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Development of Eco Print on Leather Craft Products to Increase Production of Faro Leathercraft Artisans

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Abstract

Community service focused on product creation and development, exceptionally functional leather craft products such as shoes, wallets, and bags, holds great promise. Integrating eco-print motif creation within these leather crafts is strategically significant. It enhances the production of these crafts and contributes positively to the economy of Faro Leather Craft artisans in the Bumirejo Mungkid Magelang foster village. One of the main challenges the artisans face is the lack of potential for creating new, varied, and dynamic motifs, especially considering their beginner level of expertise in leather craft creation. Therefore, there is a need for innovations that are easy to implement. The solution proposed through this community service involves mass production of leather crafts using eco-print techniques, thereby increasing production. This approach also involves applying and utilizing science and technology for the benefit of Magelang village, positioning it as a foster partner of Unnes. It aims to provide new insights into creating motifs with environmentally friendly innovative tools. Additionally, this innovation is targeted at artisans, including the younger generation, to foster a love for batik while focusing on the regeneration and development of batik in the Bumirejo Mungkid Magelang village. To achieve these goals, the community service project involves creating eco prints on leather craft products for use by artisans, artists, and new entrepreneurs. The initiative includes both new and existing artisans interested in participating as tenants. The project activities encompass execution, material exploration, form experimentation, and motif understanding. This includes the creation and motif development process using eco-print techniques, data analysis, motif creation, copyright registration, and report compilation. The outputs of this community service include products from training sessions, scientific articles, copyrights, and reports. Additional outputs involve consumer feasibility testing, exhibitions, and mandatory outputs such as scientific articles, highlight videos, copyrights, and reports.

Keywords: Eco print, Products, Leather Craft

INTRODUCTION

Bumirejo Mungkid Magelang is a Central Java region identified as an industrial area with significant existing and prospects. To develop the region's potential, new strategic steps that are innovative, precise, and focused are needed. This involves exploring human resource potential and following up with efforts to create leather crafts and stamps that highlight local natural eco-print motifs to be applied in community service projects in Bumirejo Mungkid.

Magelang is a promising location for the leather craft industry due to its strategic position between villages and main roads. Strategic, innovative, precise, and focused steps are required to develop this potential. This involves exploring human resource potential followed by efforts to protect the outcomes of leather craft creations.

In biology, the skin is the outermost layer of multicellular organisms (Encyclopedia, 1983). According to Sunarto (2001), skin is the outer layer of an animal's body, serving as an external framework where the animal's fur grows. In Indonesia, skin is a relatively abundant raw material used as the primary material in the leather industry and artistic crafts. Leather is derived from livestock, and as long as people continue to raise, utilize, and consume livestock, leather will remain available (Saraswati, 1996). Leathercraft, a form of art utilizing various animal skins, is a traditional craft of significant importance (Pebriyeni & Widiarti, 2018). Using animal skins as the primary raw material, leather crafts have been integral to human culture since ancient times (Wulandari, 2018; Purwanti &

Sulistiyowati, 2019).

The skins of cows, goats, sheep, snakes, and crocodiles are processed through various techniques, including tanning, dyeing, shaping, and decorating, to produce functional and aesthetic products. Engraved leather crafts with traditional motifs adorn various items, such as bags, wallets, and accessories, reflecting local cultural values (Wijaya & Sudirman, 2018). The products of leather crafts can include shoes, bags, clothing (jackets), shadow puppets, wallets, mobile phone cases, belts, tambourines, and various other items. Notable regions known for their leather crafts include Garut, Yogyakarta, and Bali (Na'am, 2016).

Faro Leather Craft in Bumirejo Mungkid Magelang is part of a group of artisans specializing in leather products, including shoes, bags, bracelets, wallets, keychains, and handbags. These leather craft products are currently marketed on a limited scale and require innovative design and motif enhancements to appeal more broadly to marketing and contemporary design trends. A fundamental issue commonly faced by Faro Leather Craft is the lack of new, innovative, and attractive products. Community service projects focused on creating eco prints are essential to address this.

