

Empowering Female-Headed Households through Creative Waste Management: Transforming Textile Scraps into Cultural Mascot Dolls

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Article Info	Abstract
Article history: Received: August 9, 2025 Accepted: December 3, 2025 Published: December 24, 2025 Keywords: Cultural mascots Community empowerment Entrepreneurship Female-headed households Textile waste This article is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. © 2025 Bubungan Tinggi: Jurnal Pengabdian Masyarakat	This community service program aimed to empower female heads of households in the Bunda Sehati Community of Palangka Raya by enhancing their vocational skills and promoting sustainable waste management through the creative reuse of textile scraps. The service was implemented using a participatory community empowerment approach, emphasizing active engagement in each phase, including planning, implementation, and evaluation. Activities included technical training in sewing and crafting mascot dolls inspired by Central Kalimantan culture, financial literacy sessions, and digital marketing workshops. A Joint Business Group (Kelompok Usaha Bersama/KUB) was formed to sustain production and marketing efforts beyond the program. The evaluation combined quantitative and qualitative methods through pre- and post-program questionnaires, observations, focus group discussions, and income tracking. The results showed significant improvements in participants' technical skills and entrepreneurial knowledge. Over 90% of participants completed all training modules, and more than 30% reported an increase in household income from product sales. Additionally, participants demonstrated greater awareness of the environmental impact of textile waste. The establishment of a functioning KUB enabled collaboration and continuity of the initiative. The program proved effective in achieving its goals by empowering economically vulnerable women, fostering sustainable micro-business development, and encouraging environmentally responsible practices. This model of community engagement can be adapted and scaled in other regions facing similar socio-economic and environmental challenges. To cite this article: Syarif, A., Aufa, M. N., Purtina, A., Hasanah, M. R., Ramadhani, R. C., Yutiva, M & Banjir, B. (2025). Empowering female-headed households through creative waste management: Transforming textile scraps into cultural mascot dolls in Central Kalimantan. <i>Bubungan Tinggi: Jurnal Pengabdian Masyarakat</i>, 7(4), 1031-1039.

INTRODUCTION

The Bunda Sehati Community in Palangka Raya is a clear example of a PEKKA group experiencing multiple socio-economic challenges. Most of the 32 members are widows, women whose spouses are incapacitated, incarcerated, or unemployed, and some are single women serving as the sole breadwinners due to family health issues. A survey conducted in early 2025 revealed that the majority of members have only basic or secondary education and work in informal occupations such as street vending or day labor, earning less than IDR 1,000,000 per month. They have limited or no access to sewing or craft training, and lack opportunities for entrepreneurship or microfinance ([Diana et al., 2024](#)). [Umaroh et al., 2024](#)).

Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 10 (Reduced Inequalities), emphasize inclusive economic participation and equitable access to livelihood opportunities for vulnerable groups, including female-headed households. Waste management has become an urgent environmental issue in Indonesia, especially in urban areas where domestic and industrial waste production is increasing sharply each year. Household and tailoring businesses in Palangka Raya generate over 600 kg of textile waste (fabric scraps) per month, most of which goes unused and contributes to urban waste ([Astuti et al., 2024](#)). Textile waste is a significant component of non-organic solid waste, which, if left unmanaged, could harm the environment ([Irmayanti et al., 2023](#)). Fabric scraps made of polyester and other synthetic fibers can release microplastics into soil and waterways, contaminate groundwater, increase greenhouse gas emissions through slow anaerobic degradation, and create breeding grounds for pests when accumulated near residential areas. However, textile waste also presents economic potential through creative upcycling approaches that transform unused fabric scraps into value-added products. Upcycling reduces waste volume while enabling circular economy practices, in which materials remain in productive use through reuse and reprocessing ([Fitriani & Maulidiyah, 2021](#)).

To address these intertwined issues, this community engagement program offers an innovative solution by training the Bunda Sehati Community in sewing and transforming fabric scraps into handcrafted mascot dolls representing Central Kalimantan's local identity. These products are not only economically valuable but also culturally expressive and environmentally sustainable. Such mascot dolls can serve as local souvenirs, educational tools, and eco-friendly crafts that appeal to both local and tourist markets ([Nadhiroh et al., 2025](#)).

The selection of the Bunda Sehati Community as program beneficiaries is also based on their socio-economic urgency, given that most members rely on irregular daily income, have limited digital and vocational skills, and lack an alternative livelihood support system. Strengthening their skills and income-generating capacity becomes crucial to improving household welfare and ensuring long-term resilience through : (1) technical training in sewing and fabric scrap recycling, (2) the establishment of a Joint Business Group (Kelompok Usaha Bersama/KUB) to manage production and marketing, (3) basic financial literacy and entrepreneurship training, and (4) support in digital marketing using accessible platforms. This integrated approach combines community empowerment, circular economy principles, and local resource innovation ([Ulfah et al., 2022](#)).

