



Social Campaign Wisely Choosing and Buying Food to Reduce Food Through Animated Videos

Arif Try Cahyadi^{1*}

Department of Visual Communication Design, Faculty of Design
Universitas Komputer Indonesia, Jalan Dipati Ukur 102-106, Bandung, INDONESIA
arif3cahyadi@email.unikom.ac.id

Muhammad Adhithyas Prasetyo²

Department of Visual Communication Design, Faculty of Design
Universitas Komputer Indonesia, Jalan Dipati Ukur 102-106, Bandung, INDONESIA
aditmonogatari@gmail.com

ABSTRACT

Food waste is a phenomenon that impacts the food that is thrown away because the food is no longer suitable for consumption. This is because people are not wise in choosing and using food well, one of which is buying too much food so that the remaining unused food is wasted. The method in this research uses a descriptive qualitative approach by collecting data from interviews with experts and the government sector, observations, literature studies, and questionnaires conducted by 60 respondents, most of whom know about food waste but also do it. Based on the problem of food waste, a social campaign was designed to change human behavior and reduce the food waste phenomenon by wisely choosing and buying food in the community, with an easy approach through designing animated videos. This aims to reduce the impact of the food waste phenomenon and make the environment better, healthy and clean.

Keywords: Food Waste, Food, Animation, Videos

1. INTRODUCTION

Clothing, food, and shelter are human needs that cannot be separated (Adhi Saputro, W & Arus Prio Santoso, W. 2021). Currently, this is the main thing that humans need to survive. As is the case with food needs, if humans do not meet their daily food needs, meeting their nutritional needs will affect health factors and thus disrupt daily activities. The Food Food Security Service (2021) said that support for food security often only

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focuses on efforts to increase food production to ensure its availability, but often ignored is how to overcome food waste and food losses during the consumption stage.

In Indonesia, total food waste reaches 20.93 million tons every year, based on the 2021 Food Waste Index (Naurah N. 2022). This is what caused Indonesia to become the country with the highest food waste among other ASEAN countries. Food waste is divided into food that is still fresh, but not considered optimal or according to standards, food that is thrown away either before or after it has passed the expiration date, and whole food in large quantities that is still suitable but not used up. There is also a division between avoidable food waste and unavoidable food waste. The increasing presence of food waste can have an impact on people's lives. The results are also divided into three categories: environmental, social, and economic impact. This is conveyed in the figure 1 below:

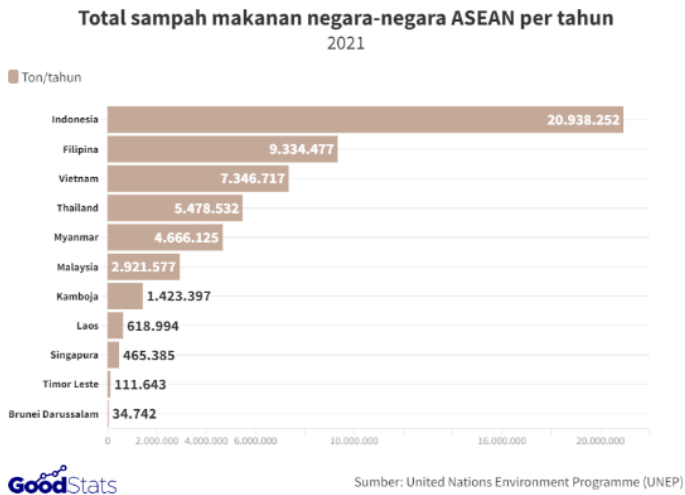


Figure 1: Data on total food waste from ASEAN countries per year

Source: <https://goodstats.id/article/food-waste-index-2021-indonesia-jadi-penghasil-sampah-makanan-terbesar-se-asean-7FgZ2> (2023).

Food waste is one of the problems that continues to be faced in the world and in Indonesia. Food waste is food that has gone through various stages in the food supply chain, then processed into final products, most of which are of high quality and suitable for consumption. In practice, there is still a lot that is not eaten and is ultimately thrown away. The food thrown away is included in the category of food that is still fit to be eaten or thrown away because it is no longer fit to be eaten.

