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Implementing A3 proposal to develop MSMEs packaging design: a community service in the university's business incubator

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ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) have an important role in the Indonesian economy. However, MSMEs often face obstacles to growth, especially due to the lack of implementation of theory-based management practices. To answer these challenges, this community service program introduced Proposal A3, a structured and concise document that in this case is focused on the development of packaging design. This activity was carried out at a private university business incubator in Yogyakarta, involving collaboration between students, academics, and MSME actors. A3 proposals have the advantage of a simple format that includes in-depth analysis of products, market trends, and innovative solution designs. This program includes training, preparation of A3 Proposals, packaging prototype design, and testing through presentations and competency tests. Participants who successfully complete the program get professional certification from the Professional Certification Institute (LSP). The results of the activity showed that this method was effective in improving the technical ability of participants and providing a model that can be replicated for various cases in MSMEs. As a recommendation, the integration of digital technology can be applied to the next community service program to expand the impact of the program.

INTRODUCTION

In Indonesia, micro, small, and medium enterprises (MSMEs) are one of the backbones of the national economy. MSMEs contribute 60.51% to the national Gross Domestic Product (GDP) and are able to absorb almost 97% of Indonesia's total workforce (Limanseto, 2024). Several factors such as flexibility in adapting to market changes (Heng, 2019), proximity to consumers (Kurdi & Firmansyah, 2020), and the ability to create innovative products in accordance with local cultural needs and values (Suyatno & Suryani, 2022) are the main competitiveness of MSMEs. This is also often appreciated by the existence of MSMEs as a driving force for local innovation that is able to accommodate and explore the creativity of the local community. This advantage makes MSMEs not only play a role in economic growth, but also in strengthening social and cultural identities.

However, it is not uncommon for MSMEs to face difficulties in upgrading and developing into larger businesses. The factors that cause this condition are varied, ranging from business cultures that are often familial or traditional (Fikriah, Muhaimin, & Dirgantara, 2023); (Supiandi, 2019) to the lack of application of theory-based management practices or scientific approaches (Asih, Sucipto, Riono, Harini, & Sholeha, 2024); (Supriyanto & Hana, 2020). Many MSME actors are more comfortable with the traditional method because it is considered more practical, although not always efficient. In addition, limited access to formal education (Susila, 2017); (Fuadi, Akhyadi, & Saripah, 2021) and lack of management training (Amin, Nugraha,

Rachmawati, & Sugiyarti, 2022) make MSMEs tend to stagnate in business scale and face difficulties in competing in a wider market. As a result, despite having great potential, many MSMEs find it difficult to compete in the modern market and fail to take advantage of opportunities to develop further. This condition shows the need for intervention in the form of appropriate education, training, and mentoring to encourage the transformation of MSMEs.

Based on this background, this community service will introduce a simple administrative technique in relation to product development. The administrative technique introduced is called the A3 proposal. This activity is a form of education, training, and assistance to apply theory-based management practices so that product development is more based on good research and analysis process. Several researchers have applied product development with different techniques such as (Kusdiana & Gunardi, 2014) which uses AHP to identify superior products of MSMEs in various sectors, (Herdiana, Maesaroh, & Nazya, 2022) designing a business intelligence system for product development through prototype mockups, and (Hidayahtullah, et al., 2022) applying design thinking to find distinctive characters for the developed products. In contrast to the three papers, the approach in the form of an A3 proposal is very effective because it contains elements of in-depth and integrative product development but is presented in a concise and aesthetic form. Of course, this will make it easier for business actors to analyze problems, design solutions, and measure success clearly.

The A3 proposal introduced in this activity was tested for the case of packaging design development in a business incubator at a private university in Yogyakarta. This activity involves collaboration between students, academics, and MSME actors to create packaging designs that are not only attractive, but also functional and in accordance with market needs. In addition, the packaging design that has been designed will be tested in the relevant BNSP competency test scheme. Later, the output of this activity will be used as a pilot model that can be replicated for various cases in MSMEs. This will effectively provide practical solutions and have a direct impact on the development of micro and small businesses in Indonesia.

