

**EXPLORING FACTORS THAT INFLUENCE
RESIDENTS' INTENTION TOWARDS SEPARATION OF SOLID
WASTE AT SOURCE IN MALACCA**

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**Report submitted in fulfillment of the requirement for the Bachelor Degree of
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WASTE AT SOURCE IN MALACCA**

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DECLARATION

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SUPERVISOR DECLARATION

“I hereby declare that have read this thesis and in our research is sufficient in terms of scope and quality. This project is submitted to University Teknikal Malaysia Melaka as a requirement for completion and reward Bachelor Degree of Technology Management (Technology Innovation)”

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ABSTRAK

Kajian ini memberitumpuan kepada faktor-faktor yang mempengaruhi niat penduduk terhadap pengasingan sisa pepejal di punca di Melaka. Sikap, Pendidikan alam sekitar dan pengetahuan dan maklumat yang diterima merupakan tiga faktor yang berpotensi untuk mempengaruhi niat penduduk. Sikap ialah faktor yang merujuk kepada penilaian, positif atau negatif, individu. Ia mencerminkan kesedaran mereka mengenai hasil tingkah laku itu dan bagaimana mereka menilai keputusan ini. Pendidikan alam sekitar adalah satu lagi faktor yang boleh digunakan untuk menggalakkan niat ke arah pengasingan sisa pepejal di kalangan penduduk. Pendidikan adalah sangat berkesan untuk membina kesedaran terhadap alam sekitar. Pendidikan alam sekitar menekankan pengajaran yang bersifat holistic alam sekitar melalui pendekatan penyelesaian antara disiplin dan masalah. Pengetahuan dan maklumat yang diterima boleh menggambarkan bahawa rakyat mempunyai maklumat mengenai cara untuk mengitar semula dan ini menyebabkan mereka lebih cenderung untuk mengambil bahagian daripada yang lain. Oleh itu, soal selidik dijalankan untuk mengumpul data. Soal selidik dijawab oleh 134 responden yang terdiri daripada penduduk kediaman di kawasan Telok Mas. Semua data dan maklumat yang dikumpul melalui soal selidik dianggap sebagai data utama kerana kajian ini penuh berdasarkan soal selidik. Kadang-kadang, data rendah akan menjadi data yang paling dipercayai dan sebaliknya. Maklumbalas daripada responden akan menentukan sama ada faktor yang terbaik adalah munasabah untuk mempengaruhi penduduk dan akhirnya objektif kajian dan persoalan kajian dapat dicapai.

ABSTRACT

This research focuses on the factors that influence resident's intention towards separation of solid waste at source in Malacca. Attitude, environmental education and knowledge and information received are three factors that have a potential to influence resident's intention. Attitude factor is attitude towards the behavior refers to the evaluation, positive or negative, the individuals have on the behavior, it reflects their awareness on the outcome of that behavior and how they evaluate this outcome. Environmental education is another factor that can be used to encourage intention towards separate of solid waste among residents. Education is very efficient to build awareness towards environmental. Environmental education emphasizes the teaching of the holistic nature of the environment through interdisciplinary and problem- solving approaches. Knowledge and information received can be describe that citizens who are better informed on how to recycle are more likely to participate than others; more and better information can make separation easier and reduce the perception of difficulty. Therefore, questionnaire is conducted in order to collect the data. The questionnaire answered by 134 respondents those consisted residential in Telok Mas region. All data and information gathered through questionnaire were considered as primary data because this research is full based on questionnaire. Sometimes, primary data will become the most trusted data and vice versa. The feedback from respondent will determine whether which the best factor is reasonable to influence residents and finally the research objective and research question can be achieved

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Malaysia has privileges associated with multi-ethnic society which is Malay, Chinese and Indian. Increasing population in Malaysia automatically will effected to the increasing the amount of waste. Therefore, solid waste management should be focused to encourage the good environmental for the next generation. According to Mizpah Ama Dziedzorm Asase (2011), the quantity of solid waste (SM) that needs managing is continuously increasing as a result of many factors of which population growth, rapid urbanization, increasing availability of consumer products, improving living standards as result of economic growth and poverty reduction are key.

Solid waste is the most visible environmental problem among many in urban areas. Increase solid waste generation creates more environmental problems as many cities are not be able to manage it due to institutional, regulatory, financial, technical and public participation shortcomings” (K.Indhiera el al. 2015).

According to SWCorp Chief executive officer, Datuk Ab Rahim Md Noor said the enforcement of the act was timely because besides reducing the percentage of garbage sent to the disposal site by up to 40 per cent, it was also expected to increase the rate of recycling in excess of 22 per cent by the year 2020. He said that

out of the 33,000 tons of solid waste collected daily; only 10.5 per cent were recycled while the rest were disposed of at the disposal site. *“Besides helping to extend the life expectancy of the disposal sites, the enforcement of the act is believed to be able to raise the rate of recycling to more than 22 per cent by the year 2020”*. (BERNAMA, 31 August 2015).