This initiative aligns with the Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 10 (Reduced Inequalities) ([Diana, Ramadhani, et al., 2024](#)). It also supports the university's Key Performance Indicators (Indikator Kinerja Utama – IKU) by involving students in off-campus experiential

learning and applied community research (Directorate General of Higher Education, 2023)([Ranti & Susilawati, 2022](#)). Thus, this community service program is not only designed to improve the economic conditions of women heads of households but also to build an ecosystem of sustainable, locally driven, and environmentally conscious empowerment ([Ranti & Susilawati, 2022](#)).

METHODS

Implementation of Activities

The community service activities were conducted in Kelurahan Panarung, Kecamatan Pahandut, Palangka Raya City, Central Kalimantan. The program took place over eight months, from February to September 2025, and centered on empowering the Bunda Sehati Community, comprising 32 female heads of households.

The participants were primarily women aged 30 to 45, most of whom worked in informal sectors such as small-scale food vending, house cleaning services, and day labor. Based on a preliminary needs analysis, over 60% of participants had a monthly income below IDR 750,000, and the majority lacked formal vocational skills or access to entrepreneurship training. These conditions indicated a high level of economic vulnerability but also provided a strong foundation for a targeted empowerment program, given the community's cohesiveness and willingness to learn.

To ensure systematic implementation, the PKM activities followed a structured flow consisting of five phases: (1) Socialization and baseline assessment, (2) Technical sewing and upcycling training, (3) Entrepreneurship and digital marketing workshops, (4) Production mentoring and business group (KUB) establishment, and (5) Evaluation and dissemination. The activity flow of the PKM program is illustrated in Figure 1.



Figure 1 Flowchart of the community empowerment program implementation process

Method of Service

The program was implemented using a participatory community empowerment approach, which emphasizes the active involvement of community members throughout the planning, execution, and evaluation phases. The implementation began with a socialization and baseline assessment stage, where an initial meeting was held to introduce the program, identify local potentials and challenges, and collect initial data through informal interviews and questionnaires. This was followed by technical skills training in which participants received hands-on instruction in basic sewing techniques, creative recycling of fabric scraps, and prototyping Central Kalimantan mascot dolls such as orangutans, tingang birds, and traditional rumah betang. Tools and materials provided during training included portable sewing machines, cutting tools, dacron stuffing, fabric glue, and various pieces of recycled fabric. In addition to technical training, participants received entrepreneurship and financial literacy education covering topics such as simple financial record-keeping, budgeting for home businesses, product pricing, cost-benefit analysis, and business plan development. To enhance market readiness, participants received training in branding and digital marketing, including designing product labels and logos, utilizing social media platforms like WhatsApp Business and Instagram for

product promotion, and selling through local e-commerce platforms such as Shopee and Tokopedia. Furthermore, a Joint Business Group (Kelompok Usaha Bersama/KUB) was formed to coordinate collective production, marketing, and collaboration among participants beyond the program's duration. Regular mentoring and reflection sessions were also conducted to help participants overcome challenges, build self-confidence, and continuously improve the learning and production process. Throughout the training and mentoring process, participants were continuously monitored using observation sheets and progress checklists to track skill development, product quality, and business readiness.

Evaluation

To assess the effectiveness of the program, a mixed-methods evaluation approach was employed, combining quantitative and qualitative data collection techniques. A pre-test and post-test evaluation design was used to measure competency improvement through (a) questionnaires assessing entrepreneurship knowledge and financial literacy, and (b) skill assessment rubrics evaluating sewing, fabric cutting, and mascot doll finishing techniques before and after training. Quantitative data from the pre- and post-test questionnaires were analyzed using descriptive statistics (frequencies, percentages, and mean scores) to assess changes in knowledge and skills. Meanwhile, qualitative data from Focus Group Discussions (FGDs) and field observations were analyzed using thematic analysis to identify repeating patterns related to participants' learning experience, motivation, and economic impact. Program success indicators included: (1) at least 80% of participants completing all training modules, (2) establishment of a functioning KUB, (3) improvement in sewing and entrepreneurship competence scores, and (4) an increase in household income among active members.

RESULTS AND DISCUSSION

Socialization and Baseline Assessment

The implementation of the community service program resulted in significant improvements in both the participants' technical skills and economic capacity. All 32 members of the Bunda Sehati Community actively participated in every stage of the activity, from training to mentoring, and over 90% completed all modules. Following the PKM implementation stages, the findings are presented and discussed for each phase below to ensure alignment with the methods section. These results confirmed the community's high economic vulnerability but also indicated their readiness to participate in a structured empowerment program.