METHOD

This community service will develop an A3 proposal that is applied to packaging design and development. A3 Proposal is an effective analytical tool for mapping problems, designing solutions, and measuring results in a concise and structured format. This initiation activity was applied to a business unit at a private university in D.I. Yogyakarta with the aim of making this model a prototype that can be replicated in various regions and other MSME sectors. Participants in this activity are final year students who are involved in the business incubation team. In addition, they also took part in a competency test organized by the National Professional Certification Agency (BNSP) for small and medium industry packaging schemes, so that this activity became an integration between theory and practice.

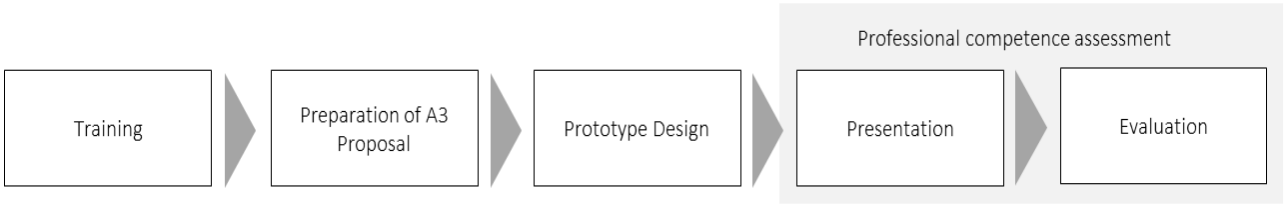


Fig. 1. Activities in this community service

There are five main activities in this community service, namely training, preparation of A3 proposals, prototype design, presentations, and evalution as shown in figure 1. In the training stage, participants will gain an in-depth understanding of the concept, objectives, and systematics of making A3 proposals, including how to identify problems, formulate solutions, and design implementation strategies. The training also includes the use of special templates designed to make the proposal writing process easier. After the training, participants will begin to compile A3 proposals based on the systematics and templates that have been given. This proposal is the basis for the next stage, namely packaging prototype design. At this stage, participants will apply the ideas contained in the proposal into a visual or physical form that is in accordance with market needs and industry standards.

The last stage is packaging testing which includes the presentation of the design results by the participants to the assessor panel. This presentation not only assesses the quality of the design, but also the ability of the participants to explain the concepts and innovations applied. This test aims to evaluate the concept of packaging development design and provide participants with the opportunity to obtain BNSP certification, which is proof of their professional competence in the field of packaging design.

RESULTS AND DISCUSSION

1. Training

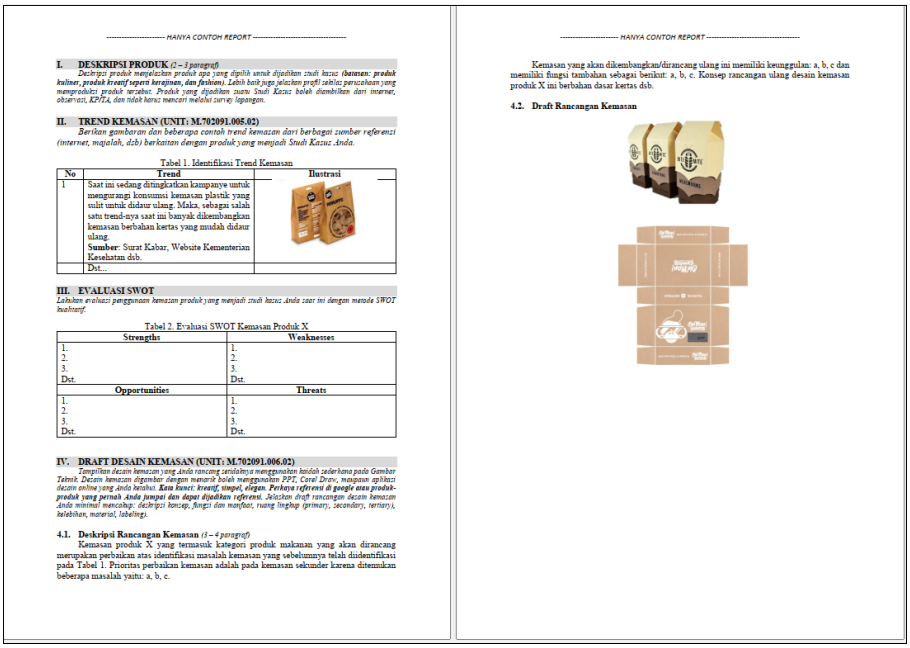
The first stage of this activity is training, which aims to provide participants with a comprehensive understanding of packaging concepts, materials, and functions. The training materials cover the basic elements of packaging as a protective and promotional medium, the aesthetic value needed to attract consumers, and how to choose the right material based on product needs. In addition, participants were also invited to understand the importance of research in packaging design, including analysis of market trends and consumer preferences, so that the resulting designs can be more relevant and competitive in the market.