The phenomenon currently occurring in Indonesia, especially in the city of Bandung based on data released by the Bandung city government in 2022, states that the waste generation in Bandung City is 1,594.18 tons per day, of which 44-52% is dominated by food waste. This can occur due to a lack of public awareness about respecting food, and the majority of this occurs due to purchasing or choosing excessive food beyond what the body needs. This can have an impact on the economy and the environment. Those who should be able to manage purchases and leftover or excess food can be distributed to people who need it. Many people are still unaware of this problem, which, according to the data, results in

the food not being consumed, ultimately becoming waste, and then being thrown away because it has already expired or is not suitable for consumption. This is conveyed in the figure 2 below:



Figure 2: The Bandung City Food and Agriculture Security Service (DKPP)

Source: <https://citarumharum.jabarprov.go.id/pemkot-bandung-kampanye-cegah-food-waste/> (2023).

The campaign above was carried out by approaching the community, including visiting food stalls and explaining the importance of appreciating food. When carrying out the campaign, it included narratives such as, "Yes, there is still food leftover", "Treasure-throne-share the food" or "Dilan said don't waste food, it's hard just to finish it" (Citarum Harum Juara, 2022).

The increase in food waste every year in Indonesia, especially in the city of Bandung is something that cannot be considered normal. Therefore, this problem requires design media to change people's behavior regarding the food waste phenomenon. This aims to help people choose food wisely so that it can be used according to their needs and minimize food waste, which has an impact on the environment.

2. LITERATURE REVIEW

Referring to the Food Security Service (2021), the definition of food is grouped based on its processing, namely processed food ingredients (food ingredients that require further processing) and unprocessed food ingredients (food ingredients that are immediately ready for consumption by the public or do not require processing, formerly). Food security is explained in Law Number 18 of 2012 as a condition of having sufficient food for the state and its individual citizens, which can be seen from the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, equitable and affordable and not in conflict with religion, beliefs and culture of society, in order to create a healthy, active and productive life in a sustainable manner (Närvänen, etc 2020).

Food security is an issue that is currently crucial. Based on data from the Food and Agriculture Organization (FAO), the world population is estimated to increase and there will be almost 10 billion people in 2050. In 1984, a conference held by FAO, initiated the basics of food security which has the essence that it will always be guaranteed adequate

food availability for humanity and ensuring every individual can obtain food.

The high demand for food from each individual due to the large number of food choices must be supported by adequate food security in order to create quality resources. Improving the food security aspect consists of food availability, food accessibility, food utilization and food stability where nutritional status is given more attention by the government (Hidayat, et al 2020).

2.1. Aspects of Food Security

Fulfillment of food and nutrition for the community can be determined from the system. The Food Security System is divided into three parts consisting of:

1. Availability of Food. Food that is nutritious and of good quality is available for public consumption. Availability can be influenced by several factors, namely:
 - a. Production: the amount and type of food available to society
 - b. Distribution: how food is available (physically moved) in what form, when and to whom.
 - c. Exchange: how much food is available and obtained through exchange mechanisms such as bartering, trade, commerce or loans.
2. Food affordability is the community's ability to access food, provide food both economically and physically according to its availability. From an economic perspective, food affordability is influenced by the level of income or purchasing power, the stability of food prices, and the level of poverty.
3. Food safety is a prerequisite and effort needed to prevent the possibility of contamination of food with biological, chemical and other substances that can disturb, harm and threaten human health and does not conflict with the religion, beliefs and culture of the community so that it is safe for consumption. (Ardani 2020). Food is said to be safe, both the quantity and quality consumed will directly determine nutritional status, however, nutrient absorption in the body is influenced by a person's physical condition. Therefore, adequate food and nutrition is needed to live a healthy, active and productive life. Fulfilling food and nutritional needs is carried out by introducing various food consumption habits that are nutritionally balanced and safe (B2SA), which starts from the family.

