Waste Management Practices among Counter Service Restaurants in Batangas City, Philippines

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ABSTRACT

The study looked into the extent of the proper waste management of the counter service restaurants in Batangas City, Philippines. The waste management of counter service restaurant highlighted on reducing the food establishment demand for virgin raw materials through increasing waste prevention and recycling. The problem encountered of the counter service restaurant agrees on the government policy that was implementing in our country. The proposed plan of action will help the counter service restaurant may serve as a guide in minimization of the waste management.

Keyword: waste management, counter service, Batangas city, waste disposal, restaurants

INTRODUCTION

Counter service restaurant like Jollibee, and Chowking take responsibility in waste management very seriously, in full support and compliance to the Ecological Solid Waste Management Act. The Jollibee Group and Chowking is currently reducing its use of styro packaging by shifting to washable melaware for dine-in services. It also practiced solid waste segregation through a comprehensive sorting process that begins at the store and continues to secondary facilities for material recovery and reprocessing.

From the store, segregation already begins through separate trash bins for biodegradable or organic waste and non-biodegradable waste. These waste materials are bagged, collected and transported in sanitary closed vans to the Materials Recovery Facility, where secondary segregation takes place. Here the waste is further sorted into styro, paper, plastic cups, spoons, forks and straws, food waste, and residual or non-recyclable waste. The increasing issue and concern of how much danger waste pose to both the human and the non-human population has made its management a genuine concern throughout the world. Despite government efforts, the management of waste disposal has remained the major environmental problem.

In fact, millions of metric tons of waste are being generated worldwide. Batangas City, having a population of 295,231,The City of Batangas generates about 80 metric tons of garbage per day, or a total waste of 29,200 metric tons for a year. Thus residual waste at 30% of the waste volume amounts to about 8,760 metric tons per year. This waste requires about 26,280 cubic meters of landfill space. Over the past 30 years, food chain restaurant have evolved into major players in the restaurants business. It delivers consistency in product and service standards. It recruits top-notch people. It train and develop people through written program. It introduced standardized system to control cost and keep up with trends and the market place. (Wade 2006). In the waste management process, segregation practice needs to be practiced more strictly and by the waste generators itself (Shalini, 2012).

The solid waste problem is not just been responsibility of the city council but also other parties *(Dwijendra, 2012).* The practice of improper waste disposal results in unsanitary surroundings that eventually attract disease-carrying inserts and canines. Sometimes itinerant scavengers would often ransack the solid waste disposal in open receptacles or even sip the plastic containers before they are collected for final disposal. Stray animals and wind compound the problem by scattering the waste left by scavengers.

Education and awareness in the area of waste and waste management is increasingly important from a global perspective of resource management and the hospitality industry. Student must be aware in the waste management program of the fast food chain.

For the above reasons, the researchers are encourage and challenge to undertake this study to be able to know if the managers and the employees know how to properly dispose their waste in their establishment.

OBJECTIVES OF THE STUDY

The study looked into the extent of the proper waste management of the counter service restaurant. Specifically, the research aims to know the profile of the counter service establishment in terms of waste management then, to know the different waste management. It also wanted to know the problems encountered in order to eliminate waste disposal problem and prepare a plan of action.

MATERIALS AND METHOD

The researchers made used use of the descriptive type of research to analyze the data gather on the waste management practices among counter service restaurant in Batangas City. The respondent of the study were sixty (60) which composed of three managers and seven employees in every branches of selected counter- restaurant such as Chow king, Jollibee, McDonalds, Mang Inasal ,Kenny Rogers and Greenwich. This research aimed to determine the respondents needed in the study since the purposive sampling technique was used to determine the number of respondents needed.

Self-made questionnaire was used in the study. It consists of three (3) parts: the profile of the counter service restaurant in terms of waste management, waste management practices among selected counter-restaurants and the problems encountered of counter service in waste management.

The draft of the questionnaires was presented to the adviser for comments and revision. The researchers incorporated the suggestions made and final copy of questionnaires was ready for distribution. The respondents were oriented about the purpose of the study before they were asked to answer the set of questions regarding the waste management. The questionnaire was personally collected after giving the respondents sufficient time in answering the questions. The data obtained from the questionnaire were tallied, tabulated, interpreted and analyzed using SPPSS v. 17.

