Community Service Based Development Of An E-Ticketing Application For Muslim-Friendly Tourism In Blitar Regency

Moh Farih Fahmi[1], Moch Khoirul Anwar[2] , Sri Abidah Suryaningsih[3], Rahmad Syaifudin[4]

Universitas Negeri Surabaya[1], Universitas Negeri Surabaya [2], Universitas Negeri Surabaya[3], Universitas Tulungagung[4]

Mohfahmi@unesa.ac.id

Abstract

This community engagement program was implemented in Ngadipuro Village, Wonotirto District, Blitar Regency, an area with high tourism potential due to its strategic location along the South Ring Road and its abundance of coastal attractions. Despite this potential, the village has not yet achieved optimal tourism development, as reflected in its low SDGs indicators, limited digitalization, and weak institutional capacity of the local tourism group, Pokdarwis Dewata Puro. This program aimed to strengthen tourism governance through digital innovation, halal tourism development, and capacity building for local stakeholders. Using the Community-Based Research (CBR) approach, the program involved collaborative problem identification, intervention design, implementation, and evaluation with community partners. Key activities included the trial use of the Alamkuindonesia.com e-ticketing system, the creation of a halal tourism map supported by halal certification for local MSMEs, and a series of training sessions on tourism digitalization and financial management. The results show significant improvements in participants' knowledge, as demonstrated by increased post-test scores, enhanced operational skills in digital tourism tools, and stronger awareness of halal tourism principles. The program also strengthened multi-stakeholder collaboration between the university, Pokdarwis, and partner organizations. Overall, this community service initiative successfully improved digital capacity, financial literacy, and halal tourism readiness in Ngadipuro Village. These outcomes indicate that integrated digital solutions and community empowerment strategies can support sustainable tourism development and contribute to improving village SDGs performance. The findings also provide implications for future research on digital-based tourism governance and collaborative models for rural tourism developmen.

Keywords: E-Ticeting, Muslim Friendly Torism, Communty Empowerment

INTRODUCTION

Ngadipuro Village is one of the southern villages in Blitar Regency that lies along the South Ring Road (Jalur Lingkar Selatan), a route stretching from Trenggalek Regency to Malang Regency and offering stunning coastal scenery. In recent years, Ngadipuro has been actively developing its coastal tourism sector, supported by the increasing popularity of the South Ring Road on social media platforms such as TikTok and Instagram. This trend indicates a growing mobility and public interest in enjoying the coastal beauty along the route. While several well-known beaches along the South Ring Road include Serang Beach, Tambakrejo Beach, and Pangi Beach(Bischoff, 2018), Ngadipuro

itself hosts an equally captivating cluster of beaches within one village: Princen Beach, Wedi Ireng Beach, Keben Beach, Selok Dadap Beach, Pudak Beach, Dung Dowo Beach, Bakung Beach, Selok Kancil Beach, and Benelan Beach. These beaches are geographically located within Ngadipuro Village and are managed by the local tourism awareness group (Pokdarwis), named "Dewata Puro".

Geographically, Ngadipuro Village borders several surrounding areas and faces the Indian Ocean directly. The western boundary borders Tambakrejo Village in Wonotirto District, the eastern boundary borders Kalitengah Village in Panggungrejo District, the southern boundary meets the Indian Ocean, and the northern boundary borders Ngeni Village in Wonotirto District. The village's topography consists of highland terrain situated approximately 300 meters above sea level. Its strategic location is positioned among three other villages within the administrative areas of Wonotirto and Panggungrejo Districts[BPS, 2022]. Ngadipuro's demographic profile shows a population of 3,693 residents, the majority of whom are Muslim. However, some residents adhere to Christianity and Protestantism[BPS, 2022], making Ngadipuro a multi-religious community with diverse perspectives toward tourism activities. Additionally, the presence of traditional cultural practices makes the village socially pluralistic. These characteristics highlight Ngadipuro's high tourism potential and significant economic prospects that could contribute to improving community welfare[Collins, 2018]. Based on the situational analysis conducted, tourism conditions in Ngadipuro Village have not yet reached optimal development. This is evident from several indicators related to the Sustainable Development Goals (SDGs). These aspects are presented in the following table.

