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EMPOWERMENT OF KARANG TARUNA PATTAPPA VILLAGE THROUGH EXACT TRAINING AND TECHNOLOGY FOR PROCESSING SOLID SANDSTONE

Nur Asmiani [1*], Alfian Nawir [1], Gerard Antonini Duma [2], La Ifa [1], Taufik Nur [1], Andi M. Tundru [1], Abudzar Adhary Yusra [1], Aura Cahya Kemala [1]
[1] Universitas Muslim Indonesia
Jl. Urip Sumoharjo Km. 05, Karuwisi Utara, Kec. Panakkukang, Kota Makassar, Sulawesi Selatan, Indonesia
[2] Universitas Hasanuddin
Jl. Malino No.Km.6, Romang Lompoa, Kec. Bontomarannu, Kabupaten Gowa, Sulawesi Selatan 92171, Indonesia
Email: nur.asmiani@umi.ac.id

Abstract

This community service activity (PkM) is carried out in Pattappa Village, Pujananting District, Barru Regency, South Sulawesi, with a focus on increasing the capacity of Karang Taruna in managing the potential of local natural resources in the form of solid sandstone. Pattappa Village has unique geological potential with high-quality solid sandstones; however, utilization is still limited to simple products and has not provided significant economic added value. Activity implementation methods include preparation stages (observation and pre-test), implementation stage (training through direct discussion and practice of sand processing), and evaluation stage (post-test and observation of practical results). A total of 40 participants participated in this activity, consisting of Karang Taruna managers, village apparatus, and residents, with a high level of participation. Pre-test and post-test analysis results showed significant improvements, with index values of 90.5% including the category of strongly agree. This confirms that Pkm activities are practical, as well as knowledge, skills, and community awareness of local potential. Increased capacity of village youth through Karang Taruna is expected to support the development of value-added craft products based on pejal sand, so they can become the village's flagship product that supports sustainable economic growth.

Keywords: Community Service Activity, Karang Taruna, Solid Sandstone, Featured Product, Pattappa Village.

INTRODUCTION

The smallest government unit has a strategic role in national development, as confirmed in Asta Cita's point six on the development of the village for economic equality and poverty equality. Village resilience is evident during the Covid-19 pandemic, when the town became the main support of the food and financial sector [1],[2],[3]. However, the strength of the village's natural resources does not align with its human resource capacity. Low-quality HR encourages many villagers to emigrate to the city due to limited access to education and health.

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The success of village development depends not only on village devices but also on the performance of village officials, but also on the active participation of the community, particularly through social institutions such as the PKK and Karang Taruna. The PKK generally focuses on food security and family welfare [4],[5] while Karang Taruna plays a more relevant role in natural resources management and village economic development, given that its membership is predominantly composed of productive-age youth.

The role of Karang Taruna encompasses various important aspects, including mapping regional potential and problems, community economic empowerment, cultural and environmental preservation, strengthening the capacity of village youth, and collaboration with the village government [6]. However, in its implementation, Karang Taruna still faces various challenges, such as a lack of funding and facilities, minimal training and ongoing development, and low participation from the younger generation.

To address these challenges, a strategy is needed to strengthen the role of Karang Taruna through synergy with the village government, BUMDes, and other relevant institutions and organizations. In addition, strengthening the cadre system and expanding access to information, training, and technology are also strategic steps in strengthening Karang Taruna's contribution to village development and independence.

Pattappa Village, Purananting District, Barru Regency, South Sulawesi, has the geological uniqueness of almost any type of rock can be found in this region [7]. One of its main potentials is a pejal sandstone with a hardness level of 7-8 (Mohs Scale), equivalent to quartz, making it very promising as a typical village product. Unfortunately, the utilization is limited, such as a tombstone or ulekan material with low economic value [8].

Limited knowledge, skills, and technological expertise are among the main obstacles hindering Katarang Taruna's efforts to persuade them. This situation highlights the need for systematic mentoring to enable Karang taruna to develop optimally. This mentoring aims to increase institutional capacity, strengthen the role of youth in village development, and encourage the development of empowerment programs based on local potential [9].

Therefore, increasing Karang Taruna's role in processing solid sandstone into creative, high-value products is a strategic step. This effort has the potential to make these products a village flagship [10]. It can also boost the local economy by empowering and developing entrepreneurial communities based on the village's natural resources.

IMPLEMENTATION METHOD

Community Service activities (PkM) are held in Pattappa Village, Purananting District, Barru Regency, South Sulawesi, with the leading partner Karang Taruna village and support village devices. The activity focuses on improving the youth's knowledge and skills in processing the potential of the vessel's sandstone.

The community service activities in the village of Pattappa begin with the preparation stage, which includes field observation to identify potential problems facing the community, especially Karang Taruna, in managing the pelvic sandstones. In addition, a pre-test is conducted to measure the level of knowledge of Karang Taruna members about the processing of local resources.

Further entering the implementation stage, activities are focused on training designed as

a combination of discussion and direct practice. The discussion is directed to provide a conceptual understanding of the processing of the seed's sandstone. At the same time, the practice is carried out so that participants acquire technical skills in real terms. At this stage, additional material regarding business management and the importance of increasing value-added craft products is provided so that youth cannot only process raw materials but also understand the aspect of entrepreneurship.