Solid waste management may be defined as the discipline associated with the control of generation, storage, collection, transfer and transport, processing and disposal of solid wastes in a manner that is in accordance with the best principles of public health, economic, engineering, conservations, and that is also responsive to public attitudes (Takele Tadesse, 2004).

1.1 Background of study

On 1st September 2015, Government has taken initiative action which they were launched a program which is implementation the separation of solid waste at source.

Enforcement of the order in the Federal Territory of Putrajaya, Kuala Lumpur, Pahang, Johor, Melaka, Negeri Sembilan, Kedah and Perlis among other things aimed to reduce the delivery of solid waste to the garbage disposal sites but did not involve any fine. Household in seven states including the Federal Territories of Kuala Lumpur and Putrajaya will begin the compulsory separation of solid waste at source or from the house. (Bernama, 31st August 2015).

According to the SWCorp, they have developed an Action Plan for Public Awareness of Separation Solid Waste at Source 2015 which aims to educate and practice of waste separation in Malaysian society. The plan outlines three strategies that will be able to achieve target.

Solid waste also can be defined as the useless and unwanted products in the solid waste derived from the activities of and discarded by society. Solid wastes can

be solid, liquid, and semi-solid or containerized gaseous material. It can be categorized into three groups. The first one is any material if they are recycled or accumulated, stored, or treated before recycling. Second one is being used in manner constituting disposal, burned for energy recovery, reclaimed, and accumulated speculatively. Third one is a discarded material that is abandoned, recycled, and inherently waste-like. (Asmawati Desa et.al, 2012).

According to the research by Mizpah Ama Dziedzorm Asase, 2011, Separation at source refers to “The practice of setting aside post-consumer material and household goods so that they do not enter mixed waste stream for the purposes are recycling, reuse or improved waste management” (Lardinois and Furedy, 1999).

1.2 Problem Statement

Separation of solid waste at source is one of key approach to maintain and keep environment clean. It can be the best alternative to encourage people to love and take a good care of their very precious live. Therefore, to achieve the target, people required to organize the way in order to collect clean recyclables from households. However there are several factors as limitation to practice that plan. The factors that contribute into mismanage of solid waste management are; lack of knowledge and information received among residents. Next, is the attitudes problem in term of lower intention to recycle among resident. Lastly is lower in environmental education that will able to encourage people to become more responsible towards solid waste. All of this factor will be contribute to the lack of residents' intention in order to keep environment clean and safety.

Lack of knowledge and information received will contribute to the lack of intention to separate solid waste. The intention to separate waste is depends on the attitudes where it will help to construct whether it is a good or bad behavior. The TRA (Ajzen and Fishbien, 1980), indicates that the most behavior is under volitional

control, the individual can decide whether they will perform or not perform in term of behavior. According to Mizpah Ama Dziedzorm Asase (2011), limited information exists on the implementation of such schemes in developing countries. The promotion of such schemes must be preceded with careful evaluation of potential constraints and opportunities. A good evaluation of the availability of recyclables will be motivating factor for the private sector and local authorities to provide organized schemes for recycling of some waste fractions.

Lower resident's intention towards recycling also can effect to the lower intention towards separation solid waste. According to the articles by Dongliang Zhang et al., (2015), Chan interviewed 173 household members in a public housing estate in Hong Kong. He found that attitude was the major factor predicting a pro-environmental behavioral intention and that publicity from the mass media should be effective for promoting green behaviors. Sometime residents were reluctant to follow the rule in term of solid waste management themselves. Marietha Ndele Mlozi (2011), describe that the major limitations at household and residents levels are lack of collection and storage facilities which could lead to serious health and environmental problems. Resident members perceive solid waste management as a sole responsibility of local government authorities. The perception towards solid waste management (SWM) is quite low and their attitude in SWM is also unfavorable.

Furthermore, residents may be refused to separate solid waste because of the awarness to keep environmental clean is lower. This problem might be happen because of they have a limited of enviornmental education background. Atasoy and Erturk (2008), lack of effective environmental education opportunities negatively affect the measures that will be taken in environmental conservation and solution of environmental problems. Acquisition of positive attitudes towards environment is closely related to environmental awareness. Knowledge, skill and values acquired in primary school form the basis for higher level of learning. The importance of primary schools in environmental education is also noteworthy since a large number of individuals do not continue with further education in Turkey.

1.3 Research Question

1. Does the attitude influence the residents' intention to separate of solid waste at source?
2. Does the subjective norm (knowledge and information and environmental education) influence the residents' intention to separate of solid waste at source?