Tabel 1 Village Situation Assessment Information

No	Aspect	Score
1	Poverty-Free Village	41,8
2	Hunger-Free Village	33,33
3	Equitable Village Economic Growth	27,57
4	Safe and Comfortable Village Settlement Area	39,43
5	Environmentally Conscious Village Consumption and Production	8,92
6	Village Concerned with Marine Environment	0
7	Village Concerned with Terrestrial Environmen	16,67

Source: processed from the Ngadipuro Village website, Wonotirto District, Blitar Regency

Based on the data presented above, it is evident that there are numerous weaknesses in Ngadipuro Village, and these weaknesses have prevented the village's tourism sector from developing optimally. On the other hand, Ngadipuro Village has coastal areas that hold strong economic and socio-cultural potential to be developed for the benefit of the local community. The data also indicate that there are many issues faced by Ngadipuro Village, and these seven SDGs score indicators become the main focus of the partner organization, the "Dewata Puro" tourism awareness group (Pokdarwis). This group is engaged in village tourism development; however, in recent years, its efforts have been less than optimal, as reflected in the 2022 SDGs Village (SDDGs) results, which show unsatisfactory performance. Furthermore, the suboptimal tourism development in Ngadipuro Village is evident from the village's revenue [Davis, D. R, 2018], viewed from two components: asset income of only IDR 15,000,000 and tax and retribution revenue of only IDR 65,750,000, making a total of just IDR 80,650,000. This is particularly unfortunate considering that Blitar Regency recorded a total of 2,597,470 tourists in 2022, with the highest concentration in Wonotirto District. This means that the economic potential that should have benefited Ngadipuro Village remains largely untapped.

Given the existing conditions in Ngadipuro Village, Wonotirto District, it is necessary to follow up and formulate solutions together with the "Dewata Puro" Pokdarwis to optimize tourism potential that can provide greater economic and cultural benefits for the community. Thus, collaboration between academics—particularly the proposal team—and the partner is crucial in solving these issues. The urgency of addressing these problems is closely tied to the welfare of the local community. The priority issues in this community service program relate to the tourism management in Ngadipuro Village, Wonotirto District, Blitar Regency, and community empowerment in supporting the achievement of higher SDGs scores. According to the information in Table 1, deficiencies in Ngadipuro Village have negatively affected village revenue. Therefore, two priority problems require collaborative solutions with the partner, as follows.

The first issue concerns the village's coastal tourism sector, which shares similar characteristics with other beaches in Wonotirto District or other districts within Blitar Regency. This raises the question of why tourism management in Ngadipuro Village, conducted by the Pokdarwis, remains unable to compete with other villages that have similar characteristics. As a result, the tourism revenue that should have been generated is far from optimal [fahmi, 2025]. In fact, tourism management could be much more effective with the use of information technology, which helps make a destination viral and easier for tourists to access [Ernawati, S, 2020].

The second issue concerns broader village development, particularly the need for sustainable progress. The data in Table 1 show various social problems that hinder the improvement of SDGs scores and, consequently, limit tourism development and reduce the village's economic potential. This second issue also reflects the lack of preservation and practice of local cultural traditions in Ngadipuro Village, even though tourism development requires strong cultural support. Both problems can be addressed through digitalization, especially in village tourism services.

The proposed solutions in this community service program are aligned with addressing the priority problem: the inability of the "Dewata Puro" Pokdarwis to develop tourism in Ngadipuro Village, causing it to lag behind other villages. This gap has resulted in economic potential being significantly underutilized and SDGs scores remaining low due to factors such as economic inequality, poverty, and environmental awareness. The proposed solutions aim to leverage information technology, build a Muslim-friendly tourism image, and support the Pokdarwis in managing tourism to improve Ngadipuro Village's SDGs performance.

