

MULTIDISCIPLINARY COLLABORATION OF STUDENTS IN KKN PMM FOR SUSTAINABLE DEVELOPMENT IN BUKIAN VILLAGE, PAYANGAN DISTRICT, GIANYAR

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The Regular PMM KKN Program Period II in Bukian Village, Payangan District, Gianyar Regency, Bali, is a form of implementation of the tridharma of higher education through community service based on village potential and problems. Activities carried out by Warmadewa University students include strengthening community capacity in the fields of health (optimization of intergenerational posyandu, integrated health checks, stunting prevention), education (children's financial literacy, bullying prevention, local culture-based pasraman kilat), economy (empowerment of MSMEs through promotional media, development of the Magenda Park tourist village), and environment (making trash sepit, managing organic waste into compost and community service in Magenda Park). Each program is designed in line with the SDGs targets, is promotive and preventive oriented, and is implemented with a participatory approach through the involvement of village officials, posyandu cadres, schools, and the local community. The results of the activities show an increase in collective awareness in health management, strengthening cultural identity, economic literacy, and community participation in protecting the environment. These findings indicate that the success of the KKN program lies not only in the achievement of shortterm activities, but also in strengthening the capacity of the community to transform towards independent, competitive, and sustainable village development.

INTRODUCTION

Bukian Village, located in Payangan District, Gianyar Regency, Bali, has significant economic, cultural, and environmental potential. However, there are significant obstacles to local community development. Specifically, the stunting rate among toddlers in Gianyar Regency remained at 6.3% in 2022, despite having previously decreased to 5.1% in 2021. It highlights the need for proactive intervention from various parties, including community service programs such as the Community Service Program (KKN PMM).

From an economic perspective, MSMEs in Gianyar also play a strategic role: there are approximately 91,000 registered MSMEs, accounting for nearly 50% of the total number of MSMEs in Bali. More interestingly, the growth of women-led MSMEs is increasing by up to 30% per year. However, issues such as limitations in digital promotion and financial literacy remain, as only 34% of MSMEs in Bali have implemented digitalization in their marketing and finances.

To address these challenges, the Warmadewa University Regular Community Service Program (KKN PMM) Period II developed a holistic intervention based on community empowerment and the Sustainable Development Goals (SDGs). The program includes optimizing intergenerational integrated health services (Posyandu) and integrated health checks to reduce

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stunting, children's financial literacy and bullying prevention as character education efforts, strengthening digital MSME promotion, implementing a fast-paced pasraman based on local wisdom, innovating organic waste management through modern teba, and working with residents to maintain environmental cleanliness and local culture through activities such as at Magenda Park.

This multidisciplinary approach distinguishes this program from previous community service programs: in addition to involving students from various fields (economics, health, social, and culture), the program also implements systematic steps, starting with village situation analysis, codesign with local stakeholders, participatory implementation, and evaluation with the community. This approach, according to community empowerment literature, has been proven to be more effective in generating sustainable, transformational impact.

Thus, the primary objective of this activity is to sustainably strengthen the capacity of the Bukian Village community in health, education, economics, environment, and culture. The expected outcomes include increased collective awareness of healthy living practices, early economic literacy, waste management innovations, and the revitalization of local cultural values, all aimed at creating a self-sufficient, competitive, and sustainable village.

METHODS

The implementation method for the Regular Community Service Program (KKN PMM) Period II in Bukian Village used a participatory approach, actively involving village officials, integrated health post (Posyandu) cadres, schools, MSMEs, and the local community in every stage of the activity. This approach was chosen because it emphasizes collaboration, empowerment, and program sustainability.

Problem Solving Methods. The main problems identified in Bukian Village include health (stunting, low routine health checkups), economic (promotion of MSMEs), environmental (organic waste management), and education and culture (financial literacy, bullying prevention, and the "Pasraman Cepat" program). To address these issues, KKN students designed a work program based on education, mentoring, and innovation, including optimizing intergenerational community health posts (Posyandu), training in children's financial literacy, anti-bullying counseling, creating promotional media for MSMEs, processing organic waste through modern waste management systems, and revitalizing local culture through the Pasraman Cepat program.