Achieving leather crafts with high aesthetic value requires a creative process that involves visualizing ideas into eco-print motifs, colors, textures, and techniques and finding innovative solutions. The materials used in this creation are leather with eco-print motif applications. Leather is known for its exclusive nature in terms of price and characteristics, requiring special skills in the design and production process to preserve its material value.

Artisans can produce high-value products with minimal investment by utilizing natural dyes from the local environment as the base for eco-print techniques on leather. Applying eco-print motifs on leather, particularly for making women's handbags, presents a lucrative business opportunity (Lestari, 2022). Leather's exclusivity in terms of price and characteristics necessitates specialized skills in design and production to maintain its material value. Using natural dyes in eco-print techniques on leather allows for creating motifs with minimal cost but high market value, as noted by Fajar Lestari. Natural materials like cowhide and sheepskin can be used for eco-print applications, enhancing the aesthetic appeal of leather products such as clothing and accessories (Purwani, 2023).

Given the challenges faced by the partners, it is essential to assist with community service activities, such as (1) Guiding in creating motifs using eco-print techniques for market-relevant products; (2) Innovating environmentally friendly products created by artisans and leather craft artists; and (3) Exploring innovative materials and tools.

METHODS

To achieve the desired outputs, strategic steps need to be taken to address the issues faced by Faro Leather Craft. The activities will be implemented using various methods to ensure the target outcomes are achieved effectively and efficiently. The following methods are proposed:

Lectures/Dissemination

This method will deliver theoretical material, including activity socialization, theoretical instruction before practice, production-related topics, human resource competency enhancement, and digital marketing.

Demonstrations

The implementation team will demonstrate how to use appropriate technology (TTG) machines/tools, particularly for applying eco-print design innovations. The process will be explained, from preparation and design steps to production methods. The team will also demonstrate the eco-print design technique.

Hands-on Practice

During this activity, entrepreneurs/workers will practice using the TTG machines/tools as demonstrated by the team. This approach is expected to develop participants' skills through hands-on experience quickly. Direct practice will also be applied to marketing aspects, such as effective marketing strategies.

Mentorship

Mentorship will cover creating product model variations, product packaging design, business management, and digital marketing. This method provides entrepreneurs the opportunity to become independent from the implementation team. The mentorship process involves giving examples, practicing under supervision, and eventually operating independently. Once sufficiently skilled, the

entrepreneurs can manage on their own.

Evaluation

The evaluation process involves collecting feedback from Faro Leather Craft partners and training participants regarding the methods' effectiveness, challenges encountered, and suggestions for improvement. Monitoring participants' skills and knowledge development after training will also be conducted through direct observation, surveys, or interviews. The evaluation results will serve as the basis for adjustments and improvements in future activities to enhance the quality and effectiveness of the training program.

RESULTS AND DISCUSSION

This community service project focuses on developing eco-print techniques for leather craft products produced by Faro Leathercraft artisans. Eco print utilizes natural materials like leaves to create unique and eco-friendly motifs on leather. The process involves several critical stages, from material preparation and mordanting to steaming and drying. The creation process includes preparing and responding to materials with acetate and tannin chemicals on leather, then arranging leaf motifs to realize design ideas.



Figure 1. Training on exploring materials and motifs (Photo: Na`am, 2024)

In an environmentally safe context, leather dyeing can use natural dyes derived from plant extracts such as wood, bark, and leaves or through eco-print techniques. The eco-print process in dyeing can be done safely and efficiently using simple materials and equipment. Therefore, learning and trying this process and producing products using eco-print techniques is essential. Not all types of fabrics can be used in eco-printing; only natural fibers such as cotton, linen, and silk can absorb colors from leaves effectively. Eco-print is an advancement of eco-dyeing, which involves dyeing fabrics with natural materials. Leather, a material with exclusive price and characteristics, requires special skills in the design and production process to maintain its material value. Using natural dyes from the surrounding environment in eco-print techniques on leather can produce motifs with minimal investment but high market value.

