

## CHAPTER I

### INTRODUCTION

#### 1.1 Background

Global awareness in recent years about environmental damage due to plastic pollution has increased. This has prompted a number of initiatives to reduce the use of single-use plastics in everyday life. These initiatives include reducing plastic in food packaging, as seen in the UK, where a supermarket has started a packaging-free trial. Most consumers complain about the large amount of plastic packaging used within supermarkets. However, supermarkets have their reasons, including maintaining the freshness of food, especially fresh products, so that fresh products do not spoil quickly and avoid waste. Plastic packaging is an essential part of efforts to reduce waste as well as the food supply chain. For example, using plastic can increase the shelf life of cucumbers from three days to 14 days. Therefore, plastic packaging maintains the quality and safety of food from spoilage and food waste.

On the other hand, the use of plastic is also hazardous to the environment and human health itself. On the health side, the use of plastic that does not meet standards can potentially cause various health problems, including the risk of cancer and tissue damage in the human body (carcinogenic). A number of studies have linked Bisphenol-A in low doses to various health impacts, such as an increased risk of prostate cancer, decreased levels of the hormone testosterone, risk of breast cancer, increased sensitivity of prostate cells to hormones, and hyperactivity disorders (Karuniastuti, 2013). At the plastic production stage, various substances, generally referred to as plasticizers, are included to achieve the desired plastic properties, such as clarity, strength, wide temperature tolerance, and flexibility. This group of materials includes *phthalate* compounds, which are used in making PVC plastic. *Phthalate* compounds can leach or evaporate from plastic quickly. Additionally, *bisphenol-A (BPA)*, used in manufacturing polycarbonate plastics, has been shown to leach from plastics and contaminate food and drinks. The main compounds used in plastic packaging include BPA and *phthalates*, and as a developing country, Indonesia, with its ever-increasing public consumption, will be exposed to these two compounds. The use of plastic in beverage and food packaging

from factories to everyday use of plastic as food containers and food processing also plays a role in exposure to BPA and *phthalates*. The Indonesian people's habit of using plastic as containers for fried foods and food molds, which are processed at high temperatures, can have an impact. Choosing a relatively safe type of plastic for food containers and using plastic containers correctly can reduce exposure to BPA, *phthalates*, and other dangerous compounds. The impact of exposure to BPA and *phthalates* is chronic, so people may not immediately see the connection between the bad habits of using plastic and health problems.

Plastic itself is also a material that cannot be decomposed naturally. Items made from plastic do not rot, absorb water, or corrode and do not decompose quickly in the soil. Decomposing plastic years before it can decompose completely. When plastic decomposes, the plastic particles can pollute the soil and groundwater. Starting from the production stage to disposal, plastic waste produces greenhouse gas emissions into the atmosphere (Karuniastuti, 2013). Toxic materials used in plastic production can leach and pollute the environment when exposed to water. These toxic substances are hydrophobic, meaning they come into contact with water and can spread across sea surfaces. Therefore, plastic has a more damaging impact on the marine environment than on land, as it can disrupt marine ecosystems (Hasibuan, 2016). Indonesia currently ranks second after China in plastic waste production. The use of plastic in daily life has become a typical consumption pattern, especially among urban residents. Data from the Central Statistics Agency (BPS) in 2018 shows that daily waste production in various provincial capitals in Indonesia in 2016-2017 showed the highest amount on the island of Java, with examples such as Surabaya, which produced 9,896.78 m<sup>3</sup> of waste per day and Jakarta which produces 7,164.53 m<sup>3</sup> of waste per day. Outside Java, cities such as Makassar, Denpasar, Manado, and Medan also produce significant amounts of waste, respectively: 6,485.65, 3,657.20, 2,064.00, and 1,892.00 m<sup>3</sup> per day. It is because of the habit of urban residents who often buy ready-to-eat food and drinks packaged in plastic as containers, cutlery, and wrappers. In rural areas, people still often use organic materials such as banana leaves to wrap food (BPS, 2018).

Several large cities in Indonesia, such as Jakarta, Semarang, Surabaya, Bandung, Palembang and Medan, contribute to the plastic waste problem, with

Bandung ranking third in terms of potential amount of waste, reaching 1,301 tons every day.

