

**INVESTIGATING THE DEGREE OF PRIVACY AWARENESS WHEN
USING SMARTPHONES AND TABLETS AMONG STUDENTS
A STUDY AT UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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APPROVAL

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Investigating The Degree of Privacy Awareness When Using Smartphones and
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A Study At Universiti Teknikal Malaysia Melaka

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Investigating The Degree of Privacy Awareness When Using Smartphones and
Tablets Among Students
A Study At Universiti Teknikal Malaysia Melaka

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Report submitted in fulfilment of the requirement for the degree of Bachelor of
Technology Management (Hons) in Technology Innovation

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DECLARATION

I declare that this project is the result of my own research except as cited in the references. The research project has not been for any degree and is not concurrently submitted in candidature for any other degree.

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DEDICATION

This research paper was fully dedicated first, to my beloved parents who have giving their non-stop moral and physical supports to me along the whole long journey of finishing this studies. Although there are a lot of problem occurs within the research period, they keep supporting me until I can finished the whole research. As their son, I am very proud to have them as my parents forever.

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ABSTRACT

The uses of smartphones and tablets now becoming a new trend among youngsters especially students due to the initiative that was launched by Malaysian Government which has launched a RM 200 smartphone rebate programs. The launching of this program was founded to have boosted the number of new smartphones and tablet users just in a short term period. However, not many of the new smartphone and tablet users that aware of the threat that was coming together with the adoption of those devices into their daily life. Most of this new users especially students did not know the fact that their devices is not as safe as what they thought. They fully utilize the smartphone and tablets by storing their confidential information onto it, using the devices to send private information, use it to connect to the network and any other uses where all of these activities making them easily exposed to the smartphones and tablets attacks. Hence, the purpose of this research is to investigate current degree of privacy awareness among students so that early action can be taken to prevent them from being a new victim to those virtual attacks.

ABSTRAK

Penggunaan telefon pintar dan tablet semakin menjadi fenomena baru dalam kalangan belia hari ini terutamanya para pelajar disebabkan oleh pelancaran program Rebat Telefon Pintar berharga RM 200 oleh Kerajaan Malaysia baru-baru ini. Pelancaran program ini didapati telah meningkatkan jumlah pengguna baru telefon pintar dan tablet ini dalam masa yang amat singkat. Walaubagaimanapun, tidak semua pengguna-pengguna telefon pintar dan tablet yang baru ini menyedari akan kehadiran ancaman yang hadir bersama-sama dengan pengadaptasian gajet pintar ini dalam kehidupan seharian mereka. Kebanyakan mereka langsung tidak mengetahui bahawa telefon pintar dan tablet yang baru dibeli itu adalah tidak selamat seperti yang mereka jangkakan. Mereka terus menggunakan sepenuhnya gajet pintar itu untuk menyimpan pelbagai jenis maklumat rahsia, menghantar dan menerima maklumat, melayari internet serta bermacam-macam lagi aktiviti yang membuatkan mereka terdedah kepada serangan dari pihak luar. Oleh itu, tujuan kajian ini dijalankan adalah untuk menyiasat tahap kesedaran tentang privasi dalam kalangan pelajar supaya tindakan dapat diambil untuk menghindari mereka dari menjadi mangsa terhadap serangan gajet pintar.

TABLE OF CONTENT

CHAPTER	CONTENT	PAGES
	APPROVAL	ii
	DECLARATION	iv
	DEDICATION	v
	ACKNOWLEDGEMENT	vi
	ABSTRACT	vii
	ABSTRAK	viii
	TABLE OF CONTENT	ix
	LIST OF TABLE	xii
	LIST OF FIGURE	xiii
	LIST OF ABBREVIATION AND SYMBOLS	xiv
	LIST OF APPENDICES	xv
 CHAPTER 1	 INTRODUCTION	 1
	1.1 Background of the study	1
	1.2 Problem statement	2
	1.3 Research question	3
	1.4 Research objective	4
	1.5 Scope of the study	4
	1.6 Research Hypothesis	5
	1.7 Significance of the study	6
	1.8 Summary	7

CHAPTER 2	LITERATURE REVIEW	8
2.1	Introduction	8
2.2	Smartphone and Tablet	9
2.2.1	Mobile Applications	10
2.2.2	Application Permissions	12
2.3	Smartphone Attacks	12
CHAPTER 3	RESEARCH METHODOLOGY	14
3.1	Introduction	14
3.2	Research design	15
3.3	Research method	16
3.4	Theoretical framework	17
3.5	Primary and secondary data sources	19
3.6	Location of the research	20
3.7	Research strategy	20
3.8	Development of questionnaire	22
3.9	Scientific canon	22
3.10	Procedures of data analysis	25
3.11	Summary	25
CHAPTER 4	RESULT & DATA ANALYSIS	26
4.1	Introduction	26
4.2	Description Of Samples	27
4.3	Demographical Analysis	27
4.4	Reliability Analysis	34
4.5	Inferential Statistics	36
4.6	Hypothesis Testing Using Simple Linear Regression	38