The first solution is the utilization of technology, specifically through the use of social media and existing tourism platforms or those developed by the proposal team in previous research. The importance of using technology lies in the distribution of information, ensuring that tourists are aware of tourism attractions in Ngadipuro that are just as appealing as those in other parts of Blitar [8]. This solution is based on data showing that poverty remains prevalent in Ngadipuro Village, making it difficult for those categorized as poor to access digital technology, including social-media-based tourism information. Consequently, it can be assumed that Pokdarwis members may also face challenges in utilizing information technology for tourism development.

The second solution is the development of a Muslim-friendly tourism image. This involves positioning Ngadipuro's coastal attractions—particularly Pudak Beach, the village's leading destination—as a Muslim-friendly tourism site, supported by the optimization of tourism services through Android-based technology. This positioning is necessary to differentiate Ngadipuro's coastal tourism from others, while promoting halal tourism values to attract more visitors. To strengthen this effort, an e-ticketing application will be introduced to maximize tourism potential, especially at Pudak Beach. This application aims to provide efficient tourism services, ensure transparency, and support effective management. Moreover, e-ticketing can help reduce uncertainty perceptions related

to halal tourism [Israel, B. A, 2019] and reinforce the image of Ngadipuro Village as a genuinely Muslim-friendly tourism destination.
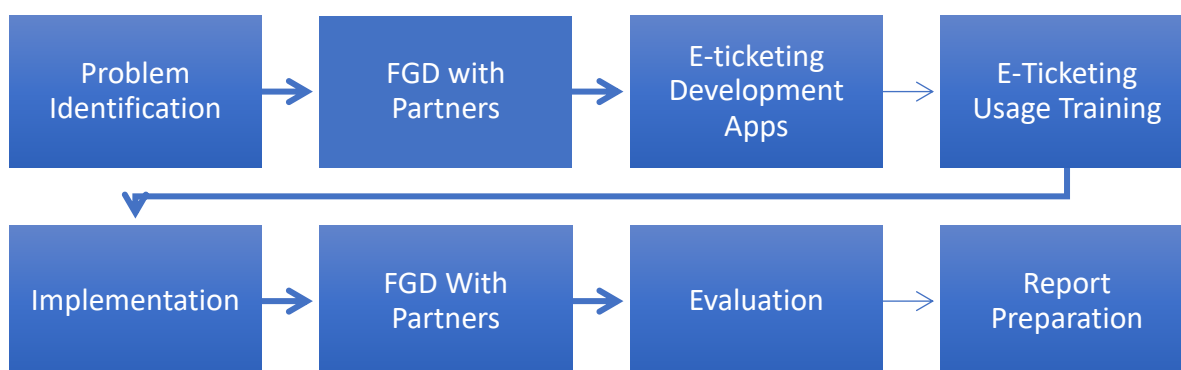
The third solution focuses on improving Ngadipuro Village's relatively low SDGs score. This solution is closely linked to the first and second solutions, forming an integrated approach. It involves providing education and training programs for the Pokdarwis to enhance their expertise in tourism management. These programs cover halal tourism literacy, tourism management, environmental education on both land and sea ecosystems, cultural preservation, and human resource development to promote economic independence.

METHOD

The method used in this community service program is the Community-Based Research (CBR) method. This method is a research approach that involves the active participation of the community throughout the implementation process of the PKM program [Iyer, P, 2019)]. This approach emphasizes the concept of community empowerment and the use of local knowledge to address the social, economic, and environmental problems faced by the community [Masban, L, 2008]. In CBR, program implementers collaborate with the community in the planning process, implementation, and interpretation of the results of activities. This approach allows the community to play a more active role in determining the research topics, methods, and intervention strategies to be implemented [Muhammad, R., 2021]. Such involvement can enhance the relevance, sustainability, and effectiveness of the research.

