

Agro-Edutourism for Strengthening Vocational Education and Agricultural Literacy

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ABSTRAK

Program Pengabdian kepada Masyarakat (PkM) dengan skema PDWA ini dilaksanakan di SMKN 1 Tapin Selatan, Kalimantan Selatan, dengan tujuan meningkatkan integrasi konsep agroeduwisata dalam pendidikan vokasi, memperkuat pembelajaran berbasis pertanian, serta mendorong pengembangan kegiatan ekonomi kreatif dalam ekosistem sekolah. Program ini diawali dengan analisis kebutuhan, kemudian dilanjutkan dengan kegiatan sosialisasi, pelatihan, serta pembangunan kolaborasi yang melibatkan praktisi dari Desa Wisata Agro Pujon Kidul, Malang. Hasil pelaksanaan program menunjukkan peningkatan yang signifikan, antara lain meningkatnya pemahaman guru dan siswa terhadap konsep agroeduwisata, terbentuknya tim pengembangan agroeduwisata sekolah, menguatnya kemitraan dengan pemangku kepentingan eksternal, serta meningkatnya literasi digital dalam mendukung promosi produk. Program ini diakhiri dengan penyusunan peta jalan pengembangan agroeduwisata yang berkelanjutan selama empat tahun di SMKN 1 Tapin Selatan.

ABSTRACT

This community service program (PkM) under the PDWA scheme was conducted at SMKN 1 Tapin Selatan, South Kalimantan, to enhance the integration of agro-edutourism into vocational education, strengthen agricultural-based learning, and promote creative economic activities within the school ecosystem. The program began with a needs assessment, followed by socialization, training, and collaboration-building that included the involvement of practitioners from Pujon Kidul Agro-tourism Village, Malang. The results demonstrate significant improvements: increased understanding of agro-edutourism among teachers and students, the establishment of a school agro-edutourism development team, strengthened partnerships with external stakeholders, and enhanced digital literacy for product promotion. The program concludes with a roadmap for a four-year sustainable agro-edutourism integration at SMKN 1 Tapin Selatan.

INTRODUCTION

Indonesia's agricultural sector continues to grapple with a structural challenge that extends beyond productivity: the accelerating disengagement of younger generations from agricultural livelihoods. Rural youth increasingly perceive agriculture as unattractive and

economically unviable, creating a generational gap that threatens long-term food sovereignty and rural economic resilience. This phenomenon is particularly acute in regions like Tapin Regency, South Kalimantan, where the economy is characterized by its agrarian base spanning agriculture, plantation, and livestock sectors, yet the added value generated from these commodities remains low due to limited post-harvest processing capabilities and underdeveloped agritourism infrastructure.

Existing research has identified agro-edutourism—defined as the integration of agriculture, education, and tourism into a unified visitor experience—as a promising intervention for simultaneously addressing low agricultural value-added, declining youth interest in farming, and limited community-based economic diversification (Andini, 2024; Damanik et al., 2024). Unlike conventional agritourism, which foregrounds recreation, agro-edutourism is explicitly structured around educational objectives, making it particularly well-suited for integration within formal educational institutions. Successful implementations in Indonesia, including Pujon Kidul Agro-tourism Village in Malang and Mulyaharja Agro-edutourism in Bogor, demonstrate that community-managed agro-edutourism generates significant multiplier effects through increased product sales, expanded tourism visits, and broader community employment (Djuwendah et al., 2025; Rahmini et al., 2024).

However, a critical gap exists in both research and practice: while village-level and community-based agro-edutourism models are relatively well-documented, the institutionalization of agro-edutourism within formal vocational secondary school (SMK) settings remains understudied. Existing models have not been systematically adapted to the organizational, pedagogical, and regulatory contexts of vocational schools, leaving a significant conceptual and practical lacuna for educational institutions seeking to adopt this approach. This study addresses that gap directly by documenting the design, implementation, and outcomes of a school-based agro-edutourism program at SMKN 1 Tapin Selatan—a vocational school with substantial natural and institutional assets that have thus far remained underutilized.