The process of laying out leaves and flowers on the smooth, shiny surface of the leather involves several steps. Preparation of Leaves and Flowers: Choose leaves and flowers with solid tannins that can imprint clearly on the leather surface. This step can be done between scoring and mordanting, with specific treatments on the leather to ensure an excellent eco-print result. Layout Process: Spread the leather on a flat surface covered with plastic, ensuring no wrinkles. Arrange the leaves and flowers in a pattern or randomly, with the vein side down for better imprinting. Blanket Process: Transfer the color from the blanket fabric to the leather surface by covering the leather with arranged leaves and flowers. Use one or two layers of blanket fabric, then cover it again with a plastic sheet. Pressing: Press or roll gently with a rolling pin or pipe to ensure the leaves and flowers adhere tightly to the leather

surface. Rolling: Roll the leather with its plastic cover tightly and securely to prevent the leaves and flowers from shifting. Tie the roll tightly with string, resembling a long eco-print roll. This detailed process ensures the effective transfer of natural motifs onto leather, resulting in high-quality, unique leathercraft products. By mastering these techniques, Faro Leathercraft artisans can enhance their product offerings, adding value and appeal to their creations.



Figure 2. Training activity on preparing media (Photo: Taofan, 2024)

Rolling leather with leaf motifs before steaming involves specific steps and measurements. Use 5 grams per liter of acetate and tunjung (iron sulfate) as mordants. This 5-gram-per-liter ratio is established through multiple trials. Maintain a temperature of 70-80°C to allow the tannin to release slowly and avoid leather shrinkage. Excessive use of acetate and tunjung can lead to grain off, where the suede and grain layers of the leather separate due to moisture. A long rectangular pan ensures the leather remains flat and straight after unrolling.

Clean the leather by soaking it in a TRO solution for 15 minutes, then rinse thoroughly. Perform mordanting by soaking the leather in an alum and vinegar solution for at least 15 minutes, then squeeze dry. Dip the leather in a tunjung solution for about 5 minutes, then squeeze without wringing. The leather is now ready for the next step. The blanket fabric, made of blaco fabric that has been pre-scored, is soaked in dye solutions such as tegeran, tingi, and secang for at least 1 hour.



Figure 3. Steam method training

Steam the rolled eco-print leather for 90 minutes at 75-80°C. After steaming, unroll the

leather, remove the plastic and blanket fabric, and peel the leaves and flowers off the leather surface. Stretch the leather on a flat surface or board to dry, ensuring it remains flat and smooth while still warm. Let the leather dry for 24 hours.



Figure 4. Leaf removal process activity

Cowhide treated with scoring and mordanting has a soft, heavy, and elastic texture. The eco-print on cowhide does not involve additional dyeing, allowing the natural base color to darken slightly. Leaf materials like Jarak kepyar leaves print clearly, leaving green-brown hues.



Figure 5. Result of eco-print products made from leather

The resulting products demonstrate that the eco-print technique adds aesthetic value to leather craft products without compromising functionality. The natural colors from the leaves provide an exclusive and unique look to each product. Additionally, this activity enhances artisans' skills and understanding of eco-print techniques, contributing positively to their craftsmanship and product offerings.

CONCLUSION

The outreach activities have demonstrated that the eco-print technique can be effectively applied to leather craft products, yielding high aesthetic value while being environmentally friendly. This process has also enhanced production efficiency and product quality for Faro Leathercraft artisans, providing them opportunities to compete in broader markets. Recommendations for further development include expanding motif variations by exploring a more comprehensive range of leaf types and other natural dyeing techniques. Additionally, continuous evaluation and mentoring of artisans are essential to ensure the sustainability and enhancement of the produced goods' quality.

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