The community service activities conducted with the tourism awareness group Pokdarwis "Dewata Puro" in Ngadipuro Village, Wonotirto District, Blitar Regency, adopted the CBR method and followed several stages. These stages began with problem identification and concluded with the preparation of the final report. The implementation of the community service program in Ngadipuro Tourism Village can be described through the following flow

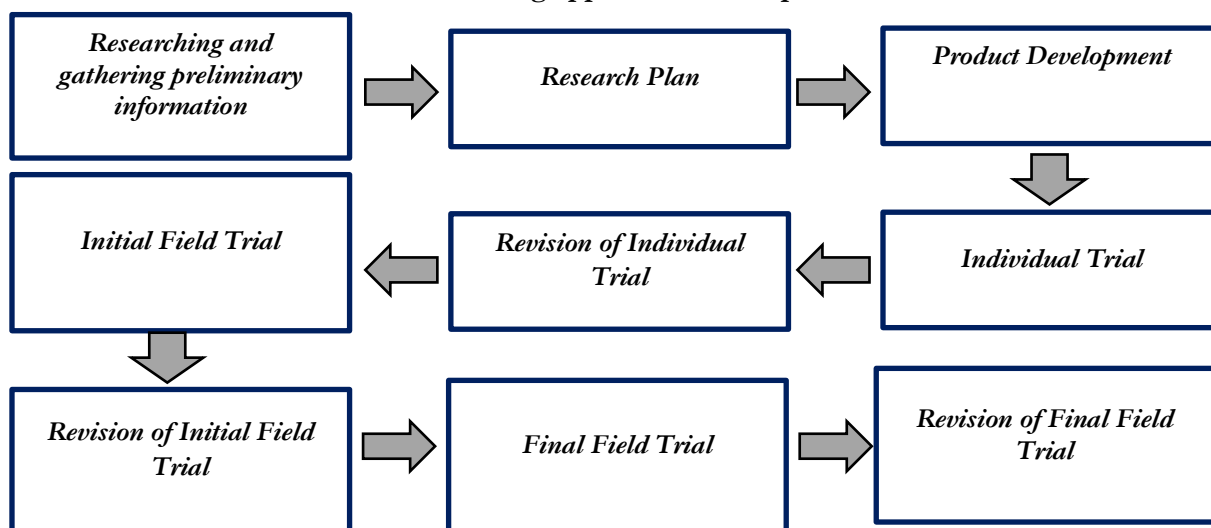**Figure 4 Community Service Workflow in Ngadipuro Village**

The success of community service activities can be measured through various factors and indicators. The following are several measures used to evaluate the success of the community service program conducted with the tourism awareness group Pokdarwis "Dewata Puro" in Ngadipuro Village:

1. Social Impact: The implementation of the program with the *Pokdarwis "Dewata Puro"* will be assessed based on its social impact. This impact relates to the increased awareness of the importance of Muslim-friendly tourism and the understanding of the halal industry as an effort to realize halal tourism at the tourist sites managed by the partner.

2. Community Participation: The level of community participation also serves as an indicator of success. The more community members involved and actively participating in the activities, the greater the likelihood of achieving successful outcomes.

3. Improvement in Knowledge and Skills: The success of community service can also be measured by the extent to which the activities enhance participants' knowledge and skills, which can be observed through pre-test and post-test results. This includes the ability of *Pokdarwis* members to understand the importance of halal tourism and their capability to operate the e-ticketing application.

4. Evaluation and Feedback: It is essential to conduct systematic evaluations and collect feedback from the partner community—*Pokdarwis "Dewata Puro"*. This evaluation concerns the implementation process and reviews whether the outcomes have met the predetermined targets, as presented in Table 2 and Table 3.