Data Collection Techniques. Data were collected through several techniques, including:

- Direct observation of village conditions, health facilities, MSMEs, and the environment.
- Semi-structured interviews with village officials, integrated health post (Posyandu) cadres, teachers, and MSMEs to map priority needs.
- Documentation review of village reports, Gianyar Statistics Agency (BPS) data, and relevant literature on public health and MSME empowerment.

Data Analysis Techniques. Data were analyzed descriptively and qualitatively, comparing baseline conditions with post-activity outcomes. The analysis also employed an evaluative approach, assessing program success based on indicators of goal achievement, community participation, and alignment with SDG targets.

Location, Time, and Duration of Activities. All activities will be held in Bukian Village, Payangan District, Gianyar Regency, Bali. The program will last one month (July 20-August 25, 2025), with weekly activities including program opening, implementation of thematic activities (health, education, economics, culture, and the environment), and final evaluation.





RESULTS AND DISCUSSION

The Community Service Program (KKN) in Bukian Village, Payangan District, Gianyar, has generally demonstrated significant achievements in supporting village development based on local potential while aligning with the Sustainable Development Goals (SDGs). The program, implemented from the first to the fifth week, not only touched on economic, health, education, and environmental aspects, but also strengthened the cultural and spiritual values of the village community. In the first week, KKN students began activities with an opening ceremony for student admissions attended by village officials, community leaders, and the general public as a form of legitimacy and strengthening collaboration between the university and the village. Next, the construction of waste separators was carried out, supporting SDG 3 by increasing awareness of household waste management based on community participation. A cross-generational Posyandu optimization program was also implemented for toddlers, pregnant women, and the elderly, contributing to stunting prevention and improving the health of rural communities. In addition, the construction of modern teba as an infrastructure for organic waste management supports SDGs 11 and 13 by producing compost and reducing greenhouse gas emissions.

Entering the second week, the focus of activities was directed towards economic empowerment and community education. Students assisted MSMEs through optimizing visual media in the form of promotional banners, which strengthened business identity and product appeal, relevant to SDGs 1 and 8. On the other hand, integrated health checks for adults were conducted at integrated health posts (posyandu), so that access to preventive services became more equitable and supported SDG 3. Character education programs were also implemented through bullying prevention counseling in elementary schools, which was relevant to SDGs 4 and 16. The results of the second week showed an increase in public awareness of business promotion, preventive health, and a safe school environment.

In the third week, students emphasized cultural and environmental-based programs. Community service activities at Magenda Park resulted in a cleaner environment ready to be developed as a spiritual tourism destination. This program is relevant to SDGs 11 and 15, as it maintains the sustainability of the area while supporting the development of ecological and culture-based tourism. Meanwhile, the initial phase of Pasraman Kilat introduced traditional skills such as making canang (traditional bamboo) and sengkui (traditional bamboo) as an effort to instill religious and cultural values in children, in line with SDG 4. Equally important, the creation of a second modern teba (traditional bamboo) expanded environmentally friendly organic waste management practices, affirming the village's commitment to sustainable development.

The fourth week focused on strengthening financial literacy, health, and culture. The Smart Financial & Piggy Bank program provided elementary school students with an understanding of the importance of saving and simple financial management, relevant to SDGs 1 and 4. Optimizing Integrated Health Posts (Posyandu) with stunting prevention outreach expanded the scope of nutrition education to the community, supporting SDG 3. Meanwhile, the second phase of Pasraman Kilat trained students in making tipat nasi and satay, which, in addition to strengthening cultural skills, also instilled values of religiosity and togetherness, in line with SDG 4. The achievements of the fourth week demonstrated the synergy between formal and non-formal education in shaping the character of the younger generation.

In the fifth week, the work program focused on developing the Taman Magenda Tourism Village through the creation and installation of notice boards as a visual identity and public information tool. This program supports SDGs 11 and 8 by strengthening the branding of the tourism village while improving the readiness of tourism infrastructure. Follow-up activities at the





Pasraman Kilat program continued, deepening the instillation of religious values and cultural skills in elementary school students so that the continuity of tradition-based education could be maintained. Furthermore, the fifth week also focused on assisted families (KK), namely household data collection activities through surveys of the physical condition of homes, livelihoods, and daily lives of residents. The results of this survey serve as the basis for determining residents who are eligible to receive social assistance from the village government and related institutions. Thus, assisted families contribute to the achievement of SDGs 1 and 10, as the resulting data can be used to reduce disparities in aid distribution and increase the effectiveness of social welfare programs.

