



Bogor Go Digital Strategy The KKN Strategy Behind the Empowerment of Waru Village

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ABSTRACT

The Community Service Program (KKN) conducted by Group 3 ITB Ahmad Dahlan in Waru Village, Parung District, Bogor Regency, West Java aims to address several issues faced by the local community. The main issues identified include the lack of public knowledge regarding digital branding for Micro, Small, and Medium Enterprises (MSMEs), the unavailability of clear directional signs towards village facilities, and the low awareness of the importance of environmental cleanliness. To achieve these objectives, this program was designed with several intervention methods. The results of this KKN activity show an increase in community understanding of digital branding, the creation of creativity in arts, as well as the installation of 9 sign systems that were successfully carried out in Waru Village. This activity not only provides direct benefits to the community but also offers valuable experience for students in applying the knowledge they have learned in college. It is hoped that this initiative can continue and create a lasting positive impact for the community of Waru Village.

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A. INTRODUCTION

In the Industrial Revolution 4.0 era, the development of digital information technology has brought significant changes to various aspects of life, including the education, economic, and social sectors. In this modern era, the ability to access, understand, and use digital technology is no longer just an additional skill but a necessity for participating effectively in education, the job market, and daily life.

One critical area is the MSME (Micro, Small, and Medium Enterprises) economic sector. Law Number 20 of 2008, Article 1, Paragraph 1, explains that a micro-enterprise is a business entity run by an individual that meets micro-scale criteria. The rapid growth of information and communication technology significantly influences the operations of the MSME sector.



This development can have a positive impact on business actors, provided they are prepared to face technological advancements. Improvements and development for business actors are essential (Bothokan, 2023). In this context, the digitalization of MSMEs will assist business owners in introducing and marketing their products to consumers. However, most MSMEs in this village have not yet utilized digital technology optimally, whether for financial management or product marketing (Riansyah et al., 2025).

According to 2020 data, Indonesia's Digital Literacy Index was recorded at 3.46, reflecting the level of public understanding and skill in using digital technology. However, there was no significant increase in 2021, with the index only reaching 3.49. Despite this, the slight increase brought positive impacts to digital literacy, enabling individuals to use digital technology, access online information, and participate actively in the digital ecosystem. In fact, the high number of internet users in Indonesia does not guarantee the maturity of Indonesian netizens in managing internet usage (Pelaku et al., n.d.).

Unfortunately, digital literacy remains a serious issue for the nation, especially in rural areas. Village communities often feel marginalized from the benefits of digital technology due to various constraints, ranging from limited access to a lack of understanding of how to apply and benefit from digital technology in daily life (Riny & Email, 2024).

This creates informational, economic, and social gaps that can worsen disparities between regions. Strengthening literacy has become a fundamental need. To participate in tackling this issue, the presence of the Student Community Service program (KKN) in Waru Village, Parung, Bogor, is more than just a routine academic activity; it serves as a strategic platform to empower and introduce the village community to digital literacy (Riansyah et al., 2025).

Many efforts can be made to manage and support the economic growth of rural communities, one of which is the Digital Village program. This concept refers to a village development strategy that integrates information technology as a means to improve the standard of living for rural residents (Nugroho, 2021). In this context, the role of the government and the private sector is crucial in providing adequate facilities, including affordable internet access, easy digital services, and digital technology training programs (Riny & Email, 2024).

In organizing these KKN activities, the Ahmad Dahlan Institute of Technology and Business Jakarta (RASIO) collaborated with the Waru Village Youth Organization (*Karang Taruna*) and the An-Naml Foundation, supported by the Head of Waru Village, to introduce digital technology to the community. Examples of service activities previously conducted by KKN groups from UPN "Veteran" Yogyakarta include Digital Parenting (education for children in the digital era), distinguishing between real news and hoaxes on digital media, and training on Digital Marketing applications and marketplaces (Pratomo, 2023).

To achieve these goals, KKN Group 3 (RASIO) offered several programs as a form of implementation. KKN 3 (RASIO) successfully installed a Sign System (directional signs) along the roads of Waru Village. Furthermore, the main work programs of KKN 3 (RASIO) included:

- MSME Digital Workshops
- Fun Class: Kite-making activities
- Community Cleanup: Environmental sanitation
- MSME Branding Content Creation

B. METHODS

The methodology for the Student Community Service (KKN) activities in Waru Village was designed to achieve set objectives in a systematic and structured manner. Data collection for this study was obtained through field observations. The methods used include several complementary approaches: the creation of a sign system, digital branding socialization, community cleanup, and "fun class" activities.

The following is a detailed explanation of each method applied:

1. MSME Workshop: Conducting socialization for village MSME actors regarding Digital Branding and introducing financial management methods through digital platforms.
2. Sign System Creation: Installing directional signs along village roads to provide navigational information for both local residents and visitors from outside the village.
3. Fun Class: Engaging in interactive activities such as making and coloring kites, aimed at allowing children to express their imagination visually and providing a creative space for them.