To achieve these targets, the community service program will be carried out through several collaborative activities with the partner. These activities include: [1] Socialization, [2] Training,, [3] Technology Implementation,, [4] Assistance and Evaluation, and, [5] Program Sustainability. Within this flow of activities, one stage requires special attention, namely the technology implementation stage. At this stage, the partner and the implementing team will develop an Android-based e-ticketing application. This step requires collaboration between the partner and UNESA academics due to the specialized process involved in developing an application-based product. The development of the e-ticketing application adopts the Borg and Gall development model, using nine out of the ten phases (Putra, 2023). The adopted stages will be illustrated in Figure 5.

Figure 5 represents the procedure used to develop the e-ticketing application, which must undergo a validation process by meeting specific criteria to be declared valid. The descriptive validity criteria of the e-ticketing application are determined by the alignment between empirical validation results and the predetermined validity criteria. To determine whether the developed e-ticketing application is valid, the study adopts the validity criteria developed by Akbar. The adopted validity criteria table is presented as follows (Aishahsari, 2019).

Picture 5 Android-based e-ticketing application development model

3.1 Table of Validity Criteria

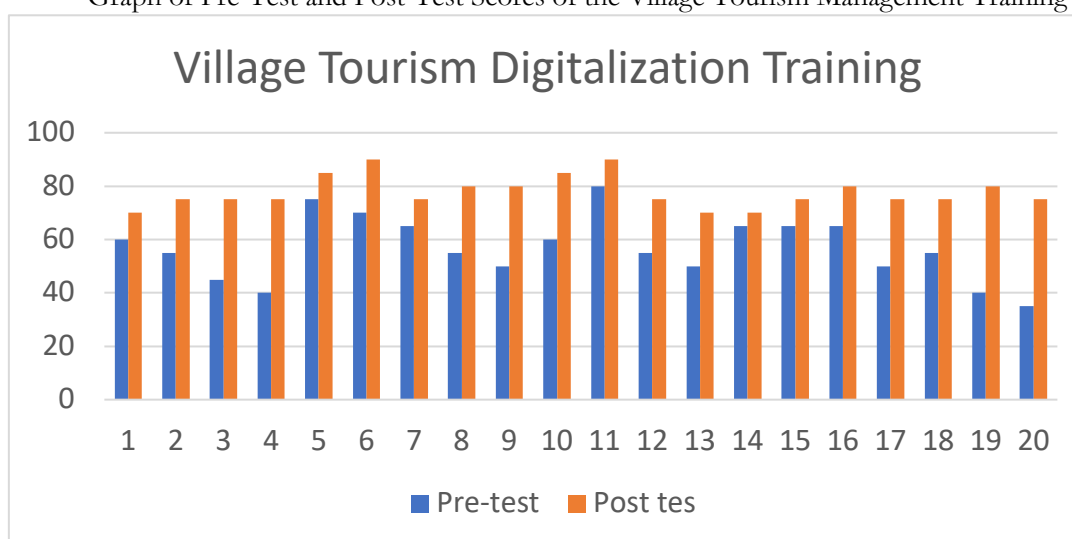| No	Validity Criteria	Validity Level	Feasibility
1	85,01 % - 100 %	**Highly valid, or can be used without revision**	**Highly Feasible**
2	70,01 % - 85 %	**Valid, or can be used but requires minor revisions**	**Feasible**
3	50,01 % - 70 %	**Less valid, recommended not to be used because major revisions are needed**	**Less Feasible**
4	01,% - 50 %	**Not valid, or should not be used**	**Not Feasible**

RESULT

The community service program in Ngadipuro Village, Wonotirto District, Blitar Regency has been fully completed (100%). The activities were carried out in collaboration with the partner, Pokdarwis "Dewata Puro", and supported by the Harapan Rakyat Nusantara Foundation. Several activities that have been implemented include:

1. Trial of the Alamkuindonesia.com application, designed to facilitate tourism management through a ticketing system and visitor revenue recording. This application also provides convenience for the partner in monitoring the movement and number of visitors entering the tourist sites they manage. The link to access the Muslim Travel Track application is as follows: https://alamkuindonesia.com.