2.2. Food Supply Chain Stage

The definition of a supply chain is a series of physical goods, information and processes used to send products or products from a source location (supplier) to a destination location (customer) (Saryatmo & Sukhotu 2021). The Food and Agriculture Organization (FAO) divides the food supply chain into 5 stages, namely production, post-harvest and storage, processing and packaging, distribution and marketing, and consumption.

In the food supply chain, all actors from the production stage to consumption are required to be responsible for the condition and quality of the product, such as preventing contamination which can cause food products to become dangerous to consumers in the long term. This in the food supply chain is known as food safety. Through explanation (Cybex Agriculture 2019), types of contamination are divided into 3, namely; Physical Contamination, When directly or indirectly dangerous foreign material such as hair or metal

enters the product; Chemical Contamination, Chemical products that are mixed directly with the product, such as the smell of mud in fishery products, mixed with kerosene, and so on; Biological Contamination, Pollution that occurs is caused by contamination by microorganisms (bacteria) either from direct products (decomposition/rotting processes), from the environment, or consumer negligence.

2.3. Food Waste

Waste is the remains of daily human activities and/or from natural processes in solid form (Riswan, Sunoko, Hadiyanto 2011). There are many types and forms of waste, one of the wastes that is currently a problem in the world and in Indonesia is food waste. Food waste is one category of food waste, namely food that passes through the food supply chain until it becomes the final product that reaches consumers and is then formed from food that is good quality and suitable for consumption, but is not consumed, and just thrown away. Examples of wasted food can be seen in Figure 3 following.



Figure 3: Ilustrasi Food Waste

Source : <https://www.suarasurabaya.net/wp-content/uploads/2021/10/istockphoto-1208241405-612x612-1.jpg> (6/02/2023)

The Food and Agriculture Organization (FAO) divides the food supply chain into 5 stages, namely production, post-harvest and storage, processing and packaging, distribution and marketing, and consumption. Food waste refers to food that is suitable for consumption but is consciously thrown away at the distribution and marketing (retail) and consumption or consumer stages. Based on an explanation from the United Nations (Di Talia, Simeone, Scarpato 2019) food waste can also be defined as any food that is discarded from the food supply chain and at some point the food is still suitable for human consumption. The United Nations also explained further that most of the food waste phenomenon is caused by economic behavior, poor stock management or indifference.

Food waste is considered one of the world's multidimensional problems from economic, environmental to social, which ultimately falls into one of the Sustainable Development Goals (SDGs) targets or sustainable development. Food waste is included in Sustainable

Development Goals (SDGs) 12.3, which explains that the goal of SDGs 12.3 is to reduce food loss and food waste generated throughout the world, including Indonesia, by 2023.

Based on data findings from the Ministry of Environment and Forestry (KLHK) (PPN 2021) in 2018 in Indonesia, 44% of waste generated was food waste. It was also stated that Indonesia is the second largest producer of food loss and waste in the world, estimated at 300 kg per capita per year. There is also a report from the United Nations Environment Program (UNEP) entitled Food Waste Index 2021 which explains that Indonesia's total food waste reaches 20.93 million tons each year. This causes Indonesia to become the largest country contributing to food waste in ASEAN. This high level of food waste causes the level of hunger in Indonesia to rank third highest in Southeast Asia. Indonesia received an index score of 18 points or included in the moderate level. This score is above the global average of 17.9 points.

2.4. Types of Food Waste

As previously explained, food waste is food that passes through the food supply chain until it becomes the final product that reaches consumers but is ultimately wasted due to negligent human behavior. There are also groupings of forms of food waste in the form of:

- Food that is fresh, but not considered optimal or up to standard. For example, the color or shape of food does not pass through sorting to meet market standards
- Food that is thrown away either before or after the expiry date has passed even though it can still be consumed, or food is left to spoil
- Whole foods are in large quantities and are still fit to eat, but are often not finished or are leftovers after cooking which are then thrown away.