4.7	Analysis Of Major Findings From Questionnaire	45
4.8	Degree Of Privacy Awareness Among Students In Utem When Using Smartphones/Tablets	53
4.9	Summary	59
CHAPTER 5	DISCUSSION, CONCLUSION & RECOMMENDATION	60
5.1	Introduction	60
5.2	Research Objectives	61
5.3	Limitation	69
5.4	Conclusion	70
5.5	Recommendations	71
	REFERENCES	73
	APPENDICES	75

LIST OF TABLE

TABLE	TITLE	PAGES
Table 4.1	The Cronbach's Alpha coefficient range and its strength of association	35
Table 4.2	Reliability Statistics	35
Table 4.3	Correlation coefficient between each variable	37
Table 4.4	Simple regression between degree of privacy awareness with confidentiality of information	38
Table 4.5	Simple regression between initial awareness knowledge and the degree of privacy awareness	40
Table 4.6	Simple regression between security and privacy protection with the degree of privacy awareness	42
Table 4.7	Summary of hypothesis testing results	44
Table 4.8	Range of mean score	53
Table 4.9	Rank of mean of each variable	58

LIST OF FIGURES

FIGURES	TITLE	PAGES
Figure 3.1	The flow of the research	16
Figure 3.2	The theoretical framework of the research	18
Figure 4.1	Pie chart of gender	28
Figure 4.2	Pie chart of field of studies	29
Figure 4.3	Bar chart for years of study	30
Figure 4.4	Pie chart for types of devices	31
Figure 4.5	Breakdown of devices operating system	32
Figure 4.6	Bar chart for years of using smartphone/tablet	33
Figure 4.7	Use of operating system vs gender	46
Figure 4.8	Use of operating system vs field of study	47
Figure 4.9	Graph of using smartphone/tablets in terms of confidential information	48
Figure 4.10	Use of operating system vs Incidence in installing applications from official stores	49
Figure 4.11	Incidence in knowing about privacy vs field of stud	50
Figure 4.12	Taken actions in protecting information	51
Figure 4.13	Graph of confidentiality of information	54
Figure 4.14	Graph of initial awareness on privacy	55
Figure 4.15	Degree of privacy awareness based on privacy and security protection	57

LIST OF ABBREVIATION AND SYMBOLS

ABBREVIATION	SYMBOLS
UTeM	Universiti Teknikal Malaysia Melaka
FPTT	Fakulti Pengurusan Teknologi dan Teknousahawanan
PC	Personal Computer
SMS	Short Message Servis
MMS	Multimedia Message Services
GPS	Global Positioning System
IBM	International Business Machine
SPSS	Statistical Package for Social Science
R	Correlation of Coefficient
R²	Correlation of Determination
X1	Confidentiality of Information (Independent Variable)
X2	Initial Awareness on Privacy (Independent Variable)
X3	Privacy and Security Protection (Independent Variable)
Y	Degree of Privacy Awareness (Dependent Variable)

LIST OF APPENDICES

NO.	TITLE
1	Sample Questionnaire

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Smartphone is defined as the trend of unified communications which integrate telecom and Internet services onto a single device because it has combined the portability of cell-phones with the computing and networking power of PCs (Guo, Wang & Zhu, 2004). In the

The sophistication of smartphones technology has undergone a revolutionized era especially in this millennium. The technology that is being adapted into smartphones has attracting million of users around the globe to try using the smartphones. Like what had happened to computers, smartphone users also was exposed to the attacks from outsiders or criminals which aims for the new users that still did not understand the smartphone very well.

The number of new smartphone users especially among youngsters such as students have significantly increase lately due to the government initiative in Malaysia. This figure however is worrying due to the facts that these new smartphone/tablet users still didn't know about the risk of their privacy and security when using the devices.

Hence, this research was done to study the degree of privacy awareness among students when using smartphones and tablets. At the same time, to investigate on what aspects of privacy that the students acquire the most and on what aspects did they lacking of.

1.2 Problem statement

The sophistication of smartphones technology has undergone a revolutionized era especially in this millennium. The technology that is being adapted into smartphones has attracts million of users around the globe to try using the smartphones. Like what had happened to computers, smartphone users also was exposed to the attacks from outsiders or criminals which aims for the new users that still did not understand the smartphone very well.

The launching of RM 200 smartphone rebates for youngsters by the Malaysia's Prime Minister - Datuk Seri Najib Tun Razak in 2013 have boosted the number of smartphones/tablet users among students in higher education institute all over Malaysia. This increasing number of new smartphones/tablet users have attracted plenty of smartphone criminals to do crime on this targeted group of people because of their lacks of awareness on privacy and security when using smartphones/tablets.