Picture 1. Implementation of community empowerment (a). Sandstone (b)

The final stage is the evaluation stage, which is performed through the post-test to assess the improvement of participants' knowledge and skills after training. In addition, direct observation of product manufacturing practices is also conducted to assess the technical skills obtained. Pre-test and post-test data were then analyzed using the Likert scale (5 = strongly agree up to 1 = strongly disagree) to determine the quantitative level of activity effectiveness[11].

$$\text{Index (\%)} = \frac{\text{total score}}{\text{maximum score}} \times 100$$

Based on the results of processing the respondents' data on 40 Karang Taruna members, 25 people (62.5%) selected the category of strongly agree (SS), 11 (27.5%) voted for the category of agree (S), and 4 (10%) voted for the category of disagree (KS). In contrast, no respondents voted for the do not agree (TS) or the most disagree (STS).

RESULTS AND DISCUSSION

Community Service Activities (PkM) were conducted in Pattappa Village, Purananting District, Barru Regency, South Sulawesi, followed by 40 participants consisting of 27 men and 13 women, with a majority (81%) aged over 25. High school graduates dominate the education rate at 52.4%. The positive participation of Karang Taruna and support for activities signal an excellent concern for developing the village's local potential.

Based on pre-test and post-test results given to 40 members of Pattappa Village Karang Taruna, there was a significant increase in the level of knowledge and skills of participants. At the time of pre-test, the average knowledge index of participants was in the category of disagreeing with a value of about 46%, which suggests that the initial understanding of the

processing of the baytupasir is still low and limited to conventional utilization, such as building materials, tombstones, or ulekans.

A post-test measures knowledge improvement after participating in a training series that combines discussion and practice. The results showed that out of 40 respondents, 25 people (62.5%) voted strongly in the category of agreement, 11 (27.5%) voted to agree, 4 (10%) voted in the category of disagreement, and no one voted strongly disagree.

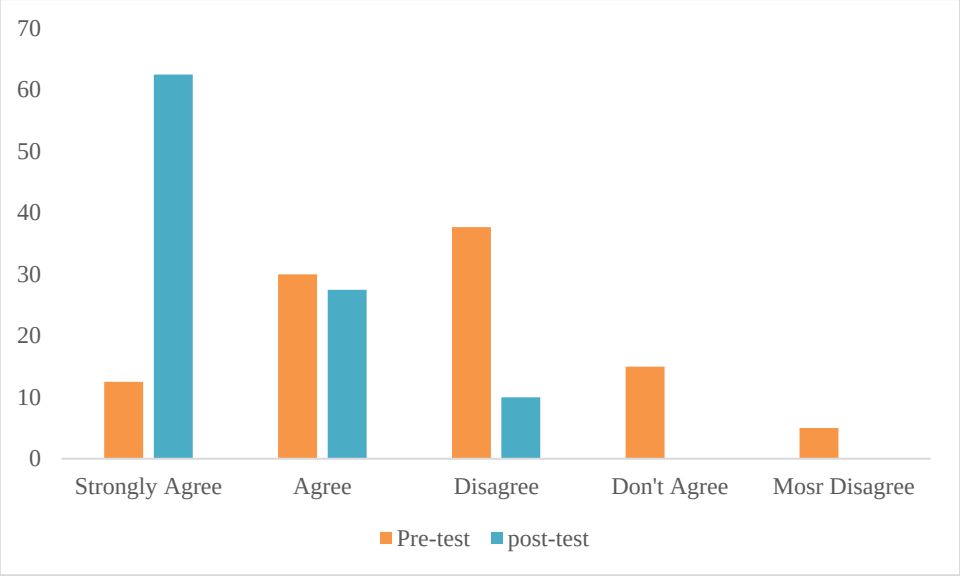

Chart 1. Percentage of pre-test and post-test values of understanding Karang Taruna on solid sandstone processing

Index calculations with the Likert scale generate a value of 90.5% which falls into the category of highly agree (80-100). This indicates an excellent improvement in the understanding of Karang Taruna members after participating in training activities. In addition to the increased knowledge, from field observation, participants could produce simple products based on pejal sand, such as table decorations and small souvenirs, with better aesthetic quality than the initial results before training.

The results illustrate the transformation of knowledge and skills in a relatively short time. This aligns with research by Harahap et al. (2025) and Wijayanti et al. (2024), emphasizing the importance of village community organizations such as Karang Taruna and PKK in empowering local potential-based economies.

Furthermore, the technical skills acquired improve individual abilities and encourage the birth of collective awareness to develop local natural resource-based businesses. Some participants expressed interest in making Pejal sand products as a village-based micro-business. However, several challenges related to the limitations of production tools, simple product design, and suboptimal marketing access exist. This is in accordance with the findings of Halpiah & Putra (2022) that the lack of technology and market networks often hampers the utilization of village natural resources.

Thus, the result of this devotion confirms that Karang Taruna has the potential to become a motor of the village economy when given proper assistance. Going forward, more comprehensive efforts will be made to develop technical skills and support access to capital, technology, and marketing to realize the village's flagship products based on sand.

CONCLUSION

PKM activities held in Pattappa Village have successfully improved the knowledge and skills of the community, especially members of Karang Taruna, in processing pejal sand as a local resource. Active participation shows positive support for the village's development efforts. Training methods that combine discussions, direct practices, and business management effectively improve participants' knowledge and skills.

Thus, this activity strengthens individual capacity and opens up local resource-based creative economic development opportunities. Optimizing the use of the vessel's sandstone is expected to produce value-added products that support the sustainable development of the village economy.

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