(Paritosh, et al 2017) There is also a division into the types of food waste to clarify the concept of wasted food. Is "edible" or "usable" or "avoidable" adequately explained that the concept of perfectly good food is left wasted? Some people will argue that rotten food is no longer "edible" and is not considered food waste (but is still included in the scope of food waste in a broad sense). To prevent this missed conception, therefore WRAP (Waste and Resources Action Program) in 2008 (Biocycle 2013), divided food waste into two, namely avoidable food waste and unavoidable food waste (unavoidable food waste). Avoidable food waste is a classification of food waste in the form of food or food ingredients that can be prevented from becoming food waste, such as paying attention to how it is stored so that it does not rot easily or not taking excessive portions.

An example is food that is not used up but can be prevented from becoming food waste by eating it the next day, such as milk, bread, fruit, and so on. Meanwhile, unavoidable food waste can easily be interpreted as anything that cannot be consumed. Unavoidable food waste can be unused vegetable scraps, meat bones, eggshells, tea bags, or leftover consumer food from restaurants or food that has been touched but not finished. Many wastes in this category can be composted or recycled, reducing the impact of methane emissions on the planet. Illustration of food waste in figure 4 below.



Figure 4: Example of Unavoidable Food Waste

Source: <https://foodcycler.com/blogs/sustainability/what-s-the-difference-between-a-avoidable-and-unavoidable-food-waste> (2023).

2.5. Impact of Food Waste

The food waste phenomenon, in 2015, was included in the Sustainable Development Goals (SDGs), which is sustainable development which aims to improve and maintain the welfare of the world community and has many areas. Food waste is included in target 12.3, namely, "By 2030, be able to halve food waste per capita at the distribution and consumption stage and reduce food loss at the production stage and along the supply chain, including post-harvest losses." In order to realize this development, it is necessary to pay attention that the impacts resulting from food waste fall into the danger category, which is divided into three impacts, namely environmental, social and economic (Hosseinzadeh, etc 2023).

2.6. Past Campaigns

A campaign, according to Rogers & Storey (Waska 2019) is a series of activities that are structured and conceptualized with clear objectives, forming and building a certain or desired effect on society and carried out periodically at a predetermined time. Campaigns initially used print media which were distributed to various places, then as technology developed, campaigns were not only carried out using print media but could also use digital media as a communication tool, one of which was using digital media. Digital media can be in the form of websites, social media, digital images and videos, digital audio, and so on. In this section, an analysis of campaign videos previously carried out by the Zerowaste Indonesia community was carried out. This is conveyed in the figure 5 below:



Figure 5: The Dangers of Food Waste by Zero Waste Indonesia

Source: <https://www.youtube.com/watch?v=X2oMo3Q8Tek> (2023).

The Indonesian Zerowaste Community is a community that focuses on reducing waste to zero in everyday life. This community is often active on Instagram social media and often discusses waste problems in every post, one of which is food waste. Apart from using social media, the media that this community uses is animated video media on YouTube with one of the frames which was uploaded along with the slogan, namely #FinishYourFood. Through this hashtag, ZeroWaste Indonesia invites people to change their behavior in wasting food waste, conveying the resulting impact through a video uploaded to YouTube in 2020.

Through this campaign, it is necessary to remind people about the food waste problem so that people do not easily forget and underestimate this food waste problem. The visuals used by the Zerowaste Indonesia community are already interesting, but if you add a little storytelling and examples, the audience who watch the campaign video can feel and realize that this problem is very close. By using storytelling too, the audience will easily remember what they have seen. This is conveyed in the Figure 6 below:



Figure 6: Avoid Food Waste Campaign by DKPP

Source: <https://visual.republika.co.id/berita/rklzvo283/kampanye-food-waste-di-bandung> (2023).

The Department of Food Security and Agriculture together with students campaigned in response to the issue of food waste in Indonesia, which is one of the largest food waste

producing countries in the world. The campaign was carried out on the side of the road and visited eating places in the city of Bandung or one of the sources of food waste. Campaigns carried out directly are considered interesting, but the short duration of the campaign will make people easily forget what is being conveyed, and the campaign coverage area is still small. Therefore, campaigns via digital media are still one of the effective campaign media because they can reach all groups and can also be accessed continuously without any time limit.

