# SUPERVISOR VALIDATION

I hereby declare that I have read this thesis and in my opinion this project is Sufficient in terms of scope and quality for the award of Bachelor of Technology Management (Innovation Technology)

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# BABY BOOMERS ADOPTION ON MOBILE HEALTH APPLICATION: A STUDY ON ACCEPTANCE (MELAKA)

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# THIS REPORT IS SUBMITTED TO

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# FACULTY OF TECHNOLOGY MANAGEMENT AND TECHNOPRENEURSHIP (FPTT)

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# **DECEMBER 2016**

## DECLARATION

I hereby declare that the report has been prepared by my own self except the summaries and citation that I have been clarify the resources.

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#### ABSTRACT

This report is study about mobile health application acceptance to the baby boomers. This research will be conducted in Melaka. The respondent in this study is among baby boomers in Melaka. Baby boomers is a person who born in 1946 until 1964. Currently their age is between 52 until 70 years old. Baby boomers are a group of people who have a high tendency toward a health problem. This is because of the external (food, life style) and internal (age) factor. Now days, the advancement of the technology already develop in a health sector. Most of the countries already introduce health technology in their country. So, Malaysia must take the advantage to promote this technology in our country. The most effective technology that use in this research is Mobile Health Application. This application is refer to the device that uses to enhance the baby boomers health especially. Baby boomers can get this technology through mobile phone, tablet and others devices. This application can help to measure the blood pressure, obesity and can help to give information to people to care about their health. By using this application, people can save their cost and time to go hospital. People also can simply get the information or training using that technology. This type of technology must be widely introduced in a society so that their can improve their health easily without spend their time and cost to get a treatment or supplement.

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**CHAPTER 1** 

### INTRODUCTION

#### **1.1 Background of Study**

Nowadays, Baby boomers generation has facing a lot of healthy problem and need to be focus. By 2020, it is predicted that there will be 635 million senior citizen who are more than 65 years representing 10% of the world population. The number of senior citizen is expected increase approximately to 30.0% (Kesihatan et al. 2012; Macunovich 2000) (Norazam, 2000). Most of Baby Boomers in Malaysia has health problem and more than half from them receive less than RM500 salary per month. The advancement of technology in the field of medicine actually can facilitate in improving the health level of people, but people choose others platform to improve the health quality such without any guidance or information. Besides, the main factor for people facing a health problem is because of the bad dietary practices. At the same time, they exposed with bad habits such as smoking, drink alcohol and refuse to do physical activities. (WHO, 2013b, WHO, 2013c).

The research from 234 of Baby Boomers has shown the health level among Baby Boomers is not encouraging. Up to37.6% of them facing obesity problem, 42.7 high blood pressure, 37.7% clogged blood vessels, and 24.8 suffer with diabetes. Only 0.9% from them do the exercise such as jogging and walking. 48.7% of them spend their time watching television. (Aziz, 2013). From this study, they suggest to promote the intervention program for community to improve the level of baby boomers health.

Most of the baby boomers spend their money to buy the medicine to prevent disease but they are not aware on the health technology that already create and lowcosts. Nowadays, they are variety type of health mobile application that will improve human health and guide peoples to become a healthy person. Calorie Counter -MyFitnessPal is the one off application that will help people to reduce the calories during exercise. People no need to spend a lot of cost to buy supplement or medicine to reduce their calories. Second app is Obesity Improve Your Health. This application is use to prevent and control the obesity, this app also will introduce the obesity, causes of the obesity, BMI calculation, the way to prevent obesity and recommend the food to control the obesity. Most of people nowadays prefer to get the medicine to reduce their obesity, they does not think the negative effect after use it. Next is Blood Pressure Log - MyDiary. The purpose of this application is to track weight, glucose and oxygen saturation. At the same time it also log the blood pressure reading in order to know the blood status of people. Besides, it also guide the exercise and food to be taken to meet the normal blood pressure. (MyFitnessPal, 2016) The health technology is very useful because it has made life easier and healthier for decades. The apps inventor looking for cheapest, faster and more efficient for health care to enhance the health level of consumer especially baby boomers. (Christine, 2016) Apart from that, health mobile application is telehealth technology which can allows physician to conduct secure virtual visit with patient. It will reduce the need for costly, in person visit, and can improve patient compliance. (David Palkoner, 2014). For example, the baby boomers just need to install the application that relate on their problem and easily get all the information about their problem including factor and the way to recover that disease.

Nowadays, baby boomers are the generation that have a high tendency to get a health problem. This problem happens because of internal and external factor that might effect on their health. The problem of baby boomers nowadays also is lack of information about their sickness. Some of them also think about cost when their go for treatment at a hospital. The dependencies of baby boomers on medicine and supplement nowadays are very high. They spend a lot of money and time to go for treatment. Sometimes the result is not really meeting the consumer expectation. This issue will be continuously happen among baby boomers if their still refuse to accept technology.

#### **1.2** Problem Statement

Baby boomers are a generation who lived without the advancement of technology. Their born in a war season. There a lot of health problem that their get nowadays such as diabetes, high blood pressure and cancer. The awareness on health important is still low among baby boomers. The number of baby boomers uses a technology as a platform to achieve a healthy life style is still low. Most of them just believe that enough to use a traditional way to cover their sickness and improve their health.