2. Development of a halal tourism map for Pudak Beach, which was realized through the implementation of halal certification for MSMEs operating around Pudak Beach. The halal certificates successfully issued to MSMEs at Pudak Beach can be accessed at the following link: https://surl.li/onustr

3. The community service activities in Ngadipuro Village also included training and mentoring for tourism managers and local youth, conducted in collaboration with the Harapan Rakyat
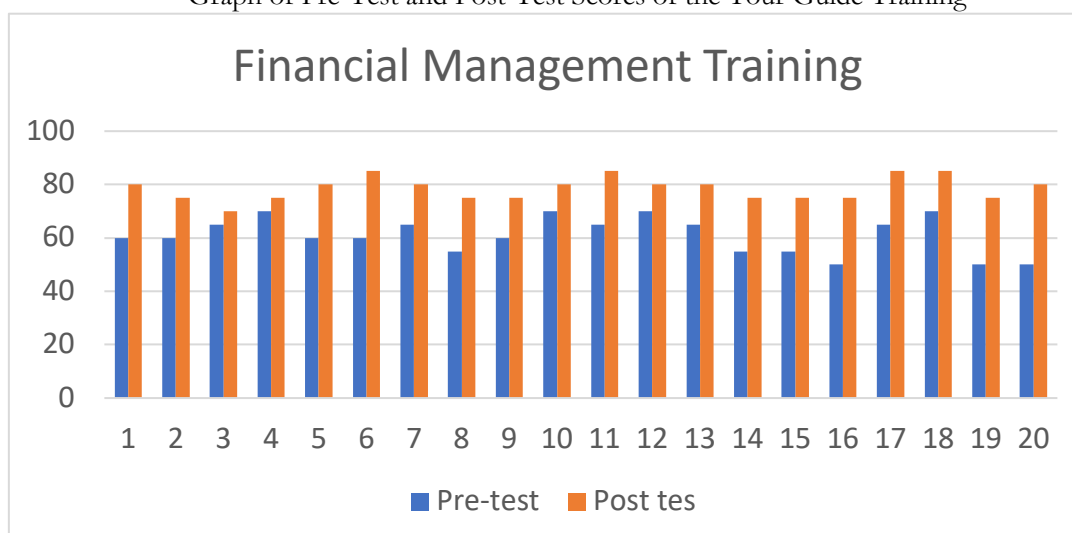
Nusantara Foundation. These activities were packaged into village tourism digitalization training and financial management training for youth and tourism managers. The results were quite encouraging, as shown by the differences between post-test and pre-test scores. The score distribution is presented in Graph 1.

Based on Graph 1, there is a noticeable increase in the knowledge of tourism managers—in this case, the Pokdarwismembers and the youth of Ngadipuro Village—when comparing the pre-test and post-test results. The graph also indicates an improvement in the partners' understanding of village tourism digitalization and sound financial management practices.

Graph of Pre-Test and Post-Test Scores of the Village Tourism Management Training

Graph of Pre-Test and Post-Test Scores of the Tour Guide Training

DISCUSSION

The implementation of the community service program in Ngadipuro Village demonstrates that collaboration between higher education institutions, Pokdarwis, and partner organizations can lead to significant achievements in the development of the village tourism sector. The involvement of Pokdarwis Dewata Puro and the Harapan Rakyat Nusantara Foundation served as a crucial foundation for the success of all program activities. Cross-institutional collaboration has proven effective in optimizing local potential while strengthening the capacity of tourism managers to meet the demands of modern tourism. These findings align with the view that multi-stakeholder synergy is essential for the sustainability of community empowerment programs (Akbar, 2021).

The trial of the Alamkuindonesia.com application contributed substantially to supporting the digitalization of tourism services in Ngadipuro Village. The application's ticketing and revenue-recording features help partners monitor visitor flows and income more accurately and in real time. Such digital transformation is vital for improving transparency, accountability, and the effectiveness of destination governance. This aligns with the perspective that digitalization is a key instrument for enhancing the competitiveness of community-based tourist destinations (Amalia, 2024).