RESULTS AND DISCUSSION

Table 1
Profile of the Counter Service Restaurant in terms of Waste Management

Profile	WM	VI	Rank
1. Holding seminars/ symposium about waste disposal.	3.37	Observed	3
2. Segregation of bio- degradable to non bio-degradable.	3.55	Highly Observed	1
3. Reusing of utensils like spoon, fork and plate.	3.42	Observed	2
4. Anaerobic digestion or converting of waste into fuel.	2.63	Observed	5
5. Using billboard and slogans on waste disposal.	2.80	Observed	4
Composite Mean	**3.15**	**Observed**	

Table 1 shows that the different counter service restaurants have different waste management protocols observed in the business. Segregation of bio- degradable to non-biodegradable was highly observed with weighted mean value of 3.55.It was followed by reusing of utensils like spoon, fork and plate with weight mean value of 3.42 and holding seminars/ symposium about waste disposal was observed weight mean value of 3.37. Over all, the respondents had an assessment in terms of waste management, with a rating of 3.15.Though treated observed, using billboard and slogans on waste disposal and anaerobic digestion or converting of waste into fuel were the least on their profile in terms of waste management. In General counter service restaurants highly implementing the segregation of bio-degradable to non-bio-degradable. Since this is a general action or standard operating system (SOP) in all fast food chains maintaining the proper disposal of waste in the establishment.

Fast food chains package their foods in disposable paper bags, wrappers, and cardboard and Styrofoam containers. Fast food outlets therefore do not have to clean utensils, ceramic cups,

plates, or serving dishes. Although paper, plastic, and foam products cost money, they are not as expensive as the stolen and broken dishes that prevailed before the fast food industry shifted to disposable packaging. Many Filipinos believe that fast food generates vast amounts of trash. However studies have consistently shown that fast food establishments are responsible for less than 1 percent of landfill volumes.

Waste disposal has become a serious concern with the exponential growth in technologies, industrial development, and the steady rise in population. People from the waste management department are searching for the best ways and methodologies for disposal as it is constantly affecting human health and the environment as well. In the waste hierarchy, the most effective approaches to managing waste are at the top. In contrast to waste minimization, waste management focuses on processing waste after it is created, concentrating on holding seminars and slogans for a good benefit (Gandhi 2006).

Table 2
Different Waste Management Practices of Counter Service Restaurant

Practices	WM	VI	Rank
1. Down-cycling or converting useless material into new material but lesser quality and functionality.	2.97	Agree	10
2. Recycling or converting used materials into new materials.	3.23	Agree	8
3. Reducing food establishment demand for virgin raw materials through increasing waste prevention and recycling.	3.50	Strongly Agree	1
4. Segregation of waste by the use of biodegradable and non- biodegradable.	3.47	Agree	2
5. Reducing of styro packaging by shifting to washable melaware.	3.32	Agree	6
6. Using a corn- based bio-plastic to produce containers for some of their products.	3.20	Agree	9
7. Use of hygienic waterless urinals in the stores.	3.32	Agree	5
8. Decentralization of waste management through the establishment of Materials Recovery Facility.	3.37	Agree	4
9. Food waste is transferred to composting and hog-feeding facilities.	3.38	Agree	3
10. Reprocessing of styro where it is safely melted and reshaped into blocks that are shipped overseas for further processing to produce new commercial and industrial applications.	3.30	Agree	7
Composite Mean	**3.31**	**Agree**	

With regards to the data above, Over all, the respondents had an assessment in terms of waste management practices, with a rating of 3.31.The respondents according to the different waste management practices of counter service restaurant strongly agreed that Reducing food

establishment demand for virgin raw materials through increasing waste prevention and recycling with weight mean 3.50.

In general, some of counter service restaurant in terms of waste management practices strongly agree by reducing of food establishment demand for virgin raw materials through increasing waste prevention and recycling. The managers and employees were highly practices of different of waste management in the counter service restaurant.

Each method of waste disposal has its drawbacks. Reusing glass bottles can require more energy than their initial manufacture as they have to be sterilized. Incineration is a source of greenhouse gases and toxic chemicals like dioxins and lead. Landfill sites are a possible source of toxic chemicals and produce large quantities of methane gas. They must be managed so that pollutants do not seep into groundwater and should therefore be kept dry, but this slows down the rate of decomposition.

Some of the counter service restaurant practices in terms of reducing of food. And the respondents also agree in Recycling or converting used materials into new materials with weight mean 3.23, Using a corn- based bioplastic to produce containers for some of their products with weight mean 3.20 and Down-cycling or converting useless material into new material but lesser quality and functionality with weight mean 2.97.

