

## ECO-FRIENDLY PACKAGING DESIGN TO INCREASE CULINARY BUSINESS SALES IN NAGASARI VILLAGE, KARAWANG

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### ABSTRACT

Currently, environmental issues are a concern and business competition is getting tighter, MSMEs are required to have added value by being more creative in maximizing product design. One of them is through an attractive and informative eco-friendly packaging design, packaging design is the result of a product creation that combines elements of function and aesthetics so that it is useful and valuable. However, many MSMEs in Nagasari Village, West Karawang District, Karawang Regency still use plastic and styrofoam for their product packaging, do not understand the concept of green business, and cannot design independently. Therefore, this community service aims to provide assistance in making eco-friendly packaging designs to increase product sales in Nagasari Village, Karawang. This community service program is implemented for 6 (six) months consisting of 3 (three) stages: 1) Coordination, 2) Mentoring, and 3) Evaluation. It is hoped that MSMEs can use environmentally friendly packaging, and utilize technology in creating graphic designs, not only for packaging, but also other promotional media, such as social media content, banners, advertisements, and so on.

**Keywords:** MSMEs, design, promotion, sustainable, fnb

### INTRODUCTION

Indonesia is the fourth most populous country with more than 270 million population and second-largest plastic polluter in the world after China (Ministry of Environment and Forestry, 2020). Indonesia produces 3.2 million tons of waste a year, of which about 19.3% consist of plastic waste (SIPSN, 2023). The increasing use of plastic packaging is difficult to avoid and has a serious impact on the environment. In an effort to reduce plastic waste, the development of edible or biodegradable packaging materials is growing rapidly. Awareness of this serious impact must be accompanied by real action in reducing the use of plastic and cultivating the use of eco-friendly materials, especially those that can be recycled in order to maintain the ecosystem and human health.

According to Greenpeace Indonesia's 2021 report, plastic food and beverage packaging dominates the types of waste produced by the community. One source that produces large amounts of waste is the Micro, Small, and Medium Enterprises (MSMEs) sector (Agrifa et al., 2024). Micro, Small, and Medium Enterprises (MSMEs) is a general term in the world of economics that refers to productive economic enterprises, both those owned by individuals and business entities in accordance with the criteria set out in Law Number 20 of 2008.

Karawang Regency has 15,410 MSME units (BPS, 2023), while in Nagasari Village as one of the most densely populated villages there are 911 MSME units and 375 of them are culinary businesses (Dinkop UMKM Karawang, 2023). As a culinary entrepreneur, determining what products to sell is not enough. It is also necessary to think about eco-friendly materials and attractive packaging designs (Kemenparekraf, 2021). The goal is to attract consumers to buy the products being sold. Packaging is often referred to as "the silent salesman/girl" because it represents the absence of a servant in showing product quality. A package must be able to convey a message through informative communication, such as communication between the seller and the buyer. Packaging design is also called product appeal, because packaging is at the final level of a production flow process that is not only eye-catching but also attractive to use (usage attraction) (Mashadi & Munawar, 2021).

Packaging design in this case is the result of a product creation that combines functional and aesthetic elements so that it is useful and has added value for the community (Kemenparekraf, 2024). A prominent design helps a product to differentiate itself from competitors in a market full of similar products and forms a good image that can be remembered by consumers. In many cases, good design is not just an aesthetic aspect, but also plays an important role in influencing the appeal and increasing the selling power of a product.

The trade and service sectors dominate the economic turnover in Nagasari Village, because it is located in the city center. However, based on observations in the field, the problem is MSME actors in Nagasari Village do not complete

the packaging with attractive product and not use eco-friendly materials, such as the use of styrofoam and plastic. Compared with conventional packaging, eco-friendly packaging meets higher environmental, economic and social standards, has better performance and quality features, and at the same time presents new possibilities in the field of waste recovery and management (Kozik, 2020). MSME business actors are less innovative and create designs to develop their businesses through packaging and branding of their business product packaging, even though this can influence purchasing decisions.

One of the main problems faced by MSMEs at Nagasari Village in Karawang is the lack of knowledge about environmental issues and plastic waste, the lack of understanding about the use of technology and the inability to create attractive packaging, especially for food products and souvenirs typical of Karawang. In fact, the role of packaging is very important because it can create a first impression even before the product is consumed. Packaging has supported the creation of added value for a product in terms of shape, color, and graphics (Kurniawan et al., 2021). Packaging also functions in building the identity of a product. An inconsistent identity can make it difficult for consumers to recognize the product.

In this digital era, there are various platforms that provide affordable and easy-to-use design solutions with graphic design software and special websites for creating product designs, such as Canva, Inkscape or Photopea. After that, the design can be simulated in the form of a mockup via online sites such as Smartmockups, Placeit.net, Pacdora and so on. MSMEs can even work with independent designers or design research and development institutions to optimize their product designs when they have more funds. In order to minimize spending on product design, community service was designed regarding assistance in creating eco-friendly packaging designs to increase sales of culinary businesses in Nagasari Village, Karawang. The purpose of this community service research is to provide knowledge related to environmental issues, the use of technology and improve the skills of MSME in developing eco-friendly packaging designs that are expected to be able to minimize the use of plastic and increase the level of sales of these products, so that they can compete with other products.