3. METHODOLOGY

The implementing method in this research uses a descriptive qualitative approach, researchers conducted interviews and questionnaires. Based on the results of interviews and questionnaires, it was found that there are still many teenagers who commit acts that cause food waste. Even though someone already understands what is meant by food waste, they still do it consciously or unconsciously. In this food waste problem, the main source of food waste occurs due to human behavior which intentionally or unintentionally throws away food/food ingredients that should be consumed.

In understanding food waste, most respondents answered that food waste is leftover food that is wasted due to human activity. There was also a small percentage who answered that they did not know or did not understand food waste. However, the answers given are inversely proportional to the respondents' behavior in daily life towards food/food ingredients. (Schneider 2023) Most respondents felt disappointed with wasted food because they understood that this action was wrong. Prevention of food waste in retail, restaurants, food stalls, etc. selling goods according to the portions and demands required by consumers. If consumers buy excess food/foodstuffs without considering whether they need it or not, then it is likely that when the food/foodstuffs reach the hands of consumers, a new problem will arise, namely food waste at the consumption stage which can occur due to excess food/foodstuffs or Storage that is too long can cause the food/food ingredients to expire. Therefore, it is necessary to plan first before purchasing food/food ingredients and also pay attention to how to store food/food ingredients after arriving at home or residence.

4. DISCUSSION

The communication objective of this campaign is to invite people to change their behavior regarding wasting or not consuming food (food waste) resulting from excessive purchasing through animated videos presented with attractive visualization and audio. The communication approach used in this campaign is persuasive communication (Cahyadi, et al, 2023). According to Adya, communication is carried out as an invitation or inducement so that the action desired by the communicator can occur (Kompas 2022). In this campaign, through video media, people will be persuaded to abandon the behavior of wasting food which results from choosing or buying excessive food beyond the body's limits.

The main media of this design is a 2-dimensional (2D) animation telling about "Wisely choosing and buying food" which lasts 2 minutes 30 seconds and will show the problem that is the main cause of food waste, namely lack of wisdom in choosing and buying food which results in excessive buying beyond the limit, which is ultimately not consumed and thrown away. In this design, it is hoped that the technical production of the video can be made well and the information can be conveyed well to the audience. This 2 minute 30

second video will use a resolution of 1280 px x 720 px with 24 fps, which is a common standard for animation. In pre-production, data and references were searched for which were used to design an animated social campaign video about choosing & buying food wisely. Search for data on what foods are often thrown into the trash (Julinda 2021). The video will often show foods that are often made, namely carbohydrates in the form of rice and bread. Then followed by vegetables and finally protein such as chicken and fish.

4.1. Creative and Media Strategy

In order for the campaign animation video to be conveyed well, a creative strategy is needed that is packaged well and correctly. The use of 2D animation will make the video easier to attract attention because now animation can be accepted by all groups (Pratama, M. A. T., & Cahyadi, A. T. 2020). The concept of this animated video is to explain the phenomenon of food waste and its prevention through choosing and buying food wisely, which will be explained by adding storytelling, which will use a point of view. the third person. where there are characters who are actors in this story. The story begins with a youngman who suddenly saw food turn into money. This wants to explain that what we eat or the food we throw away can also be said to be wasting money. Therefore, the video will focus on the economic impact resulting from food waste, followed by the environmental impact.

4.2. Copywriting

In designing this campaign, a tagline will be used that reads "Choose & Buy Food Wisely". Through this tagline, the video wants to convey that thinking about choosing & taking food is mandatory, so as not to take too much beyond the body's limits.

4.3. Visual Design

The first stage carried out in making this campaign video was searching for data so that the story in the video would be appropriate to current conditions. Then proceed with creating a storyline, which is a depiction of the story line in audio-visual works, such as films and animations, which can be seen in Table 1.