Most of emerging countries have a problem to deliver health care for people and face challenges to meet the quality and standard (Moss et al., 2010) (Muller, 2013). Many of sectors nowadays already implement and heavily invest in information technology to make the service become effective and efficient such as banking and telecommunication but not widely in health sector. The health sector is need to drastic change the platform into modern. This will give a big impact to the health care crisis which is become more innovative and inventive. This study is to identify the level of acceptance baby boomers on health mobile application. Most of baby boomers still not aware on the mobile health application which is easy, efficient and cheap to guide their activity and daily life. In 10 years, Malaysia will have a group of baby boomers demography which is conquer almost whole of asset in the country. The buying power of baby boomers in Malaysia is high and their level income is a good in a history Malaysia. (Hanadzlah, 2012). From that, the health level of baby boomers must be excellence in order to facing a big challenge in future.

The research from 234 of Baby Boomers has shown the health level among Baby Boomers is not encouraging. 37.6% of them facing obesity problem, 42.7 high blood pressure, 37.7% clogged blood vessels, and 24.8 suffer with diabetes. Only 0.9% from them do the exercise such as jogging and walking. 48.7% of people spend their time watching television. (Aziz, UKM, 2013).

Some of Baby boomers have the problem to manage their health because need to spend a lot of time and cost to get medicine or advice from specialist. By using health mobile application, they can easily get the information based on health problem of baby boomers. In Malaysia, baby boomers prefer to spend their time with family, farm and members especially who live in rural area.

The aim of this study is to factor that influence baby boomers to use the mobile health application. The awareness on importance of health mobile application must widely deliver to baby boomers to ensure the number of patient among baby boomers is reduced. Actually, baby boomers still use the ordinary ways in order to maintain their health. The way maybe costly and take time. By using health mobile application, baby boomers can manage the daily activity toward healthy life style. The baby boomers also still use the traditional ways to recover their health. They still believe that traditional ways is the best.

Nowadays, technology has replace so many things in the world include health technology. Baby boomers must accept the technology to ensure their can maintain their health easily for future. But, in order to introduce the health mobile technology to baby boomers, the study must be conducted to identify the barriers and roadblock for baby boomers to accept the technology. The deeply research must be answered on technology acceptance by baby boomers.

### 1.3 Research Question

This study is to answer the following major question:

RQ1: What are the factors influencing baby boomers to use Health Mobile Application?

RQ2: How far do the adoption factors impact the attitude toward using health mobile application among baby boomers?

### 1.4 Research Objective

This study to achieve this research objective:

RO1: To investigate the factor influencing Baby Boomers to use Health Mobile Application.

RO2: To analyse the impact of health mobile application adoption toward attitude toward using the technology.

#### 1.5 Significance of Study

This purpose of this study is to identify the level of acceptance of Baby Boomers on Health Mobile Application in Melaka. Furthermore, this study will help Baby Boomers in Melaka to aware on the health technology to improve their health. The Baby Boomers just manage and get the information by using health app.

Some of Baby Boomers in Melaka spend a lot of money to get the treatment or information to manage their health. By using the Health Mobile Application, Their can save time, cost and get the efficient treatment information.

Hence, these studies also to investigate the factor of Baby Boomers use the Health Mobile Application. At the same time, I can get the reason for baby Boomers not prefer to use a Health app in daily life. From that reason, the government or NGO can widely introduce Health Mobile Application among Baby Boomers in Melaka.

This research will understand more on the scope and limitation that will be conduct in this study. This is because to ensure the research is on the right track.

#### **1.6** Scope and Limitation

The scope of this research is to identify the level acceptance of Baby Boomers on Health Mobile Application. Besides, the purpose of this study is to investigate the factors influencing Baby Boomers to adopt Health Mobile Application. This research is focused on Baby Boomers generation in Melaka. There are two limitation involve in this study.

First is the study is conduct in Melaka. Any baby Boomers who live in Melaka. Second is examining the level of acceptance of Baby Boomers on Health Mobile Application and the factor influencing Baby Boomers to use Health Mobile Application in Melaka.

Time also is a limitation for this study. The data must be collected in certain period of time to ensure the data can be analysing wisely. Next limitation is cost. The cost involve in this study is limit. Need to maximize the data and information, and need to minimum the cost.

#### 1.7 Summary

This chapter is introduced the root of this study including background of study, problem statement, research question, research objective, significance of study, scope and limitation. Based on this foundation, the researcher proceeds to the next chapter which chapter two and study on the literature review. Chapter 2 will deeply explain on the past research of this study. Besides, it also includes the model

and constructs that used in the research. Based on the next chapter, people can easily understand on this study based on the previous research.