The beneficiaries of this series of Community Service (KKN) programs include several community groups. Elementary school children benefit from cultural skills, religious attitudes, antibullying practices, and early financial awareness. Vulnerable age groups such as toddlers, pregnant women, and the elderly receive routine health services and nutrition education, which raises awareness of healthy lifestyles. Local MSMEs benefit from improved business promotion skills through banners. The general public of Bukian Village feels the impact of environmental improvements, both through community service at Magenda Park and the presence of a modern teba for organic waste management. Through the assisted KK (Family Community Group), households with limited socio-economic conditions are more accurately identified, thus increasing their potential to receive targeted social assistance.

A key finding from the Community Service Program (KKN) implementation in Bukian Village was the complementary integration of physical, educational, and socio-economic programs. The creation of modern teba not only addressed the waste problem but also produced economically valuable compost. Pasraman Kilat demonstrated that local wisdom-based education can be an effective tool for strengthening children's character. Meanwhile, the assisted families (KK) were a significant finding because they generated microdata on household conditions that the village government can use to prioritize aid recipients. Thus, the KKN program not only left an impact in the form of skills and infrastructure, but also a legacy of strategic social data for sustainable village development.

CONCLUSION

The implementation of the Community Service Program (KKN) in Bukian Village from July 20-August 25, 2025, demonstrated that a multidisciplinary approach combined with community participation can produce tangible changes in the health, education, economic, environmental, and cultural spheres while simultaneously preparing the prerequisites for sustainability. In the health sector, optimization of intergenerational integrated health posts (Posyandu) and integrated health checks expanded the reach of preventive services for toddlers, pregnant women, the elderly, and adults, while strengthening nutritional awareness and stunting prevention. In the education and character sector, a series of Pasraman Kilat (Kilat Pasraman) and anti-bullying education provided a fun and relevant learning space for children; they not only reacquainted themselves with cultural skills (canang, sengkui, tipat, satay) but also practiced discipline, cooperation, and pride in local identity. In the economic aspect, strengthening MSME promotion through simple banners helped business actors develop brand identities and increase self-confidence to expand markets. In the environmental aspect, the creation of trash bins, community service in Magenda Park, and modern teba improved the area's cleanliness and introduced practical organic waste management with reusable compost output. In the context of village governance, assisted families present a microhousehold database covering the physical condition of the house, livelihood, and daily needs, which can serve as an objective reference for mapping the priorities of aid recipients in a targeted manner.



The cross-program results crystallized in several key achievements. First, there was an increase in literacy in healthy living practices and environmental awareness, as evidenced by community involvement in integrated health posts (Posyandu) and cooperation (gotong royong) at Magenda Park. Second, the village's socio-cultural infrastructure was strengthened through the sustainability of Pasraman Kilat and the presence of a noticeboard at Magenda Park, which clarified the identity of the spiritual tourism area and facilitated information for visitors. Third, the local economic value chain began to move through the promotion of more organized MSMEs and opportunities to utilize compost from modern tea. Fourth, village institutional capacity was boosted through data from assisted families (KK) that were ready to be used in evidence-based deliberations and planning, resulting in a more equitable and efficient allocation of aid and social programs. All of these processes occurred because the program design prioritized co-design with village officials, schools, Posyandu cadres, and MSME actors; focused on simple solutions with quickly visible benefits; and consistent communication in the field. Thus, the KKN program in Bukian Village not only resulted in activities completed on time, but also left behind a vibrant ecosystem: new, healthier behaviors, a sustainable cultural learning space, a discernible tourism identity, and social data ready to inform village decisions. These achievements demonstrate Bukian Village's readiness to move toward becoming an independent, competitive, and sustainable village and provide a model that can be replicated in other villages with similar contexts.

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