<b>Years</b>	<b>Total Population</b>	<b>Waste Potential (m3/day)</b>	<b>Potential Waste Tons/day</b>
2010	2.001.108	1463,23	1.500
2015	2.470.202	1929,55	1.549
2020	2.804.540	2245,87	1.890
2025	2.990.910	2562,20	2.050
2030	3.205.268	2878,52	2.550

*Table 1.1 Potential Population and Waste Generation in Bandung City*

**(Source: Bandung City Cleanliness , 2019)**

The information in table 1.1 shows that the amount of waste is expected to increase due to increased consumption and community activities in Bandung City, as well as the variety of types of waste produced. Based on data from the Regional Cleaning Company, the potential for waste generation in Bandung City reaches 50 tons per day. In response, Bandung City Cleanliness developed various innovations to reduce waste, such as compost programs, biogas, Resik Lapak Recycling Waste Bank, and lay stall.

This not only threatens local ecosystems, but also poses health risks to residents and burdens waste management infrastructure. Critical efforts to address this problem include public education about the use of environmentally friendly plastics, stricter government policies regarding the use of single-use plastics, and support for overall plastic waste reduction initiatives. Waste production from Bandung city residents continues to increase to 550,000 cubic meters which is not transported because residents on average produce around 7,500 cubic meters of waste per day. Practically, not a single public space is free from rubbish.

The city of Bandung attracts great attention due to the high amount of single-use plastic waste produced, requiring special efforts to address this problem. According to information from the Bandung City Cleaning Instagram social media

account, single-use plastic waste and food waste are the largest contributors to total waste in the City of Bandung, reaching 44.5% for food and leaf waste, and 6.95% for plastic waste, followed by 5.56% for plastic bag waste. The cause is due to the increasing consumption of food and drinks packaged in single-use plastic, especially in food stalls and small or large business . Bandung local government has initiated a campaign called "Kang Pis Man" which aims to reduce waste by reducing, separating and utilizing. However, this campaign has not been proven to be effective and has not significantly influenced the community around Bandung City, possibly due to the lack of effectiveness of the media used by Bandung local government and the lack of public interest in responding to the campaign carried out by Bandung local government.

The presence of plastic packaging in various places cannot be separated from the evolution of industry and the growth of consumerism. Global industry continues to source raw materials and convert them into products that meet human needs. Industrial sectors, such as instant food and drinks, often choose aluminum foil-coated plastic or double-layer plastic because they are considered safe and able to maintain product quality. Another advantage is that the use of this packaging material does not increase production costs significantly, while it can also function as an effective branding tool. Furthermore, the use of plastic in food and beverage packaging is believed to increase the durability of the product in the packaging.

On March 1 2019, the Indonesian Retail Entrepreneurs Association (Aprindo) implemented a policy regarding the sale of plastic bags in modern retailers without any freebies. This step was taken as an effort to reduce the amount of waste produced by the use of single-use plastic bags. This policy is the result of the commitment of association members to encourage people to be wiser in using plastic bags, as well as a step to overcome the negative environmental impacts caused by plastic waste in Indonesia. With the government targeting a 30 percent reduction in waste and an increase in waste management capabilities of up to 70 percent by 2025, it is hoped that implementing a no-free plastic bag policy in modern retail can be one solution. However, some people still choose to pay extra for plastic bags at convenience stores for several reasons. They consider the price of paid plastic bags to be relatively cheap, usually selling for 1000-2000 per piece,

while supermarkets and convenience stores also provide special edition reusable bags at higher prices. Apart from that, some people also feel lazy about bringing their own bags because reusable bags tend to be too big and cannot be folded small, so they take up a lot of space in the bag.

From this problem, it can be concluded that a convincing explanation is needed to consumers regarding the reasons behind the payment policy for using plastic bags when shopping. The initiative to carry bags instead of plastic bags needs to be instilled as a habit that will become part of a culture that supports a cleaner and healthier environment. Consumers should also get better service, especially when they act as consumers who care about the environment. Business actors and the government need to prioritize consumers as the main service recipients who receive optimal service.

## **1.2. Problem Identification**

Based on the information above, the problems that can be found are :

1. Food packaging using plastic can prevent food waste, but single-use plastic packaging for food packaging is also dangerous for the surrounding environment and dangerous for human health.
2. Lack of public awareness and understanding of the impact of single-use plastic on the environment and health.
3. The media used for Bandung City Regional Government campaigns is less effective.

## **1.3. Problem Formulation**

How to create appropriate advertising and visual and media techniques to raise awareness about the usage of plastic packaging in everyday life through zero waste management campaign?

