

A STUDY ON ELECTRONIC WASTE (E-WASTE)
MANAGEMENT AND THE ADOPTION AMONG
UTEM CITY CAMPUS STUDENTS

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**The thesis is submitted in partial fulfillment of the requirements for the award of
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DECLARATION OF ORIGINAL WORK

“I declared that this project is the result of my own research except as cited in the references. This research project has not been any degree and is not concurrently submitted in candidature of any other degree.”

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DEDICATION

This thesis is dedicated

To my lovely parents, Mr Mohd Salim and Mrs. Juriah whom has always been there supporting me through my ups and downs and giving me the extra boost that I always needed to finish up my thesis.

My siblings, Mr. Abdul Ghony, Ms. Nur Emyza and Mrs. Munirah who always has been such a supportive person for me to finish what I have started.

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Abstract

Recently, electronic waste management have shown the serious problem in the management term. There are several aspects that need to be considered in conducting the e-waste management, and also how is the adoption among the students regarding this electronic waste management. The theoretical framework is based on the UTAUT model which is usually being used to conduct the research regarding the adoption of the electronic waste management. This research contributes to existing research in the following ways. First, this study extends our knowledge on electronic waste management. This research is to investigate a relationship between the independent variable and dependent viable. The results indicate a significant statically link between the variables.

Abstrak

Baru-baru ini, pengurusan sisa elektronik telah menunjukkan masalah yang semakin serius dalam terma pengurusan. Terdapat beberapa aspek yang perlu dititik beratkan dalam melaksanakan pengurusan sisa elektronik dan bagaimana pengurusan sisa elektronik ini diadaptasi di kalangan pelajar. Kerangka teori untuk kajian ini berdasarkan model UTAUT yang selalunya diguna untuk melaksanakan kajian berkenaan dengan pengurusan sisa elektronik dan adaptasi di kalangan pelajar. Kajian ini menyumbang kepada kajian yang telah dilaksanakan sebelum ini. Kajian ini menambahkan pengetahuan kita terhadap pengurusan sisa elektronik. Kajian ini dilaksanakan untuk mengkaji hubungan di antara pemboleh ubah bebas dan pemboleh ubah bergantung. Keputusan yang didapati menunjukkan secara signifikan wujud hubungan diantara kedua-dua pemboleh ubah..

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CHAPTER 1

INTRODUCTION

1.1 Introduction Chapter

In this chapter incorporates few sections as divisional of the study. The first section of this research is about the background of the research and at this section the researcher should give a general review of the thesis topic and introduce the pivoting ideas that you will be using throughout the thesis. The second part of the study is regarding the problem statement. The problem statement is a define description of the issues that need to be solve by the researcher. Next part of the study is the research objectives. Research objectives may be connected with the hypothesis or used as the statement or facts of purpose in the study that does not have a hypothesis. Next, the research questions. The research question is the research question guides and it should be clear as well as focus and also synthesize multiple source to present the unique argument. The question is about electronic waste management and the adoption of students. Lastly, the last part of this chapter is the researcher will conclude with summary of this chapter.

1.2 Background of Study

This study aim is to investigating and adoption of the electronic waste management among the students in UTeM City Campus. Electronic waste also known as electronic waste is a term for electronic products which we can say is already unwanted, obsolete and have reach the end of the device life. Technological innovation that are growing rapidly and more advance is the reason why many electronic devices become scrap after a few years or short period of time. Electronic waste can be defined as an electronic equipment or products that are connected with power sources such as plug, batteries. This has become outdated or we can call as obsolete due to the reasons of advancement of technology, changes in the preferences or either it is not useful anymore. All the old electronic devices for examples netbook, computers, television, DVD player, MP3 player, Walkman, mobile phone, iPod, and etc have inclined by the former users is one of the categories of electronic waste.

The rapid growth in ICT has led to an improvement in the capacity of computers but simultaneously to a decrease in the products lifetime as a result of which increasingly large quantities of waste electrical and electronic equipment (electronic waste) are generated annually (O. Osibanjo 2007). The electronic waste management as well as the awareness among the users or consumer is essential to be known to help the growth of clean and green information technology. Almost all of the electronic devices waste is important because the waste produce is rich source of raw materials. According to the research made by the United States, 10%-15% of gold that exist in the electronic waste was being successfully recovered while the remaining 85 percent is unsuccessful. The old electronic item mostly has toxic substances such as mercury, lead and chromium. Because of the toxic substances it is a must to ensure that all of these materials are not exposed to the surrounding environment.

There are several factors that can be look up in the electronic waste management such as factor why electric and electronic waste is increasing each time every year in almost all of the developing countries, the effect of inappropriate electronic waste management toward oir surrounding and also to the countries, the challenges that need be face while handling the electronic waste and also the awareness among the consumers. According to (Osibanjo 2007), clearly stated some of the factor that contribute to the increasing of the electronic waste currently.

1.36 million metric tons of the electronic waste is being disposed in 2005, mainly at the landfills and it keep growing even until today because of the rapid change in the technology. We can see from the S-curve that how fast is the technology is growing compared to one or two decades back. The European Union, Japan, South Korea, Taiwan and other regions are currently working with the electronic waste management systems to handle all the type of waste stream (Kahhat et al 2008). According to (Liu, 2005) in China, electronic waste has become an serious waste stream issues in terms of both quantity and also toxicity.