SMKN 1 Tapin Selatan possesses considerable agro-edutourism potential: extensive agricultural practice areas, active vocational programs in agribusiness and food processing, and established community ties. Nevertheless, a preliminary needs assessment revealed four critical constraints impeding development—low teacher and student comprehension of agro-edutourism principles, insufficient promotional infrastructure, weak inter-institutional collaboration networks, and inadequate digital marketing competencies among students and staff. These systemic gaps necessitated a structured, multi-stage intervention.

The novelty of this program lies in its dual contribution: theoretically, it extends the agro-edutourism literature into the formal vocational education domain; practically, it produces a replicable model and actionable four-year roadmap that other agricultural SMKs across Indonesia may adapt. The program was funded under the PDWA (Pengabdian kepada Masyarakat berbasis Wilayah dan Agroekosistem) scheme and pursued four operational objectives: (1) strengthening teacher and student capacity in agro-edutourism management; (2) facilitating the establishment of a school-based agro-edutourism working team; (3) building formal collaborative networks with external stakeholders; and (4) enhancing digital literacy for product and tourism promotion.

MATERIALS AND METHODS

Theoretical Framework

Agro-edutourism provides a hybrid learning and tourism experience by enabling visitors to participate in agricultural activities while simultaneously acquiring educational knowledge related to food production, environmental stewardship, and rural livelihoods. Prior research confirms that agro-edutourism contributes to local economic growth through multiplier effects including increased sales of agricultural products, higher tourism visit volumes, expanded community employment, and wider youth engagement in agribusiness value chains (Rahmini et al., 2024; Bagaskara et al., 2025). Within a vocational education context, agro-edutourism additionally functions as an authentic, contextual learning platform through which students develop practical entrepreneurship competencies aligned with national vocational standards and the demands of the green economy (Nugroho et al., 2019; Marseva et al., 2025).

Successful national models—Pujon Kidul in Malang and Mulyaharja in Bogor—demonstrate that sustainable agro-edutourism must rest on three foundational pillars: community empowerment, a viable and adaptive business model, and an integrated marketing strategy (Djuwendah et al., 2025; Novikarumsari & Amanah, 2019). Digitalization plays an increasingly central role within this framework. Social media platforms, QR-code-based interpretive content, and e-commerce channels have been identified as high-impact, low-cost mechanisms for improving visitor engagement and extending agricultural product reach beyond local markets (Aqeela et al., 2025).

This program adopts a participatory action research (PAR) approach, which emphasizes iterative cycles of planning, action, observation, and reflection involving both the implementing academic team and the school community participants. PAR is appropriate for this context because it foregrounds local knowledge, builds internal capacity rather than creating dependency on external facilitators, and generates outcomes that are both scientifically documented and practically owned by participants (Djuwendah et al., 2023).

Program Implementation Stages

The PkM program was implemented across five sequential stages. The first stage was needs assessment, in which the school's constraints, strengths, and agro-edutourism potential were systematically identified through the Critical Success Factors (CSF) analysis framework. Data were gathered via structured interviews with school principals, department heads, teachers, and students, complemented by direct observation of facilities and surrounding agricultural areas, producing a baseline institutional readiness profile.

The second stage was program socialization, involving a formal engagement session with teachers, students, the school committee, and local government representatives. This stage aimed to build institutional awareness and shared ownership, clearly communicate program objectives and expected outcomes, and secure sustained commitment from all stakeholder groups.

The third and most substantive stage was training and assistance, delivered across three thematic domains. The first domain addressed agro-edutourism concepts and site management, including visitor experience design, safety protocols, and attraction development. The second domain covered digital marketing and promotional strategy, encompassing social media content creation, product photography, and QR-code-based labeling. The third domain focused on technology applications in agricultural production and processing. Practitioners from Pujon Kidul Agro-tourism Village participated as resource persons, grounding workshop content in

operational reality. Guided practical sessions reinforced theoretical learning through hands-on activity.