1.4 Research Objective

1. To determine the attitude influences the residents' intention to separate of solid waste at source?
2. To examine the subjective norm (knowledge and information and environmental education) influence the residents' intention to separate of solid waste at source?

1.5 Scope of Study

Study about resident's intention towards separation of solid waste at source in Malacca. The researcher has chosen Malacca state because it is one of state that adopted the Solid Waste Management Act and Public Cleansing Act 2007 (Act 672). The researcher focused only in around Telok Mas. According to the En Abu Bakar Bin Md. Sudi, Assistant Statistical Officer in Department of Statistic Malacca, Malaysia, said that the total population around Dun Telok Mas (N23) is about 40,572. However, the residents around Telok Mas are about 1,248 people. Telok Mas

is choose because of it consists of several number of housing and would be easier to collect the data by using survey method.

1.6 Limitation of Study

1.6.1 Cooperation

The researcher will face the lack of cooperation from the respondent. For example, the respondents refuse to answer the questionnaire or refuse to reply the questionnaire back. Besides that, the respondent does not given an accurate answer.

1.6.2 Time constraint

This study will be carrying out starting on September 2015 until June 2016. The time frame given is not sufficient for the researcher to carry out a research within nine (9) month since the responsibility to perform other things at the same time. An assignment, group discussion and also presentation also need to be focused by the researcher. An excellent research required full concentration and cannot be mixed up with others things.

1.6.3 Lack of experience

In an attempt to complete this research, it really required a lot of energy, patience, skill and perseverance besides of demanding for useful knowledge and experience as researcher is lack of doing of the research.

1.7 Significant of Study

The purpose of this research is to study the key approach that can assist government to encourage the population to become more responsible towards solid waste management at source. This study is important since it will be beneficial and enhance knowledge to all related parties such as;

1.7.1 The Government

This study can be guidance for government in order to achieve the status of “*Melaka Maju Negeriku Sayang, Melaka Bandar Teknologi Hijau*”. This study can be used in order to enhance good image and improve their performance in the future.

1.7.2 The researcher

This study will help researchers to gain new working experience because of interact with many people with different attitude and behavior. Researcher also have exposed with new skills in term of solid waste management. This study also provides some knowledge and allow researcher to brainstorm in order to contribute some idea and recommendation to improve the management.

1.7.3 The respondents

Respondents will gain extra knowledge about the step of separation needed in order to fulfill government requirement. All these way will guide to better solution to improve the current management of solid waste provided by government. The implementation to separate useless materials would become more easily and automatically will improve the public attitude and behavior towards solid waste.

1.8 Summary of the Chapter

In chapter one, the researcher introduced clearly introduction, background of study, problem statement (the main reason of doing research), research questions and objectives. The question that is the main purpose of this study is does the attitude influences the intention to separate of solid waste at source. Second is Does the subjective norm (knowledge and information and environmental education) influence the intention to separate of solid waste.

To answer those questions, objective must be achieved;to determine the attitude influences the intention to separate of solid waste at source. Second is to examine the subjective norm (knowledge and information and environmental education) influence the intention to separate of solid waste. All these are the objectives of this study and lead to findings that will be reviewed in the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

First of all, literature review means the process of analyzing, evaluating and summarizing about specific topic. Here the researcher will discuss about the topic titled “Exploring the factors that influencing the resident’s intention towards Separation of Solid Waste at source in Malacca. When all the process done, the results of the literature review may be compiled and book as a report or may be published as research article and reference for students, researcher and personnel of an organization.

The main purpose of doing literature review is strengthening details, data and information given or established by the authors. Sometimes, the authors do not realized of important information that should be put or explained well in their research. Therefore, the process of literature review must establish a theoretical framework in order to make the research become more reliable and acceptable by others.

The literature presented in this chapter deals with research findings on exploring the factors that influencing the resident's intention towards Separation of Solid Waste at source in Malacca based on the a few theories regarding with solid waste management that make sense. Theoretical background will be described and explained in this chapter.

In this section contains two parts. The first part defined the general all about Municipal of Solid Waste and also will be related with the topic of research which is about the separation of solid waste at source. The second part discusses the factor that influence resident's intention towards separation of solid waste. In this part, the researcher explains theory of reasoned Action (TRA). TRA is one of method that can be used to study about how residents' intention to perform or not to perform something. For example, in this study, the researcher will look to the resident's intention towards separation of solid waste at source. After that, the researcher will construct the theoretical framework by refer to TRA in order to test the hypothesis regarding with the resident's intention after the data collection is done in next chapter.

2.2 Solid Waste

2.2.1 Solid Waste Definition

Solid waste comprise all the wastes arising from human and animal activities that normally solid and that are discarded as useless or unwanted. From the days of primitive society, humans and animals have used the resource of the earth to support