Therefore, a research must be done to investigate the degree of privacy awareness among students when using smartphones/tablets so that action can be taken to increase their consciousness on their privacy and security.

1.3 Research question

The research question of this study are:

- 1.3.1 What is the degree of privacy awareness among students in UTeM when using smartphones/tablets
- 1.3.2 On which aspects of privacy awareness that is more dominant among students in UTeM when using smartphones/tablets.
- 1.3.3 What is the best possible solution to encounter the privacy ignorance among students when using smartphones/tablets

1.4 Research objective

The objectives of this study are:

- 1.4.1 To investigate and examine the degree of privacy awareness among students in UTeM when using smartphones/tablets
- 1.4.2 To determine on what aspects of privacy awareness that are more dominants among students in UTeM when using smartphones/tablets.
- 1.4.3 To suggest the best possible solution to encounter the privacy ignorance among students when using smartphones/tablets

1.5 Scope of the study

The scope of study for this research will be focusing on investigating and identifying the degree of privacy awareness among students in UTeM when using smartphones or tablets.

1.6 Research Hypothesis

Hypothesis can be defined as a logically conjectured relationship between two or more variables expressed in the form of a testable statement (Sekaran, 2003). After the objectives and the questions of the research have been identified, next the researcher examine the hypothesis of this research. Since that there are the total of three independent variables for this research, hence, there are the total of three hypothesis that is required for this research. The hypothesis for this research are:-

(i) Hypothesis 1

H₀: The degree of privacy awareness based on the confidentiality of information is very low

H₁: The degree of privacy awareness based on the confidentiality of information is high

(ii) Hypothesis 2

H₀: The degree of privacy awareness based on the initial awareness knowledges on privacy is low

H₁: The degree of privacy awareness based on initial awareness knowledge on privacy is high

(iii) Hypothesis 3

H₀: The degree of privacy awareness based on security and privacy protection is low

H₁: The degree of privacy awareness based on security and privacy protection is high

1.7 Significance of the study

The advancement of technology embedded in the smartphones or tablets in today's world has become a phenomenon in human's life and activity. The presence of several giant companies such as Apple, Samsung, Sony, Nokia and Blackberry into the smartphone industry have boost the smartphone technology until it had surpassed the past human's expectation and imagination.

In line with the advancement of smartphone technology, the smartphone's cyber criminal also have revolutionized and increasing in number significantly. The increasing number of smartphones' users being attack virtually by the criminals is something that we have to worry. They steal and attack the user's privacy and personal data and use it as what we can describe it as *identity theft*.

The significance of this study is that it is very important to investigate the degree of privacy awareness when using smartphone or tablets among students because they contribute a large proportion of smartphone users in Malaysia and most likely to be exposed to the attacks from outsiders. At the end of this research, the degree of privacy awareness among students especially in UTeM will be established and action must be taken accordingly in order to increase and boost the privacy awareness among students with the hope that it can prevent them from being a victim to the smartphone's criminals.

1.8 Summary

This chapter is the introduction part of the research where the purpose, scope, objectives and problem statement for this research was identified to make a clear vision about this research. This research was expected to gives a contribution to the society especially in reducing the amounts of smartphone attack's victims among students.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section of the report is the part where the researcher briefly reviews about smartphones and tablets, mobile applications, applications permissions, privacy awareness and also the aspects and the importance of privacy awareness when using smartphones or tablets. This is the section where the researcher will look on what the previous studies, books and previous journals explains about privacy awareness, confidentiality of information and others.

2.2 Smartphone and Tablet

Smartphone is defined as a mobile phone or Personal Handy-phone System (PHS) that incorporates a public general-purpose operating system, to which users can freely add applications, extend functionality, or customize (Shiraishi, Ishikawa, Sano & Sakurai, 2011). In addition, smart-phone is the trend of unified communications which integrate telecom and Internet services onto a single device because it has combined the portability of cell-phones with the computing and networking power of PCs (Guo, Wang & Zhu, 2004) .

Meanwhile, A tablet PC is a wireless, portable personal computer with a touch screen interface. The tablet form factor is typically smaller than a notebook computer but larger than a smartphone (Rouse, 2014). Tablet computers (or tablet PCs) are a form of mobile personal computer with large, touch-sensitive screens operated using a pen, stylus, or finger; and the ability to recognize a user's handwriting-a process known as "pen computing." (Atkinson, 2008). Both devices becomes a new phenomenon in the 21st century and the technologies still evolving throughout the year.

Smartphone recognition has increased rapidly due to exposure via newspapers, magazines, and advertising media as well as the promotion of smartphones at mobile phone retailers, and the recognition rate, which was just 23% in October 2008, has climbed to 93% as of September 2010. As it stands most consumers have now heard of the term "smartphone" (Shiraishi, Ishikawa, Sano & Sakurai, 2011).