C. RESULTS AND DISCUSSION

In an effort to participate in introducing digital technology and promoting the digitalization of MSMEs in this modern era, the KKN Group 3 (RASIO) carried out its activities with intensity and dedication. The KKN team, consisting of 10 members (9 males and 1 female), conducted their community service in Waru Village, Bogor Regency. These KKN activities took place from June 7 to June 29, 2025.

1.1. Fun Class

The first activity carried out was the Fun Class, held on June 8, 2025, targeting children. This activity aimed to serve as a medium for children to express their imagination visually through the use of kites. Several child development researchers have found that drawing is a form of expression or a visual realization of something in two-dimensional form, intended to explain objects realistically (Sumanto, 2006; Syakir & Mulyono, 2007; Hamalik, 2008) (Alurmei et al., 2024).



Figure 1. Fun Class Activity: Drawing and Coloring Kites.

1.2. MSME Workshop and Digital Content Creation

The second activity was the MSME Workshop and Digital Content Creation, held on June 15, 2025, covering topics such as Digital Branding and Digital Financial Management. The event was attended by local MSME entrepreneurs. The relationship between MSME actors and community life serves to support and dominate the Indonesian economy (Astuti et al., 2020; Mudrikah et al., 2024). This activity aimed to introduce the community to the era of digitalization and enable them to utilize digital technology for economic activities. According to Desai (2019), digital marketing is the marketing of products using digital technologies – primarily the internet, advertising, and other digital platforms (Hanifah, 2024). During the presentation, materials on branding and tips & tricks for effective product marketing were shared. According to data from *kominfo.go.id*, as of 2024, approximately 19 million MSMEs have begun using digital applications, while 11 million have yet to join digital platforms.

The third activity was the creation and installation of a Sign System, or directional signage. These signs were installed along the route from Parung Market toward the Village Hall, the Waru Sports Center (GOR), and the An-Naml Foundation. This activity aimed to facilitate access for both visitors and local residents in finding and navigating the roads.



Figure 2. MSME Workshop and Digital Content Creation Activities.

1.3. The Creation and Installation of a Sign System

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Figure 3. Creation of the Sign System/ Directional Signage.



Figure 4. Installation of the Sign System/Directional Signage Along Village Roads.

Table 1. Comparison of Results Before and After
 the Implementation of KKN Activities

No	Before Training	After Training
1	Many people lack an understanding of color theory and are unfamiliar with the principles of color mixing.	Through this activity, the children learned about primary colors and color mixing theories, which they then applied creatively to their kites.
2	Many MSME actors were previously unaware of how to manage their finances digitally and limited their product marketing to the local neighborhood rather than reaching a wider audience.	Through this program, MSME actors now understand how to manage their finances digitally and are capable of marketing their products through social media platforms.
3	People wishing to visit Waru Village often found it difficult to reach their destinations due to a lack of road signs.	With the implementation of the sign system, the community and visitors now find it much easier to navigate and determine their directions within the village.

D. CONCLUSION

In conclusion, these KKN activities have provided a tangible contribution to enhancing the digital literacy of the Waru Village community. Through intensive approaches – such as MSME socialization, the development of information infrastructure (sign systems), and creative classes – this program has successfully addressed the challenges of information access and the digital divide at the village level.



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F. AUTHOR CONTRIBUTIONS

Project Execution: Muhammad Raihan Nafi Dradjat, Sahrul Ramadhan, Arto Widodo, Agung Muhammad Natsir. Article Preparation: Muhammad Daffa Albari, Muhamad Abdi Rahman, Larasati. Impact Analysis: Awaldi Agung Nugroho, Ilham Firdaus, Mohammad Ihsanul Azhim.

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- Riansyah, R., et al. (2025). *Implementation of the KKN Program to Strengthen Literacy, Digitalization of MSMEs, and Social Moderation in Ndokum Siroga Village*. North Sumatra State Islamic University, Indonesia. *Summary*: This study highlights challenges in rural areas, such as low literacy (only 40% of school-age children have good reading interests) and conventional marketing in MSMEs (85% have not optimized digital technology). The KKN program serves as a cross-disciplinary solution to improve literacy, assist MSME digitalization, and strengthen social harmony.
- Riny, K., & Email, K. (2024). *Digital Village Development Strategy to Improve Literacy, Public Service, and Community Self-Reliance*. Faculty of Agriculture, Djuanda University, Bogor. 10(April), 25–40. *Summary*: This research discusses digital villages as a manifestation of the "Nawa Cita" program to develop outskirts and boost rural economies. It emphasizes the need for government policy, ICT facilities, and digital security to support rural digital transformation.

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