## **METHOD**

The implementation of this Community Service activities began in March 2023 to February 2024 for MSMEs in Nagasari Village, West Karawang District, Karawang Regency. This community service activity is divided into 3 (three) stages: 1) Coordination, 2) Mentoring, and 3) Evaluation.

In the first stage, after the team conducted a field survey and found that most of MSMEs nearby still used plastic and styrofoam for their packaging, the team coordinated to take care of the permits for the implementation of activities with related parties in Nagasari Village which organizes local culinary or MSME business activities and makes preparations for the core activities.

Furthermore, the implementation of mentoring is carried out in 4 (four) different sessions. The first session is in the form of counseling related to green business and the use of technology, especially for environmentally friendly packaging design. The second session is in the form of counseling for graphic design and product structure, such as shape, size and materials used. The third session is the core of this program, namely the implementation of mentoring for partners to create environmentally friendly packaging designs. The last is the evaluation and consultation of the packaging design that has been made by the partner.

After the implementation of the mentoring is carried out, the last stage is the evaluation of the activity by reviewing the problems that arise during the mentoring process of partner packaging design in Nagasari Village, Karawang. The evaluation is expected to be able to provide improvements for future implementation. The stages taken in implementing the solutions offered are described as follows:

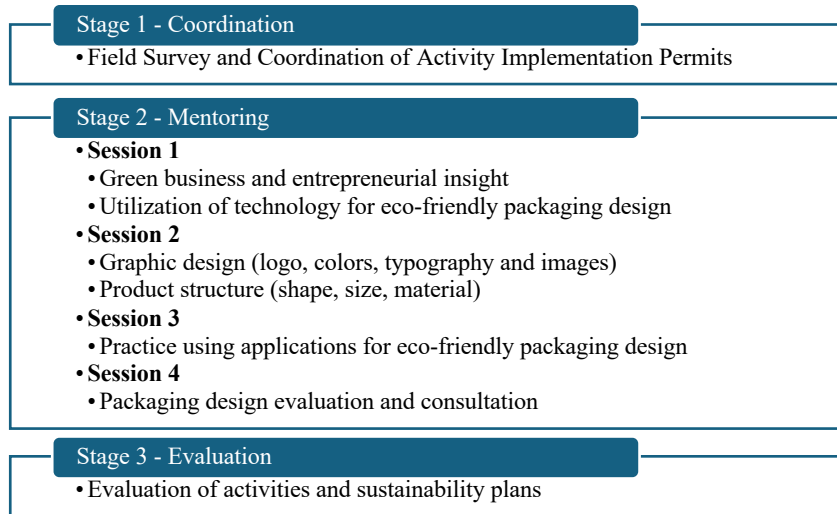


Figure 1. The stages of the community services

## RESULTS AND DISCUSSION

The training activity for making environmentally friendly packaging designs to increase culinary business sales was carried out for 6 (six) months and was attended by 4 (four) MSMEs consisting of bakpao (Bun Bun Pao), dimsum (Hai Dimsum by Ummu Yuta), noodle (BundoMie) and beverage (Es Teh Sawargi) sellers. Community service activities were carried out through 3 (three) stages, pre-during-post activities.

In the first stage, based on the pre-test results, it was found that all MSMEs still use plastic or styrofoam for the culinary products they sell and do not know the concept of green business, but 60% of them know that the use of plastic and styrofoam is dangerous, both for the environment and human health. In addition, it was also found that 80% of the participants knew about the application for packaging design, but only 20% really knew how to use it. All of them had never received training and never knew about graphic design or product structure.

Furthermore, in the second stage, it consisted of 4 (four) sessions, sessions 1 and 2 were conducted online, while sessions 3 and 4 were offline. In session 1 (one) mentoring was carried out on green business, entrepreneurship, and utilization of technology. Before participants learn to make eco-friendly culinary product packaging, they must know and be aware of the concept of green business in running an eco-friendly culinary business and the use of technology in making packaging designs independently, so that they can be applied sustainably. As all business, green business is about making money, but “green” means doing so while sustainably harnessing opportunities that nature holds, and without harming the environment (Majurin, 2017).