The fourth stage was monitoring and evaluation, conducted continuously throughout all program activities using structured observation checklists and pre-post knowledge assessment instruments. This stage documented changes in participant knowledge, skills, and attitudes, and provided iterative feedback enabling real-time program adjustments. The fifth and final stage was reporting and roadmap formulation, encompassing comprehensive documentation of activities and outcomes for institutional purposes, culminating in the co-creation of a four-year agro-edutourism development roadmap through a participatory stakeholder workshop.

RESULT AND DISCUSSION

Increased Knowledge and Conceptual Understanding of Agro-Edutourism

The pre- and post-assessment results demonstrated a substantial improvement in agro-edutourism knowledge among both teachers and students at SMKN 1 Tapin Selatan. Prior to the program, the average knowledge score among teachers was 54.3 out of 100, reflecting limited familiarity with agro-edutourism principles, site management frameworks, and sustainable business modeling. Following the socialization and training activities, the average score rose to 81.7—an improvement of 27.4 percentage points. Among students, average pre-assessment scores of 48.6 rose to 78.2 post-training, representing a gain of 29.6 points.

These results are consistent with findings from Djuwendah et al. (2023) and Damanik et al. (2024), who similarly documented significant knowledge gains following structured agro-edutourism training interventions. Qualitative data gathered through post-training focus group discussions further revealed that participants gained practical confidence: teachers reported being able to design introductory agro-edutourism learning modules, while students described clear understanding of the visitor experience workflow, from arrival reception through guided agricultural activity and product sales. The involvement of Pujon Kidul practitioners as resource persons was identified by participants as a particularly impactful element, as firsthand operational accounts made abstract agro-edutourism concepts tangible and locally applicable. This finding aligns with Nugroho et al.'s (2019) observation that practitioner involvement in vocational training substantially enhances participants' perceived relevance and transferability of learning content.

Establishment of the School Agro-Edutourism Development Team

A significant institutional outcome of the program was the formal establishment of the School Agro-Edutourism Development Team (Tim Pengembang Agroeduwisata Sekolah, TPAS), constituted through an official school decree. The team comprises twelve members: two teachers from the agribusiness department, two from food processing, the school's student entrepreneurship coordinator, and seven student representatives selected through an open nomination process. This internal team structure ensures institutional ownership and reduces reliance on external facilitation—both essential conditions for long-term program sustainability, as emphasized by Bagaskara et al. (2025) and Marseva et al. (2025).

Following its formation, the TPAS conducted an inaugural internal planning workshop during which members identified five priority agro-edutourism visitor attractions based on the school's existing agricultural assets: an organic vegetable garden tour, a poultry processing demonstration, a traditional food product tasting and sales experience, a guided paddy field walk,

and a school nursery activity. Each attraction was assigned to a dedicated sub-team with defined roles, a preliminary development timeline, and a basic visitor script developed collaboratively during training. This structured approach to internal planning reflects the capacity-building orientation of the PAR methodology and positions the TPAS to function autonomously as the program transitions from external facilitation to self-management.

Strengthened Partnerships and Institutional Collaboration

The program facilitated the formalization of two collaborative partnerships through the signing of Memoranda of Understanding. The first MoU was established with Pujon Kidul Agro-tourism Village, enabling ongoing mentorship, reciprocal knowledge exchange, and the foundation for future student internship placements at this nationally recognized agro-tourism site. The second MoU was signed with the Tapin Regency Tourism and Culture Office, opening pathways for SMKN 1 Tapin Selatan's agro-edutourism program to be incorporated into the regency's official tourism promotion calendar and for access to local government development funding channels.

The significance of multi-stakeholder formal partnerships in agro-edutourism development is well-supported in the literature. Rahmini et al. (2024) demonstrate that tourism villages with strong inter-institutional networks—connecting government, educational institutions, businesses, and communities—achieve significantly higher visitor growth and revenue than those operating in relative isolation. Novikarumsari and Amanah (2019) similarly emphasize that sustainable agro-edutourism models require embedded institutional support structures rather than relying on individual initiative. The MoU-based partnerships established through this program therefore represent a structural foundation for the school's agro-edutourism ecosystem, extending its resource base and promotional reach well beyond what internal capacity alone could achieve.

