

UNIVERSITI TEKNOLOGI MARA

**THE ADOPTION OF SMARTPHONE IN
OLDER ADULTS**

NURUL AMIRA BINTI HARON

Computing Project submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Information Technology

Faculty of Computer and Mathematical Sciences

July 2016

ABSTRACT

The use of smartphone has become essential part in all people's life including the older adults. The Malaysian Communications and Multimedia Commission (MCMC) stated the percentage distribution of hand phone users for senior adults which age 50 years above are 14.4%. This shows that there is older adults that using smartphone. The research objectives are to study the factors of adoption of older adults in using smartphone and to identify the type of smartphone usage of older adults in their daily life. Based on the literature review from the previous study, the diffusion of innovations (DoI) was used to examine the factors of smartphone adoption. Thus, this study used DoI to study smartphone adoption factors among older adults and 50 survey questionnaire had been distributed to respondents. Based on the research model from DoI, there are five attributes that used to identify the factors of adoption which are relative advantage, complexity, trialability, observability and compatibility. Based on these attributes, five hypotheses had been developed in order to determine its significance to the adoption of smartphone. The results that had been analyzed shown the relative advantage, trialability and compatibility had significant with the adoption of smartphone among older adults. Meanwhile, the complexity and observability had no significant with the adoption of smartphone among older adults.

ACKNOWLEDGEMENT

First of all, I want to say Alhamdulillah and thanks to Allah S.W.T, with His merciful blessing because giving me the opportunities to complete my Final Year Project from the beginning until the end of this research. Without His grace, I would have lost sight in my purpose of to complete this research.

I would like to say thank you and appreciation to my beloved parents Mr. Haron Bin Ahmad and Mrs. and also not to forget to all my family who has always give me support and motivation to complete my research. Not to forget their hard work and love for me completing my studies, if not because of them I would not be here today. Their effort and support will not be forgotten and may Allah bless all of you.

My gratitude and appreciation to my supervisor, PM Dr. Wan Adilah Wan Adnan. Thank you for her guidance and advices for this research. Also a very special thank you to Mr. Muhammad Naqib Muhsin who has been giving support and many advices. I also would say thank you to fellow friends for lending their hands to help, and giving support also ideas throughout the whole process in completing this research.

Last but not least, I am grateful to my true self for not giving up as this struggle is real. Yes, damn real. I am thankful for my brain to withstand some unnecessary temptations from the heart, and my eyes for going through countless nights of facing the computer screens, also to my ears for allowing me to listen to all kinds of comments, sometimes hurtful, sometimes harsh, sometimes a soft and supportive whisper of "You can do it." Most importantly, to my fingers and hands whose 'tip-tapping' sounds accompanied my lonely nights, sometimes with tears soaking them. I thank you all. And yeah to my stomach for coping with instant noodles and caffeine, I am sorry. Thank you very much to everybody who has been involved in this research whether with intentional or unintentional.

TABLE OF CONTENTS

	Page
AUTHOR'S DECLARATION	i
ABSTRACT	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER ONE: INTRODUCTION	
1.1 Introduction	1
1.2 Research Background	1
1.3 Problem Statement	2
1.4 Research Questions	3
1.5 Objectives	3
1.6 Scope	3
1.7 Significance	4
1.8 Organization of Report	4
1.9 Summary	5
CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	6
2.2 Smartphone	6
2.3 Older Adults	7
2.3.1 Use of Smartphone in Older Adults	7
2.3.2 Limitations and Barriers of Older Adults in Using Smartphone	8
2.4 Adoption	9
2.5 Adoption of Smartphone among Older Adults	10
2.6 Related Studies in Adoption of Smartphone	11

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter describes about the background of study and the problem statement that gives the idea for this study. Besides that, this chapter also defines the objective of the study and the scope of this study to give a specific findings and a guide to ensure this study is achieved its objectives.

1.2 Research Background

Day to day there are many new technologies and innovations has been developed as the world is growing old. As the technology grow, people also will make a changing in their lifestyle which it shows the technology affects their daily life. Thus, this impact not only affects to younger people but also older people which are 50 years and above. This phenomenon give affects to elderly on how they accept the new technology. According to Norizan et al. (2014), the Department of Statistics Malaysia in 2010 has recorded 7.9% of older people across the country and it is expected to rise to 9.9% by 2020 while this amount also expected to increase to 15% in 2030. However, the number of older adults to adopt the new technology is increasing (Harada, et.al, 2013). Smartphone is one of the innovation that is currently been using in this era where it give huge advantages and convenience to people in the world (Pheeraphuttharangkoon et al., 2014). Nowadays, smartphone has being an essential part of personal and business life across of all boundaries, but the numbers of elderly user is still a very small compared to other groups (Norizan et al., 2014).

Before smartphone, older adults usually used feature phone which does not have many applications. Then after the feature phone, there is multimedia phone which is more attractive in its interface and yet there is some added features in it. After that, the advance mobile phones which is smartphone has come out where it is very pricey than multimedia phone. According to Norizan et al. (2014), most studies assumed that older adults as the target users must have at least little experience in using previous