Technical Sewing and Upcycling Training

Based on pre- and post-training assessments, participants demonstrated notable progress in sewing competence and creative recycling skills. Pre-test questionnaires showed low levels of entrepreneurship literacy (average score 42/100) and financial literacy (38/100). Skill assessment rubrics also indicated limited competence in fabric cutting, sewing machine operation, and finishing techniques. Observation notes showed that many participants initially struggled with needle threading, fabric measurement, and seam accuracy. Still, by the end of the training, 28 participants were able to produce mascot doll prototypes independently. These improvements align with previous findings showing that vocational skills training can significantly improve women's economic capacity when supported by hands-on practice ([Adeputri & Widjajani, 2025](#); [Hadi & Wulandari, 2023](#)).

Entrepreneurship and Digital Marketing Workshops

Participants also showed improvement in business literacy, financial planning, and marketing skills. Entrepreneurship literacy scores increased from an average of 42/100 (pre-test) to 79/100 (post-test), while financial literacy scores increased from 38/100 to 76/100. Participants also reported gaining confidence in cost calculation, pricing strategies, and managing simple bookkeeping systems, as indicated during FGD sessions: *“Dulu saya bingung hitung modal dan harga jual, sekarang saya bisa menghitung untung rugi sendiri.”* This supports studies showing the importance of financial literacy training in empowering women in home-based businesses ([Sari & Kholifah, 2020](#); [Handayani & Ratnasari, 2023](#)). The entrepreneurship and digital marketing workshop is shown in Figure 2.



Figure 2 Entrepreneurship and digital marketing workshops

Formation of Joint Business Group (KUB) and Production Mentoring

The formation of the KUB became a turning point for sustainability beyond the program. Two months after KUB formation, the group reported a 30–50% increase in household income among its most active members, primarily from the sale of recycled-fabric mascot dolls. Participants also successfully marketed products through WhatsApp Business, Instagram, and small-scale exhibitions. Photographic evidence showed improved consistency in quality, mascot motif, stitching accuracy, and stuffing density compared to early prototypes. These results demonstrate that community empowerment paired with a circular economy approach can simultaneously support livelihood development and environmental sustainability ([Irmayanti et al., 2023](#)). The business group (KUB) is shown in Figure 3.



Figure 3 Business group (KUB)

Program Impact and Long-Term Significance

The PKM program not only resulted in immediate technical and financial benefits but also fostered psychological empowerment. Many participants expressed improved self-

esteem, independence, and optimism, as reflected in FGD notes: “*Kami merasa punya keterampilan yang membuat kami lebih percaya diri, tidak hanya bergantung pada bantuan.*” This aligns with empowerment theory, which asserts that skill mastery combined with collective organizational support leads to lasting behavioral change and autonomy among vulnerable women ([Diana, Ramadhani & Sulisty, 2024](#); [Ranti & Susilawati, 2022](#)). Overall, the program demonstrates that a participatory, skills-based, and culturally contextualized empowerment model can be highly effective in improving economic independence, strengthening social support networks, and reducing environmental waste. ([Irmayanti et al., 2023](#)).

CONCLUSION

This community service program aimed to empower female heads of households in the Bunda Sehati Community of Palangka Raya through skills development and creative waste management by transforming unused fabric scraps into Central Kalimantan mascot dolls. The results showed that the program effectively achieved its objectives. Participants experienced significant improvement in sewing and design skills, gained basic entrepreneurial and financial literacy, and demonstrated increased awareness of environmental sustainability. The successful formation of a Joint Business Group (KUB) enabled participants to collaborate on production and marketing, resulting in an increase of over 30% in income for several active members. Furthermore, the program not only promoted women’s economic independence but also contributed to local cultural preservation and waste reduction efforts. These outcomes reflect the relevance and impact of a participatory, skill-based, and locally contextualised empowerment approach in addressing the economic and social challenges faced by vulnerable women. Therefore, this model has the potential to be replicated and scaled up in other communities with similar conditions.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTION STATEMENT

Data collection, B and RCR; Conceptualization, AS, MY, and MNA; methodology, AP and MRH; formal analysis, AS; investigation, AS and MNA; resources, MNA and MRH; data curation, AP; writing—original draft preparation, AS; writing—review and editing, AS and MH; supervision, AP; project administration, MNA. All authors have read and approved the published version of the manuscript.

ACKNOWLEDGMENTS

This community service program is supported by a 2025 grant from the Ministry of Higher Education, Science, and Technology of the Republic of Indonesia through the Directorate of Research, Technology, and Community Service (BIMA). The authors expressed their deepest gratitude to the Bunda Sehati Community in Palangka Raya for their active participation and collaboration throughout the program. They also thank the Institute for Research and Community Service and the leadership of Muhammadiyah University of Palangkaraya for their institutional support, as well as to all students and volunteers involved in the field activities.

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