The program for developing a halal tourism map and issuing halal certification for MSMEs at Pudak Beach strengthened the destination's identity as a Muslim-friendly area aligned with halal tourism principles. Halal certification provides assurance to visitors and raises the quality standards of products offered by local MSME actors. This initiative not only increases product value but also opens broader market opportunities. This approach supports the notion that the implementation of halal standards plays a strategic role in increasing consumer trust and the attractiveness of tourist destinations (Habibi, 2024).

The village tourism digitalization training and financial management training provided to tourism managers and youth yielded significant outcomes. The improvement in post-test scores compared to pre-test scores shows that participants experienced increased understanding of tourism management and financial literacy. These findings indicate that practice-based training effectively enhances participants' competencies. This result is consistent with previous studies stating that experiential training models are effective in improving the ability of rural communities to manage their economic potential (Razzaq, 2013).

Overall, the various community service activities illustrate that strengthening digital capability, financial management skills, and halal certification can improve the quality of village tourism governance. Programs targeting Pokdarwis members and youth have proven effective in reinforcing a sustainable tourism ecosystem. Besides generating new knowledge, these activities also lay the groundwork for future development driven by village-based innovation. This learning supports the view that measurable community empowerment fosters the development of stronger local economic resilience (Sutomo, 2024).

RESEARCH IMPLICATION

The results of the community service activities in Ngadipuro Village have important implications for developing a model of tourism digitalization at the village level. The implementation of the Alamkuindonesia.com application demonstrates that technology can strengthen destination governance systems through greater data transparency and improved operational control. This supports the theory that digital innovation can significantly enhance the effectiveness of tourism management (Srinivashan, S, 2024).

More broadly, this community service initiative contributes to the development of theories on community empowerment based on multi-stakeholder collaboration. The collaborative model involving universities, pokdarwis, and social foundations can serve as a subject for further research and community engagement to evaluate effective partnership patterns in developing tourism villages. These field findings enrich the literature on village-level tourism governance involving local actors. This implication aligns with the view that cross-sector collaboration is a fundamental element in the successful management of tourist destinations (Vogel, R, 2022).

CONCLUSION

As a follow-up to the progress that has been achieved, the Community Service Program will enter the field implementation stage in July in Ngadipuro Village, Wonotirto District, Blitar Regency. The activities will begin with a socialization session for the management of Pudak Beach tourism and relevant village officials regarding the use and benefits of the developed e-ticketing application. Subsequently, the installation and on-site testing of the application will be carried out directly at the tourism location together with the end users, accompanied by brief training to enable the tourism managers to operate and maintain the system independently. The implementation team will also conduct monitoring and evaluation of the application during the initial usage period to identify any technical or operational challenges that may arise. This series of activities is expected to be completed by the end of July, allowing the preparation of the final activity report and the drafting of scientific articles or other output documents to begin in early August. These deliverables will serve as documentation and dissemination of the results of this community service program. The main focus of the outputs is the program's concrete contribution to the digitalization of tourism services and the strengthening of the concept of Muslim-friendly tourism in the coastal area of Ngadipuro Village.

REFERENCES

Akbar, S., Noviyanti, E., Khadijah, U. L. S., & Deinaputra, R. D. (2021). Community Empowerment in the Context of Sustainable Tourism Development in Surodadi Village. JPPM (Jurnal Pendidikan dan Pemberdayaan Masyarakat), 8(2), 131–146. https://doi.org/10.21831/jppm.v8i2.39164

Amalia, R., Kartono, D. T., Wibowo, A., & Syiam, N. (2024). *Development of Halal Tourism to Improve The Community Economy in The Halal Tourism Village of Setanggor*. Ijtimā Iyya Journal of Muslim Society Research, 9(1), 1–14. https://doi.org/10.24090/ijtimaiyya.v9i1.10797

Bischoff, S. T., & Jany, C. (Eds.). (2018). Insights from practices in community-based research. De Gruyter Mouton.