## **1.4. Problem Scope**

### **1. What**

The focus of this problem is to encourage people to reduce single- use plastic through commercial campaign for packaging food and drinks also the plastic bag in Bandung.

### **2. Who**

The targeted audience are :

- a. Age : 21-24 years old
- b. Gender : All gender
- c. Demographic : Bandung

### **3. How**

Through commercial campaign with zero waste management campaign will be used as a means to provide awareness to the public by minimizing the use of plastic packaging for food and drinks also plastic bag.

### **4. Where**

Bandung, because most of them especially university student and workers are still using plastic bags or single – use plastic packaging for their food and drink also plastic bag in their daily life.

### **5. When**

This work is expected to be published on 2024 for fulfilling author Final Project.

## **1.5. Goals Of Research**

Based on the explanation of the problem that have been raised, this research is aimed at providing awareness through commercial campaign to the workers and university student in Bandung area, so they can minimize the use of single – plastic for food and drinks also reduce plastic bag waste caused by everyday use of plastic.

## **1.6. Research Benefits**

### **1. For Academic**

- a) This research will be a source as a reference for graphic design in the visual communication design department, especially in the advertising department.
- b) This research can be a reference and knowledge about graphic design in the visual communication design department.
- c) This research will educate the public, especially the intended target audience, about the dangers of plastic waste for health and the environment

### **2. For Author**

- a) Author can comprehend and enhance their research skills at the university level.
- b) Author has the capacity to engage in critical thinking and apply the knowledge acquired during their studies in Visual Communication Design at Telkom University.
- c) An opportunity for author to overcome challenges and design graphic design-oriented solutions, thereby gaining additional expertise, understanding, and project research skills at the university level.

### **3. For Readers**

- a) Provide knowledge to the public about the dangers of using plastic for packaging food and drinks
- b) Add insight to the public about minimizing the use of single-use plastic in food and drink packaging and in daily activities.