Fig. 2. The photo of training

The training also includes an introduction to various supporting applications to help participants design packaging drawings. They are given practical guidance using graphic design software to create sketches to digital prototypes. With this combination of theory and practice, participants are expected to be able to integrate elements of aesthetics, functionality, and sustainability into their packaging designs. As a follow-up, the main points learned in the training became the basis for drafting the A3 proposal, which was designed according to the predetermined systematics. This proposal will assist participants in formulating problems, solutions, and implementation in a structured manner for the next stages of the program.

2. Preparation for A3 Proposal

The second stage of this activity is the preparation of the A3 proposal, which is an important step in the packaging design and development process. The materials required to prepare the A3 proposal have been given at the training stage, so that participants have enough understanding to apply it. The A3 proposal is designed with a simple but systematic format, containing four main points that are the focus of development.



---------- HANYA CONTOH REPORT ----------

I. DESKRIPSI PRODUK *(2 – 3 paragraf)*

*Deskripsi produk menjelaskan produk apa yang dipilih untuk dijadikan studi kasus (**batasan: produk kuliner, produk kreatif seperti kerajinan, dan fashion**). Lebih baik juga jelaskan profil sekilas perusahaan yang memproduksi produk tersebut. Produk yang dijadikan suatu Studi Kasus boleh diambilkan dari internet, observasi, KPITA, dan tidak harus mencari melalui survey lapangan.*

II. TREND KEMASAN (UNIT: M.702091.005.02)

Berikan gambaran dan beberapa contoh trend kemasan dari berbagai sumber referensi (internet, majalah, dsb) berkaitan dengan produk yang menjadi Studi Kasus Anda.

Tabel 1. Identifikasi Trend Kemasan

No	Trend	Ilustrasi
1	Saat ini sedang ditingkatkan kampanye untuk mengurangi konsumsi kemasan plastik yang sulit untuk didaur ulang. Maka, sebagai salah satu trend-nya saat ini banyak dikembangkan kemasan berbahan kertas yang mudah didaur ulang. **Sumber**: Surat Kabar, Website Kementerian Kesehatan dsb.	
	Dst...	

III. EVALUASI SWOT

Lakukan evaluasi penggunaan kemasan produk yang menjadi studi kasus Anda saat ini dengan metode SWOT kualitatif.

Tabel 2. Evaluasi SWOT Kemasan Produk X

Strengths	Weaknesses
1. 2. 3. Dst.	1. 2. 3. Dst.
Opportunities	**Threats**
1. 2. 3. Dst.	1. 2. 3. Dst.

IV. DRAFT DESAIN KEMASAN (UNIT: M.702091.006.02)

*Tampilkan desain kemasan yang Anda rancang setidaknya menggunakan bidang sederhana pada Gambar Teknik. Desain kemasan digambar dengan menarik boleh menggunakan PPT, Corel Draw, maupun aplikasi desain online yang Anda kuasai. **Kata kunci: kreatif, simpel, elegan. Perhaya referensi di google atau produk-produk yang pernah Anda jumpai dan dapat dijadikan referensi.** Jelaskan draft rancangan desain kemasan Anda minimal mencakup: deskripsi bancap, fungsi dan manfaat, ruang lingkup (primary, secondary, tertiary), kelebihan, material, labeling).*

4.1. Deskripsi Rancangan Kemasan *(3 – 4 paragraf)*

Kemasan produk X yang termasuk kategori produk makanan yang akan dirancang merupakan perbaikan atas identifikasi masalah kemasan yang sebelumnya telah diidentifikasi pada Tabel 1. Prioritas perbaikan kemasan adalah pada kemasan sekunder karena ditemukan beberapa masalah yaitu: a, b, c.