Results found that managers and employees of the counter service restaurant agreed on the recycling or converting used materials into new materials. By recycling of wastes that coming from all the fast food chains in Batangas City is one of the actions that can minimize the production of waste. To Reuse is to use an item more than once. This includes conventional reuse where the item is used again for the same function, and new-life reuse where it is used for a new function. In contrast, recycling is the breaking down of the used item into raw materials which are used to make new items. By taking useful products and exchanging them, without reprocessing, reuse help save time, money, energy, and resources. In broader economic terms, reuse offers quality products to people and organizations with limited means, while generating jobs and business activity that contribute to the economy.

The counter service restaurant was least agreed in the down-cycling process of a product because they do not work on it. Down-cycling is the process of converting waste materials or useless products into new materials or products of lesser quality and reduced functionality. The goal of down-cycling is to prevent wasting potentially useful materials, reduce consumption of fresh raw materials, reduce energy usage, reduce air pollution and water pollution, and lower greenhouse gas emissions (though re-use of tainted toxic chemicals for other purposes can have the opposite effect) as compared to virgin production. A clear example is plastic recycling, which turns the material into lower grade plastic.

Segregating or by separating biodegradable to non-biodegradable. This is the general action or standard operating system (SOP) in all fast food chains by maintaining the proper disposal of waste in the establishment.

Table 3 shows the problems encountered of Counter Service Restaurant in terms of waste management practices. As revealed from this table, different counter service restaurant experience a problem with regards to their waste management practices. Among the problems enumerated, government policies on waste management rank first, followed by health hazard of the customer and paper and plastic product that are used in serving the food that ends up in the landfill with weighted mean value of 3.32, 3.28 and 2.95 respectively.

Table 3
Problems Encountered of Counter Service Restaurant in terms of Waste Management Practices

Problems Encountered	WM	VI	Rank
1. Paper and plastic product that are used in serving the food that ends up in the landfill.	2.95	Agree	3
2. Improper waste management.	2.53	Agree	6
3. In and Out groups of foods.	2.92	Agree	4
4. Health hazard of the customer.	3.28	Agree	2
5. Government policies on waste management.	3.32	Agree	1
6. Lack of knowledge about proper waste disposal system.	2.45	Disagree	7
7. Irregular schedule of collection of waste products.	2.33	Disagree	10
8. Limited number of waste disposal.	2.65	Agree	5
9. Inaccurate segregation of waste.	2.35	Disagree	9
10. Lack of awareness in handling the proper disposal of waste.	2.40	Disagree	8
Composite Mean	**2.72**	**Agree**	

Based on the results of the problem encountered by counter service restaurant agree of the government policies on waste management by the managers and the employee was highly observed of this problems. However, they do not encounter lack of knowledge about proper waste disposal system, lack of awareness in handling the proper disposal of waste, inaccurate segregation of waste and irregular schedule of collection of waste products.

Based on the result of the table the managers and the employees was disagree of lack of knowledge about proper waste disposal system in the problem encountered in terms of waste management in the countered service restaurant with weight mean value of 2.35.

The problem with fast food trash has been the customers who toss their refuse onto highways and streets, making it highly visible. Fast food establishments have placed trash containers in convenient locations so they can be easily used. Chains have also encouraged customers to "put trash in its place." Also, most fast food chains have installed trash compactors in each outlet to limit the volume of trash generated at the outlet. To counteract the bad public relations due to its customers tossing trash onto streets, many fast food chains have contributed to local activities, such as sponsoring highway cleanups.

CONCLUSION AND RECOMMENDATION

The waste management profile of counter service restaurant focus on segregation of biodegradable and non- biodegradable of waste compare to reusing of utensils like spoon, fork and plate, holding seminars/ symposium about waste disposal, and using billboard and slogans on waste disposal.

The counter service restaurant must implement a signage's in their different working station. Using slogan and chart in the working areas can prevent the increasing waste. Practicing implementation can help to minimize waste in their establishment. Conducting training and seminars about waste management to managers and employees is recommended for better implementation. They have to consider the down cycling programs in every food establishment. Counter Service Restaurant needs to get their waste off, they need to have private vehicle for the transportation of the wastes product and they can have assurance of their waste disposal. The proposed plan maybe the action plan in determining the proper waste management procedure in a service establishment. To the future researchers, it will serve as a guide for the future studies using of this research in the waste management to the CITHM students.

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