social networking sites are free and available anytime for people all around the world to communicate, make new relationships and connections, it is becoming more addictive especially among teenagers and students. It is common nowadays to see teenagers and young adults surfing the web and browsing social networking sites, reading blogs, chatting using Facebook and Twitter or posting photos of daily updates through sophisticated devices.

Social networking plays a huge part in the lives of Malaysian youth and has become part of their life. Through Facebook, Twitter, MySpace, and Instagram users are allowed to create and share content and at the same time present a virtual self of them. Social networking has enormous benefit and is an influential and superior tool in communication but if they are not used with caution these sites can be harmful or bring harm to an individual. According to the statistics from the website Malaysia Computer

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Emergency Response Team (CERT), a total of 270 cyber harassment cases and 2000 fraud cases were reported from January till July 2015.

In Malaysia, nine of 20 top websites are social networking sites. Therefore, the adoption of social media has shown significant growth in the last few years in Malaysia. With Facebook being the most popular visited site, there are 3.5 million youth aged 18 to 24 out of 10.4 million Facebook users in Malaysia. Statistics show that Malaysian social network users are engaged at these sites rather than meeting people in person. Social network users also tend to share everything about themselves on these sites rather than having an actual conversation with family and friends (Subramaniam, 2014).

1.2 Research Background

Many social network users do not realize by spending more time on social networking sites, they are actually more exposed to cybercrimes. 79 out of 100 people who tend to spend at least 49 hours a week on social network will fall victim to cybercrime. According to Federal Commercial Crime Investigation Department, Malaysians lost 1.6 billion ringgit due to scams in 2012 with a total of 18,386 cases. Therefore, online users especially students should be prepared to face increasing threat on social networks through education. They should also know how to protect themselves by being more protective and thoughtful when using social networks (Yun, 2013).

The statistics show that 88.8 percent of students tend to disclose their gender and full birthdate while 45.8 percent updates their current residence to social network. This small information may seem to be not risky or harmless to be shared with the public online but one does not realize that simple information like that can be combined to know one‟s whereabouts. The youths are in the current trend of sharing and updating their life online that they often ignore or sometimes unintentionally ignore privacy concerns (Ho et. at, 2009).

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According to Cavoukian (2009) many youths are conscious of the risk of physical threats rising from online activities such as cyber predators; some do not entirely understand the range of risks related to revealing too much information online. Online users attitude show that they either are not concerned about their privacy or do not understand their loss of privacy when social networking. The issue of online privacy is a highlighted issue and is in need of attention (Zamzami et.al, 2010).

1.3 Problem Statement (PS)

The problem in social networking is mainly the increase in the rate of cybercrimes such as identity theft and online fraud in Malaysia. Hence, it is important for University management and the society to ensure that students have a thorough understanding of online privacy (Zamzami et.al, 2010). Youths are at some risk as they surf the Internet and spend many hours using social networks. With some parents that are not technology savvy and have no basic understanding of new forms of socialization, they may find it difficult to monitor and advise their children on privacy (O'Keeffe & Pearson, 2011). Teenagers and students tend to reveal too much about themselves and their live online without realizing the risks that comes with it. Many of social network young users are also not aware and do not understand the privacy policy and their right of use of social networking sites. With limited oversight by the government and incentives to educate users on privacy and identity protection, social network users especially students have limited understanding on online privacy. Therefore, to address privacy issues a privacy framework is important as it can provide a foundation for privacy in social networking.

Table 1.1: Summary of Problem Statement

PS	Problem Statement
PS_1	No privacy framework in social networking

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1.4 Project Question (PQ)

From the problem identified, a few questions are to be answered. The questions will guide this present study.

Table 1.2: Summary of Project Question

PS	PQ	Project Question
PS_1	PQ_1	What are the variables of privacy in social networking?
	PQ_2	What is the degree of influence of the elements to privacy?

1.5 Project Objective (PO)

There are a few objectives to be achieved in the study. Due to no privacy framework in social networking, this present study is carried out to investigate the variables that influence privacy in social networking sites. In this present study, privacy in social networking is analyzed for students based on Instagram as case study. The objectives are also to construct a privacy framework and evaluate the framework using statistical validation.

Table 1.3: Summary of Project Objective

PS	PQ	PO	Problem Objective
PS_1	PQ_1	PO_1	To investigate the variables of privacy in social networking.
	PQ_2	PO_2	To analyze privacy in social networking for students based on Instagram as case study.
		PO_3	To construct a privacy framework.
		PO_4	To evaluate the framework using statistical validation.

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1.6 Project Scope

1.6.1 Respondent

The respondents for this study are students specifically in UTeM. The respondent group is chosen because students are fragile and vulnerable to online fraud.

1.6.2 Case study

The case study chosen for this study is Instagram because new research shows Instagram is becoming very popular among youths (Kang, 2013).

1.6.3 Respondent Age

The targeted group of respondents is within age 19 to 29 years old because most of social network users are undergraduate students.

1.7 Project Contribution (PC)

The present study will give a few contributions. Contribution can be divided into body of knowledge which consists of theoretical contribution and practical contribution and application domain which is community contribution.

a) **Theoretical Contribution**

Privacy Framework in social networking

b) **Practical Contribution**

Validated questionnaire for privacy in social networking

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c) Community Contribution

As a guildline to improve the curriculum syllabus in universities

1.8 Thesis Organization

The remaining part of this report is organized as follows:

1.8.1 Chapter 1: Introduction

This chapter discusses about the background of the study and highlights problems faced by Malaysians due to privacy issues in social networking especially among teenagers and adolescence. Based on the problem statement, a few problem questions are identified and the objectives of this study are determined. This chapter also discusses the project scope and the project contributions that are significant.

1.8.2 Chapter 2: Literature Review

This chapter discusses about the taxonomy of privacy in social networking. A review of previous empirical studies and related works are highlighted here. Then, the research gap and the privacy variables are identified.

1.8.3 Chapter 3: Project Methodology

This chapter discusses the methodology to carry out this study. Each stage is presented to develop a privacy framework. This is a crucial chapter as it is a layout of the plan of study. The project milestone helps to ensure all stages of study and processes are completed on time.

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1.8.4 Chapter 4: Data Collection

This chapter discusses the process of data collection. Content and construct validation from pilot study results are discussed here. During pilot study, items of variables that did not give desired value are revised. After pilot study is completed and the desired results are achieved, the data collection is continued for the whole sample size.

1.8.5 Chapter 5: Analysis and Results

This chapter presents statistical analysis from data collection. The analysis is done to identify any modifying factor that contributes to privacy. Some descriptive statistics is done based on respondents‟ demographic background. Pearson correlation and regression analysis is also carried out to design the privacy framework.

1.8.6 Chapter 6: Validation and Discussion

This chapter discusses on the validation process of the statistical data obtained from analysis. Statistical validation of Structural Equation Modeling is chosen to validate the output of the data. Besides that, discussion of the variables and hypothesis is done in this chapter with reference to previous studies.

1.8.7 Chapter 7: Conclusion

This chapter discusses the summary of the study on privacy in social networking. Some limitation of this present study is identified and highlighted here. Future improvement pertaining to the works of present study is discussed in this chapter.

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1.9 Conclusion

In conclusion, this chapter gives a clear picture of the background and overview of all the other chapters in this present study. It is the first and foremost guideline in order to start the study. The objectives determined in this chapter will lead the coming chapters in order to achieve the stated objectives. The next chapter will discuss on literature review.

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