---------- HANYA CONTOH REPORT ----------

Kemasan yang akan dikembangkan/dirancang ulang ini memiliki keunggulan: a, b, c dan memiliki fungsi tambahan sebagai berikut: a, b, c. Konsep rancangan ulang desain kemasan produk X ini berbahan dasar kertas dsb.

4.2. Draft Rancangan Kemasan

Fig. 3. The A3 proposal template written in Bahasa Indonesia

The first point is the product description, which includes an in-depth explanation of the product's characteristics, market needs, as well as target consumers. The second point is packaging trends, where participants are asked to identify the latest styles or innovations in packaging design that are relevant to the

product they are developing. The third point is the analysis of packaging design development, which contains an evaluation of design needs based on the data that has been collected, including an analysis of the advantages and disadvantages of existing packaging. Finally, the draft packaging development design is the initial stage of visualizing the participants' ideas, which will be the basis for further design processes. By drafting this A3 proposal, participants not only understand the packaging development process thoroughly, but also have a clear guide for the next steps of implementation.

3. Prototype design

The third stage of this activity is to design a packaging prototype based on the concept and plan that has been prepared in the A3 proposal. At this stage, participants begin to translate the ideas outlined in the proposal into real prototypes, using pre-planned materials. This process involves the direct application of the packaging design to the original product, so that participants can test the suitability of the design with the expected function and aesthetics.

The designed packaging can be in the form of primary packaging, which is packaging that is in direct contact with the product, or secondary packaging that functions as additional protection or a means of promotion. This process not only emphasizes the visual and material aspects, but also ensures that the packaging meets functional standards, such as protecting the product from damage, maintaining quality, and making it easier to distribute. By designing and testing prototypes, participants gain hands-on experience in integrating technical and aesthetic elements, making the resulting packaging more relevant and effective for market needs.

4. Professional competence assessment

The testing stage is the final stage of this series of activities, which consists of two main sub-activities: presentation and competency test. In the presentation sub-activity, participants were asked to present the packaging design concept that they had developed based on reference to the A3 proposal prepared earlier. This presentation aims to evaluate the extent to which participants are able to explain their design ideas and concepts, including the relevance of the design to the product, market trends, and consumer needs. The evaluator panel will provide input on the strengths and weaknesses of the proposed design, so that participants can understand the potential for improvement for further development.

Fig. 4. The presentation of the developed packaging design

The second sub-activity is a competency test with a special scheme for specialist consultants for packaging products for Small and Medium Industries (SMEs). This competency test is carried out in collaboration with the Professional Certification Institute (LSP) in the campus environment. Participants are assessed based on their ability to design, analyze, and implement packaging design concepts professionally. Participants who successfully pass the competency test will receive an official certificate of competence, which is a recognition of their expertise in the field of packaging. This certificate is expected to increase the competitiveness of participants in the world of work while providing added value to this community service program.

CONCLUSION

This community service program has introduced the A3 proposal as an effective, easy-to-understand, and structured method that can be applied to MSMEs for various purposes. In this activity, the A3 proposal was applied to the case of packaging design development at a business incubator at a private university in D.I. Yogyakarta. This community service activity is also integrated with the competency test so that the participants involved in this activity have received training and at the end of the activity, the participants have been tested and obtained competency recognition in the field of MSME packaging design development. That way, competent participants can practice according to their competencies and can be replicated for real cases in MSMEs. As a recommendation, further service activities can implement the development of digitalization aspects to expand the positive impact of the program.

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