In conclusion, there are many aspects that can be look up regarding the electronic waste (electronic waste) management which are the factor, the effect, the challenges as well as the public awareness regarding the issue of the electronic waste management. The major aspects that contribute to all of the other aspects is come from the factor why is the electronic waste is rapidly increasing throughout the year by year.

1.3 Problem Statement

The aim of this section is to investigate some of the aspects that are related to the electronic waste (electronic waste) that the researcher found. There are several problems that can be viewed based on the aspect that contribute the electronic waste. Firstly, is

the factor that contributes to the electronic waste. The factors are rapid advance in technology, rapid growth of the Information Technology and telecommunication and also the purchasing power (Osibanjo 2007). We can see that the technology especially in mobile phone keep changing and upgrading time by time. This has led the consumers to keep their gadget up to date to ensure that they have the latest technology compared to the others. This has led to the short life cycle of the electronic devices and make it reach its end of life (END OF LIFE). Therefore, this has linked to the increment of the electronic waste.

The second aspects that relate on the electronic waste management are the effect of the inappropriate of electronic waste management to surroundings also to the countries. Inappropriate management of electronic waste can affect the sustainable development. According (Osibanjo 2007), the quick developing and growing of ICT sector gives several threats to the sustainable development and a lot of natural resources are involved in the life cycle of products and hazardous waste materials are being generated. Even though feature which is the size and weight of hardware has reduced dramatically, total volume has considerably increased the absolute resource consumption and toxic waste (Plepys 2002).

The third aspects that relate on the electronic waste management is the challenges need to face while practice and implementing the accurate electronic waste management in the countries that is still developing. This is because, according to (Osibanjo 2002), there is lacking of infrastructure for suitable waste management, none of legislation dealing specifically with electronic waste, an absence of any framework for end-of -life (END OF LIFE), product tack back and implementation of extended producer responsibility (EPR) and lack some funds and investments for finance profitable.

1.4 Research Gap

The researcher doing research in Universiti Teknikal Malaysia Melaka about the electronic waste from aspects of students. While the past research makes a research mostly regarding the management of the electronic waste in the country and how they develop it according to each of the country law and regulations.

1.5 Research Question

The research question relates to the factors, effect, and the management issues of the electronic waste. These questions are that construct as follows:

1. What is the factors that influence the adoption of the electronic waste management among students in UTeM City Campus? What is the factor for students to conduct the electronic waste management?
2. What is the relationship between the factor that influence the adoption of the students on electronic waste management?
3. What is the most influencing factor of the adoption of electronic waste management?

1.6 Research Objectives

Important objectives of the study are follows:

1. To know the factors that influence the adoption regarding the electronic waste management among students in UTeM City Campus.
2. To investigate the relationship between the factor that influence the adoption of the students on electronic waste management
3. To identify the most influencing factor of the adoption of electronic waste management

1.7 Scope of the Study

Nowadays, there are many people that do not have knowledge and awareness regarding the electronic waste management. Therefore, focus of the research is regarding investigating electronic waste management and the adoption among City Campus UTeM students. The factors that contribute to this increasing of electronic waste is rapid advance in the technology, rapid growth of IT and telecommunication and as well as the purchasing power that the consumer have.

1.8 Limitation and Key Assumption of the study

1. The researcher assume that respondent will provide honest answers.
2. The researcher assume that respondent have adequate knowledge to be one of respondent while collecting the primary data collection.
3. The researcher assume that respondent have experience in managing research topic where he or she can provide justifiable answer.

1.9 Significance of the Study

The point of this research is to investigate electronic waste management among the student in UTeM City Campus. Therefore, the important of this research is to improve and make create awareness about the electronic waste management for future generation use. So, the researcher must relate the research problem which is about the factor of the electronic waste management, the effect than inappropriate electronic waste management, and also the challenges to conduct this electronic waste managements. Furthermore, the researcher must understand the aspects that need to be considered in the electronic waste management because it is valuable for the better future for the next generation.

1.10 Summary

In this chapter 1, this paper researcher stating briefly about topics that studied which is to investigate about the electronic waste management and its aspect. Next, it is continuing with the overall of the electronic waste management and through background of the study. This chapter also state about the problem statements, research question, research objective, scope of study, limitation, and significant key assumptions of the study. Besides that, the researcher fined the relevant information related with the topic. The information that the researcher gets such as from journal, web internet and so on. Therefore, the researcher will get a variety of information from credible sources on information reviewed by the journal, internet websites and many others resources.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In the last chapter which is chapter 1 the introduction, the researcher has introduced the problem statement, research objectives and also the research questions. In this chapter, the researcher used to explain the overall study of the literature as one of the primary sources. Furthermore, the literature must relate with the topic that been study by the researcher. Moreover, this chapter is aim to develop the theoretical framework for the research study. Because of that, the researcher need to provide and also review the model as well as to construct the theoretical framework based on the articles and also journals from study that have been conducted before. Furthermore, from the theoretical framework it can guide the researcher to get and collect the data and also analysis the data that have obtain. In this chapter also contains all the relevant written statements from the journal and articles to support and to strengthen the argument given. It is