Table 1: Storyline

No	Script Video	Audio Teks
1	Shows sunny, cloudy daytime weather	Sfx: vehicle sounds, bird sounds Music: Relaxing beats
2	You can see Toni's residence from the front and you can see a Gojek motorbike driving away from Adi's house	Sfx: vehicle sounds, Music: Relaxing beats

No	Script Video	Audio Teks
3	Adi is seen sitting at the dining table	Sfx: The sound of chairs shifting, the sound of walking feet, the sound of plastic bags rubbing together Musik: <i>Beat</i> santai
4	Adi showed an astonished expression	Music: Relaxing beats Music: Relaxing beats Dialog: Adi : I didn't see it wrong, right?
5	Seen in the food packaging, there are several bills and coins	Sfx: The sound of birds chirping, the sound of plastic rubbing together Music: stop
6	Title	<i>Music: Relaxing beat</i>
7	Toni looked at the contents of the packaging with a confused face and scratched her head	<i>Music: Relaxing beat</i> Dialog: Adi: strange... why is it filled with money like this...?
8	Suddenly a notification sound came from Adi's cellphone	Music: Relaxing beats Sfx: cellphone notifications

Source: author's work.

4.4. Illustration

In general, illustration is a visualization of writing or ideas using drawing techniques. In designing this campaign, character illustrations were created using 2D styling. Characters from a third person point of view, there are two main characters, namely there will be a character as the main character named Adi. The story will center on Adi, a teenager, so Adi will appear from the beginning of the story to the end of the story.

There are also supporting characters who will appear at the end of the video whose aim is to convey the message of this campaign video as well as the identity and mascot of the campaign, named PiBi or Wise Thoughts. PiBi at the end of the video conveys this campaign message to the public. Character illustrations can be seen in Figure 7 below.

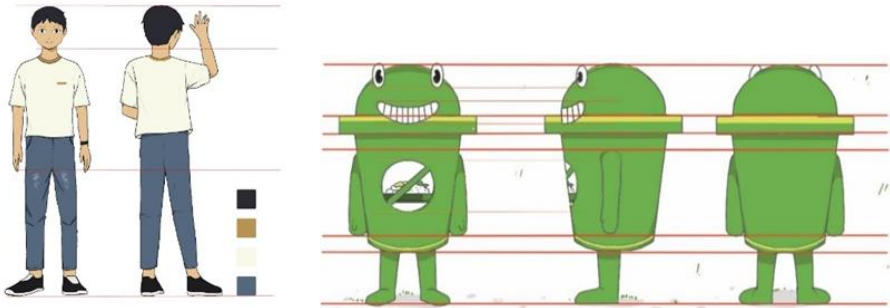


Figure 7: Main Character and second character

Source: author's work.

The background for the animation will use naturalistic illustrations, namely illustrations that have colors and shapes that match the original form. This is so that the information is conveyed as it is without exaggeration. Then on the main property, in the form of food waste, then plates with food residue on them. and money because this campaign's animated video focuses on the economic impact of food waste. The final animation result can be seen in Figure 8 below.



Figure 8: Final Result Illustration

Source: author's work.

When designing a 2D social campaign animation, the frame to frame animation type will be used in its creation. 2D frame to frame animation, namely animation in which movement is created through a sequence of images displayed sequentially. The change from one image to the next is measured in fps. Production begins by creating a new worksheet with a size of 1280 px x 720 px with a resolution of 300 dpi and RGB color mode as shown in the image. After production is complete, the animated video that has been created will be immediately uploaded to social media platforms such as YouTube and Instagram as a process of the social campaign.

5. CONCLUSION AND RECOMMENDATION

From this design, it can be concluded that choosing and buying excessively outside the limits of the body results in the food being wasted in the trash, becoming one of the many causes of the food waste phenomenon that occurs in everyday life. Through these problems, a media was designed that aims to change behavior and thought patterns by encouraging and reminding people to wisely choose and buy food so that it is not excessive beyond the body's boundaries by using the main media, namely 2-dimensional (2D) animated videos which are designed to be attractive. The message can be conveyed well and understood by the audience.

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