Then session 2 (two) related to graphic design and product structure. At this stage, participants are also provided with how to determine the design of the logo, color, typography and images, also structure of the product such as shape, size, packaging material. Company logo is related to color which is an element of corporate visual identity, where color is a medium of communication from companies and marketing; colors induce emotions and moods, express personality, impact on consumers' perceptions and behavior, and help organizations position or differentiate themselves from competitors (Azzahira & Dirganatara, 2021). Participants are also taught how to provide sticker labels and the correct label position so that the packaging looks attractive and informative to consumers, consider it has important role in consumer decision-making. Culinary product labelling is critical in facilitating the exchange of information about a culinary product between seller and buyer (Perumal et al., 2023). Information needs to be provided regarding specific standards for size, shape, and materials packaging to help participants make decisions about culinary products that eco-friendly, have less plastic or styrofoam packaging.

Next, in session 3, participants learn to create eco-friendly packaging designs that are in accordance with the culinary products they sell, accompanied by the team. At this stage, it becomes the benchmark of the success of community service, because it is expected that participants will be able to implement the theories that have been presented in previous sessions and create designs that can be applied to their culinary products. Participants were given an explanation and immediately practiced creating culinary product packaging designs using the application called

Canva, which was then the results applied to the online mockup site, placeit.net, to find out the shape of the packaging if applied to the new product structure.



Figure 2. Community service activities

Culinary products use a various packaging materials depend on the preferences and the type of food or beverage products that they sell. The most used materials are glasses, metals (aluminum, foils and laminates, tinplate, and tin-free steel), paper and paperboards, plastics and its derivatives (Marsh & Bugusu, 2007). These days packaging industry is also focusing on green packaging, through reducing and recycling packaging materials. Paper is a common material that is currently widely used for eco-friendly packaging (Gumulya & Deaviera, 2022), it is also one of the easiest products to recycle.

Therefore, product packaging design simulation implements the use of eco-friendly paper-based materials, both for food and beverages products. According to James & Kurian (2021), several important aspects to consider in packaging design consist of: 1) Functional aspect: packaging design must protect the product inside; 2) Marketing aspect: packaging design must be able to communicate product content to buyers, attract buyers, build buyer awareness and sell products; 3) Logistics aspect: packaging design is designed to be easy to ship, compact in storage, easy to track, and recyclable; 4) Environmentally friendly aspect: packaging design can be reused, easily recycled, or disposed of responsibly. The results of the eco-friendly packaging designs for culinary products created by the participants refer to these four aspects.



BundoMie



Hai Dimsum by Ummu Yuta



Bun Bun Pao

Es The Sawargi

Figure 3. Before-after results of eco-friendly packaging design for culinary products

First, the packaging design is made closed so that the food or drink inside remains protected, the taste and cleanliness are maintained. Second, the product clearly states the business name, legible font type, attractive colors, and images that reflect the product, so that the basic message can be conveyed to consumers and they can recognize the product well. Third, the shape, size and type of packaging provide effectiveness for consumers, the packaging is made easy to carry by hand or when it is going to be consumed immediately. The last is the most important, culinary product packaging design is simulated using paper-based materials that are adapted to the type of foods or beverage, so that it can be easily recycled or disposed of responsibly.

Today's consumers are increasingly concerned about the environmental impact of their purchases. Consumers' perceptions of green packaging are limited regarding to the design, price, the biodegradability and recyclability of the packaging materials (Wandosell et al., 2021). MSME must compete and innovate in designing their product packaging by paying attention to eco-friendly materials used, considering product design has a positive and significant influence on consumers' purchasing decisions thus increasing the number of sales (Chowdhury et al., 2023; Derwin Thomas et al., 2024).

Participants are given a basic module for using Canva so that it can be studied independently outside of activities. Then session 4 (four) is closed by an evaluation and consultation on the design of the environmentally friendly packaging that has been made according to the product being sold. At this stage, the packaging design that has been made by the participants is then evaluated based on the indicators of the theories that have been explained previously. Participants are also invited to consult regarding the application of culinary product packaging design for their business.

After the series of activities are completed, in the final stage the team evaluates the implementation of the activity by conducting a post-test. It is known that all participants have understood the concept of green business and aware that the use of plastic and styrofoam is dangerous. All participants also have known the technology that can be used to design, only 60% have mastered the use of the canva application or online mockup sites, such as placeit.net. However, However, participants have received a module book to be used as a reference for independent learning. We fully realize that using application or software for design requires time and repeated practice.

## CONCLUSION

The results of this activity can be concluded that the implementation of community service activities has provided participants with knowledge about the concept of green business, environmental impacts, graphic design, and product structure, also provided skills in creating attractive packaging designs using eco-friendly materials.

The results of the research packaging survey showed that participants were interested in the packaging of the results of the activity. As a sustainability plan, changes are needed to the packaging of other MSME who still use conventional packaging to make changes to environmentally friendly packaging, both in terms of materials and design. This activity is still carried out for business actors on a very limited basis, it is hoped that there will be similar activities involving more business actors, especially in Nagasari Village, Karawang.

Through the module provided regarding how to use the Canva application, it is hoped that participants can use it, not only for packaging design but also to create other promotional designs, such as banners, brochures, social media content and so on, thus they can boost sales of their culinary products.

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