BPS Kecamatan Wonotirto dalam angka 2022

BPS Kecamatan Wonotirto dalam angka 2022

Collins, S. E., Clifasefi, S. L., Stanton, J., Straits, K. J., Gil-Kashiwabara, E., Rodriguez Espinosa, P., ... & Wallerstein, N. (2018). Community-based participatory research (CBPR): Towards equitable involvement of community in psychology research. American Psychologist, 73(7), 884.

Davis, D. R., & Dingel, J. I. (2020). The comparative advantage of cities. Journal of International Economics, 123, 103291.

Ernawati, S. (2020). Viral Marketing dan Motivasi Wisatawan dalam Meningkatkan Minat Berkunjung

pada Destinasi Wisata di Kabupaten Bima. Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship, 9(2), 195-207.

Fahmi, F. (2025)Digitizing Halal Tourism and Designing Muslim-Friendly Tourism Categorization as an Effort to Minimize Uncertainty in Halal Tourism in Blitar Raya. Formosa Journal of Multidisciplinary Research, 2(11), 1716-1732

Fahmi, M. F., Anwar, M. K., Suryaningsih, S. A., Fahrulloh, A., Canggih, C., & Syaifudin, R. (2023). Digitizing Halal Tourism and Designing Muslim-Friendly Tourism Categorization as an Effort to Minimize Uncertainty in Halal Tourism in Blitar Raya. Formosa Journal of Multidisciplinary Research, 2(11), 1716-1732.

Habibi, M., dkk. (2024). *Community Empowerment and MSME-Based Tourism Development in Malaka Village, North Lombok District.* Jurnal Wicara Desa, 2(4), 279–287. https://doi.org/10.29303/wicara.v2i4.5528

https://timesindonesia.co.id/peristiwa-daerah/443562/kunjungan-wisata-ke-kabupaten-blitar-2022-lampaui-target

Israel, B. A., Schulz, A. J., Coombe, C. M., Parker, E. A., Reyes, A. G., Rowe, Z., & Lichtenstein, R. L. (2019). Community-based participatory research. Urban health, 272(2), 272-282.

Iyer, P., Davari, A., Zolfagharian, M., & Paswan, A. (2019). Market orientation, positioning strategy and brand performance. Industrial Marketing Management, 81, 16-29.

Masban, L. (2008). Pengembangan Obyek Wisata Alam Pantai Tambakrejo Kecamatan Wonotirto Kabupaten Blitar (Doctoral dissertation, Institut Teknologi Nasional Malang).

Muhammad, R., Mutiarin, D., & Damanik, J. (2021). Virtual tourism sebagai alternatif wisata saat pandemi. Journal of Indonesian Tourism, Hospitality and Recreation, 4(1), 53-60.

Razzaq, A. R. A., Mohamad, N. H., Kader, S. S. S. A., & Mustafad, M. Z. (2013). Developing human capital for rural community tourism: using experiential learning approach. *Procedia-Social and Behavioral Sciences*, *93*, 1835-1839.

Srinivasan, S., SHerkar, A., Jayamani, J., Indora, A., & Mukherjee, R. (2024). Tourism innovation and the role of technology in enhancing visitor experiences. *Educational Administration: Theory and Practice*, *30*(4), 1506-1513.

Sutomo, D. A. (2024). Community-led Economic Resilience: Fostering SME Growth through Financial Education. *Golden Ratio of Data in Summary*, *4*(2), 361-371.

Vogel, R., Göbel, M., Grewe-Salfeld, M., Herbert, B., Matsuo, Y., & Weber, C. (2022). Cross-sector partnerships: Mapping the field and advancing an institutional approach. *International Journal of Management Reviews*, *24*(3), 394-414.

Website Desa Ngadipuro: https://ngadipuro.desa.id/index.php/first/statistik/1.