Enhanced Digital Literacy and Promotional Capacity

The digital marketing training module produced measurable improvements in participants' promotional competencies. Prior to training, fewer than 15% of student participants reported active use of social media platforms for agricultural or entrepreneurship-related content creation. Following the two-day workshop, 78% of students successfully produced at least one piece of promotional content—including short-form video content, product photography posts, and QR-coded product labels—using mobile devices and freely available digital tools.

The program facilitated the creation of dedicated social media accounts for the school's agro-edutourism initiative on Instagram and TikTok, with initial content developed during the training. Within the first two weeks of account activation, the Instagram profile accumulated 312 followers, and the school received inquiries from three external parties regarding potential educational visit arrangements. This early traction reflects the leverage potential of even basic digital marketing capacity at an early stage of agro-edutourism development, consistent with findings by Aqeela et al. (2025), who identify social media and QR-based content as high-impact, low-cost promotional mechanisms for community and school-based agro-edutourism. Students who demonstrated strong content creation proficiency were additionally identified as priority candidates for a planned school-based creative economy incubator, creating a productive linkage between the PkM program's immediate outputs and the school's longer-term entrepreneurship development agenda.

Four-Year Agro-Edutourism Development Roadmap

The culminating tangible output of the program is the co-developed Four-Year Agro-Edutourism Development Roadmap for SMKN 1 Tapin Selatan (2026–2029), formulated through a participatory workshop involving teachers, student team members, and external stakeholders. The roadmap is structured across four annual phases. Year 1 (Foundation Phase) prioritizes physical site preparation, formal curriculum integration through project-based learning modules, initial visitor piloting with invited groups, and capacity consolidation for the TPAS. Year 2 (Consolidation Phase) targets expanded partnership development, refinement of visitor experiences based on pilot feedback, and the launch of digital product marketing channels. Year 3 (Growth Phase) focuses on increasing regular visitor volume, establishing a school cooperative for transparent agro-edutourism revenue management, and launching a formal student internship program in partnership with Pujon Kidul. Year 4 (Sustainability Phase) aims at achieving program financial self-sufficiency, hosting inter-school agro-edutourism benchmarking visits, and formally positioning SMKN 1 Tapin Selatan as a regional reference school for vocational agro-edutourism in South Kalimantan. The roadmap's integration of agro-edutourism as a cross-cutting theme within formal project-based learning ensures lasting educational value that transcends the limitations of extracurricular programming.



Figure 1. Agro-Edutourism Training at SMKN 1 Tapin Selatan

CONCLUSION

This community service program under the PDWA scheme successfully initiated and strengthened the development of agro-edutourism at SMKN 1 Tapin Selatan, South Kalimantan. The implementation process, which included needs assessment, socialization, thematic training, and partnership development, produced significant outcomes in strengthening vocational education, agricultural literacy, and creative economy capacity. Teachers and students demonstrated substantial improvement in their understanding of agro-edutourism concepts, while the establishment of the School Agro-Edutourism Development Team provided an institutional mechanism to sustain future activities. In addition, strategic partnerships with external stakeholders expanded opportunities for mentorship, promotion, and institutional collaboration. The program also enhanced students' digital marketing competencies through

social media management and promotional content creation, supporting the school's long-term agro-edutourism development agenda.

The program positions SMKN 1 Tapin Selatan as a promising model for integrating agro-edutourism into vocational education in Indonesia. To ensure sustainability, future initiatives should focus on continuous capacity-building programs, strengthening funding and facility support, and integrating agro-edutourism into project-based learning within the school curriculum. Expanding collaboration with tourism agencies, agricultural institutions, and local business stakeholders is also essential to improve program effectiveness and regional impact. Furthermore, this model has strong potential to be replicated in other agricultural vocational schools across South Kalimantan and similar agrarian regions, provided that institutional readiness and stakeholder engagement are carefully prepared.

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