**CHAPTER 2** 

### LITERATURE REVIEW

#### 2.1 Baby Boomers Generation

Baby Boomers are the generation born 1946 until 1964. Today their age is within 52 until 70. Get older and reach retirement age. There are labelled as "Baby Boomers" because of the increasing number of Baby Boomers after the end of World War II. (Bar, 2014). More babies were born in 1946 than ever: 3.4 million, 20 per cent more than 1945. This was the beginning of the so called "baby boom". In 1947, another 3.8 million babies were born: 3.9 million were born in 1952; and more than 4 million were born every year from 1954 until 1964, when the boom finally tapered off. (Staff, 2010) (Jones, 1995). During that time people prefer to have more babies in good economic time. In 1950s, the economic was become well as the western recovered from the largest ever fought. In United States, the Baby Boomers Population now make up 26%. This will affect to the demand Medicare which is

need the support from professional caregivers and the boomers' own children. The obesity among Baby Boomers is biggest because of lack of exercise; this would lead to an epidemic of diabetes and others chronic diseases (Valeo, 2005). Percentage of adults in baby Boomers Generation who are obese has more than doubled from 15% in 1971- 1974 to 34% in 2003 – 2006 for adult 20 - 24 years old. (National Health and Nutrition Examination Survey).

Technology in the world was introduced at a slow phase during 70's, 80's and 90's. This time the baby boomers were in school, establishing our career and raising families. During 1970, the main phone was still a rotary dial phone. People who lived that time relied on the answering machine with a micro-cassette and the tape is the one technology that able to hear the massage or information. The baby boomers at this time just expose with the traditional life without fully get the technology advancement. Most of them prefer to do the work by manually. From this issue, until this time they still feel hesitate to accept to use the technology. This will make them behind others generation which is Y and X generation. (Golden, 2016)

### 2.2 Health Scenario in Malaysia

Malaysia is the country that rich in diversity of food. The food culture in Malaysia is the barriers for government to implement a health country in future. The big number of races in Malaysia contributes to the diversity of food. Different races will introduce different traditional food for example mee laksa sarawak, asam pedas, nasi lemak, nasi kandar and others. Malaysia has a very high frequency of people eating out. (Poulain, The Star Online, 2014). A variety food culture in Malaysia will contribute number of peoples who get disease. Health sector in Malaysia, food is the larger factor that contributes to health problem such as obesity, stroke, Lung disease, diabetes, Breast cancer, Lung cancer and Kidney disease. The Malaysian health system that developed since the independent from the British in 1957 is heavily influence by UK health system. The system was controlled by Ministry of Health to play a major role to manage fund and services at national state and even district level (Aljunid, 2014). The data collected by Institute for Health Metrics and evaluation in Malaysia 2015 shows the most death causes by the lung and colorectal cancer (30.8%), Alzheimer disease (29.4%), Chronic Obstructive Pulmonary Disease (COPD) (23.6%) and followed by Diabetes (21.7%). Cancer disease is the top number of death in Malaysia. Malaysian people must aware on this issue and at the same time others disease must be control by using self-awareness, government and NGO. (Institute for Health Metric and Evaluation, 2015)

Besides, Malaysia has facing a big famous problem on health which is obesity. Malaysia has been rated as the highest among Asian countries for obesity. The situation had become more urgent because there were more overweight children now. (Malaysia Society for study of Obesity president Prof Dr Mohd Ismail Noor, 2013). A part from that, Malaysia was rated heavyweight at 45.3% of its population, followed by South Korea (33.2%), Pakistan (30.7) and China (28.3). (The lancet, 2014). The obesity problem will cause diabetes, heart and other disease. Most of the factor that can be related on this issue is food, exercise and life style. A big number of children overweight now will show the future of view. So many parents ignore the health notice and awareness on daily life in Malaysia.

Based on this issue, the government has plan the strategies to improve and solve this problem which is through Transformation toward a more efficient & effective health in ensuring universal access to healthcare. Next, health awareness & health lifestyle which is to increase access to health knowledge through conducting healthy lifestyle campaigns, using social marketing strategy, initial targeted at school children with focus on healthy eating, physical activity, anti-smoking and mental health. Besides, Malaysia also has to confront the familiar and unpleasant task to make the right choices to provide its citizen with affordable, high-quality care. By create a right decision it can help to control the health system costs with the high quality of treatment. Malaysia has to undergo health transformation as the builds a health system for future. The future healthcare requires reshaping from a system that is largely disease-based medical care focused on illness, facilities and healthcare providers to personalized healthcare that is focused on wellness, people and the capacity to deliver services into people's homes.

Besides, the government have to introduce the technology to help people improve their health with low costs and faster. The recent technology is very useful for people to meet the healthy life style because the information or knowledge can be easily get from that platform. At the same time the government can explain the importance and benefits of using technology on our health. From that effort, the government can reduce the cost for medicine or treatment for baby boomers especially. This is because people start aware on their health and accept the technology as a teacher for them to become healthier. Famous health technology nowadays is mobile application. Mobile application is the mobile tools that can be use anywhere and easy to control and improve health.

# 2.3 Mobile Health Application

Most of people are easily spend a lot of money in order to maintain and improve their health. At the same time they forget that the advancement of technology nowadays are really useful and efficient to adept especially in health sector. There is a lot of health technology that can be widely using especially health mobile application. Most of this application is free and easy to use. The drastic development of mobile communication and wireless technologies, penetration of both mobile phone and various emerging mobile application is very high. The