## 1.7. Collecting Data and Analysis

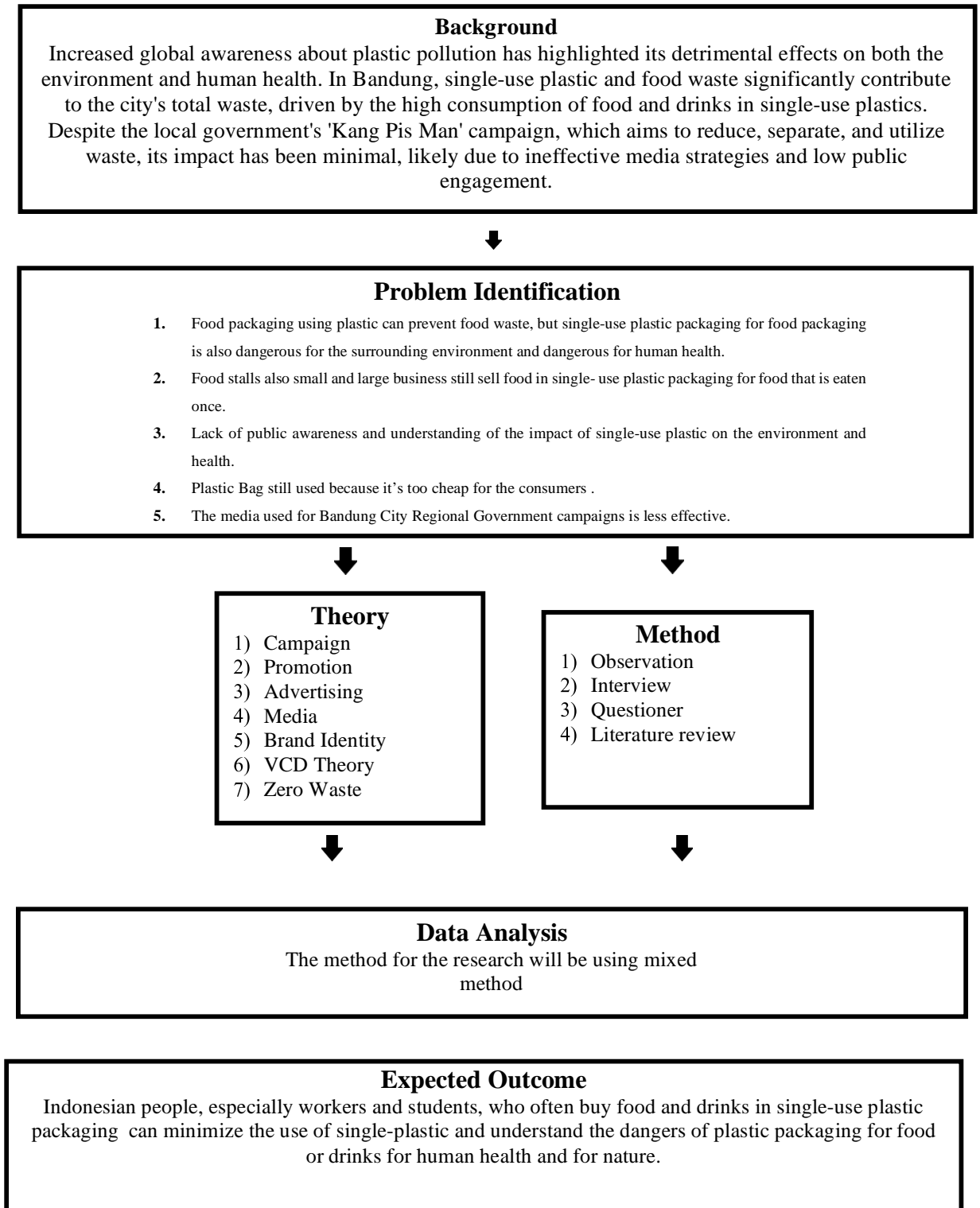
- a) Literature Studies :** Sugiyono (2017) states that theoretical research as well as additional references pertaining to the values, customs, and social norms of the context under study are included in literature studies. Research findings will have more credibility if they are backed up by previously taken images, scholarly articles, or artwork. As a result, a literature review may impact the validity of a study. Researchers will conduct research by examining books, journals and articles related to a particular phenomenon, ensuring the acquisition of accurate data related to the phenomenon.
- b) Interview :** Moleong (2012, 186) defines an interview as the process of having a conversation with a certain goal in mind. Two individuals can conduct the interview: the resource person who provides the answers to the questions and the interviewer who poses them. In this stage, a semi-structured interview session will be conducted with sources from various fields and expertise in accordance with the data requirements required. The author aims to get accurate information from the zero waste management community or practitioners. The purpose of these interviews is to ensure appropriate data collection, appropriate to the phenomenon being studied. Through this process, the author seeks to gain a thorough understanding of zero waste management practices and their implementation, which will provide a valuable contribution to knowledge in this field.
- c) Observation :** (Morissan, 2017: 143) states that observation is a regular human activity in which the five senses are the primary tool. Stated differently, observation is the capacity of an individual to employ their five senses to aid in their observations. The five senses are employed in this instance to record the symptoms that are seen. After recording what was observed, the notes underwent analysis. Observations can be made on various business actors, from street vendors to large entrepreneurs who still use plastic packaging and plastic bags to wrap food and drinks. Apart from that, observations were also carried out at waste



banks located in areas that were the focus of the problem. This observation aims to identify problems related to plastic waste management in the environment and to evaluate individual awareness of the risks and dangers of using plastic packaging for food and drink safety.

**d) Questioner :** A questionnaire, according to Sugiyono (2017:142), is a method for gathering data in which a written statement or a series of questions are given to the responder to complete. Created a Google form to reach a broader target audience containing questions about the knowledge of workers and students who often buy food and drinks in convenience stores with single-use plastic packaging with the various dangers posed to human health and the dangers to nature.

## 1.8. Research Framework



*Figure 1 Research Framework*

(Source : Private Document)

## **1.9. Chaptering**

### **CHAPTER I : INTRODUCTION**

This chapter contains background, problem identification, problem formulation, scope, benefits of research for self, institution and readers, collection of data and its analysis and the framework.

### **CHAPTER II : THEORITICAL FOUNDATION**

This chapter will shed light on the subjects discussed in the research foundation by gathering information from various media sources.

### **CHAPTER III : DATA COLLECTION AND ANALYSIS**

This chapter presents the results of data collection, encompassing literature reviews, interviews, observations, and questionnaires, with the organized presentation of the acquired data.

### **CHAPTER IV : DESIGN CONCEPT AND RESULTS**

This chapter concentrates on every facet of the design process, encompassing the User Experience (UX) stages, like identifying the target audience, to formulating the User Interface (UI) for the mobile application, which entails compositions and design elements.

### **CHAPTER V : CLOSING**

This chapter incorporates conclusions drawn from the studies and design processes, along with outcomes pertaining to the final project.