

The E-Commerce Application Development Training to Promote the Digitalization of Micro Enterprises in Sorkam Village

Author Name: Alpansuri Tanjung, S.Kom, M.M,¹ Fadhil Muhammad,² Jonathan Edward Panggabean,³

Affiliation: Sekolah Tinggi Ilmu Ekonomi Al-Washliyah Sibolga^{1,2,3}

Contact Information: alfansuritanjung85@gmail.com¹

Abstract

This community service activity was carried out as an effort to enhance the capacity and competitiveness of micro-enterprise actors in Sorkam Village through the utilization of digital technology, particularly in the form of e-commerce application development training. Sorkam Village has significant local economic potential but has not yet been fully digitized. Through this training, UMKM actors were provided with an understanding of the importance of business digitalization, introduced to the basic concepts of e-commerce, and equipped with technical skills to create and manage online stores independently. The methods used in this activity include needs surveys, the development of training modules based on local needs, the implementation of interactive training over three days, and post-training mentoring for one month. Evaluation was conducted using pre-tests and post-tests, observations, and questionnaires. The results showed a significant increase in the participants' digital literacy, technical skills in creating online stores, and motivation to market products digitally. A total of 18 online stores were successfully created by the participants, some of which have received orders from outside the village. This activity also fostered collaboration between business actors and local youth as digital administrators. This program demonstrates that e-commerce training can serve as a gateway to the digital transformation of UMKM in rural areas.

Keywords

Business Innovation, e-commerce, digitalization, UMKM, digital transformation.

Introduction

Micro, Small, and Medium Enterprises (UMKM) play a crucial role in national economic development. According to data from the Ministry of Cooperatives and UMKM, UMKM contribute more than 60% to Indonesia's GDP and absorb over 90% of the workforce.

However, many UMKM have not yet utilized digital technology in their operations and marketing, especially in rural areas.

Sorkam Village, located in the Tapanuli Tengah Regency of North Sumatra, is one of the villages with significant potential for UMKM in the fields of agriculture, local food processing, and handicrafts. However, most business owners in this village still rely on conventional methods to run their businesses. A lack of knowledge and skills in digital technology is a major barrier to the development of their businesses.

Digital transformation through e-commerce has become a strategic solution to improve the competitiveness of UMKM. Therefore, this community service activity was carried out to provide training and assistance in the development of simple yet effective e-commerce applications, enabling business owners to reach a wider market and increase their income.

Literature Review

The digitalization of UMKM is a crucial process in facing the era of the Fourth Industrial Revolution, where the integration of information technology into business activities has become a necessity (OECD, 2021). Research by Prasetyo (2021) indicates that the use of digital platforms can significantly enhance market access and operational efficiency for UMKM, particularly in remote areas.

Kotler and Keller (2016) argue that digital marketing and e-commerce provide competitive advantages through cost efficiency, faster transactions, and the ability to reach a wider customer base. Therefore, it is essential for micro-enterprise owners to understand and master digital platforms to remain competitive in the market.

Effective digital transformation requires intervention in the form of training and mentorship. According to Sugiyono (2019), a participatory training approach that actively involves participants in hands-on practice is more effective in building new skills than lecture-based methods alone.

In rural contexts, digital literacy is a primary challenge. A study by the Ministry of Cooperatives and UMKM (2022) found that limited access to information, lack of digital infrastructure, and insufficient ongoing support are major obstacles to UMKM digitalization. Therefore, developing human resource capacity through technology training is a critical step in the comprehensive empowerment of UMKM.

Methodology

A. RESEARCH METHODS

The implementation of this community service program employed a participatory approach, practice-based training, and continuous mentoring. The execution process consisted of several structured stages as follows:

1. **Preparation and Initial Survey Stage**

In this stage, coordination was conducted with the village officials of Sorkam to determine the schedule, location, and participants for the training. The initial survey aimed to:

- a. Identify the types and scales of existing micro-enterprises.
- b. Assess the level of digital literacy and access to digital devices.
- c. Understand participants' expectations regarding the training.

The survey was conducted through semi-structured interviews and questionnaires distributed to 30 UMKM actors.

2. **Curriculum and Training Module Development**

The implementation team developed a participant-oriented curriculum with materials covering:

- a. Basic concepts of e-commerce and business digitalization.
- b. Selection of free and user-friendly e-commerce platforms (WordPress, TokoTalk, Google Sites).
- c. Account creation and online store design.
- d. Product content management (photos, descriptions, pricing, stock).
- e. Digital payment systems: bank transfers, e-wallets, QRIS.
- f. Digital marketing strategies: basic SEO, social media, and product branding.

The modules were developed in both printed and digital guidebooks, along with short video tutorials to facilitate understanding.

3. **Technical Training Implementation**

The training was conducted over three days at the village hall using interactive and hands-on learning methods:

- a. Day 1: Introduction to e-commerce, success case studies, and platform overview.
- b. Day 2: Workshop on building online stores, uploading products, and managing transactions.
- c. Day 3: Transaction simulation practice, group discussions, and initial training evaluation.

Facilitators used live demonstrations, small group mentoring, and Q&A sessions.

4. **Post-Training Mentoring and Monitoring**

After the main training, participants received one month of mentoring through both online and periodic field visits. This included:

- a. Technical assistance in managing online stores.
- b. Evaluation of participants' challenges.
- c. Feedback on product promotion and visuals.
- d. Progress reporting via WhatsApp groups and weekly Google Form submissions.

5. **Program Evaluation and Reflection**

Evaluation was conducted through:

- a. Pre-tests and post-tests to measure knowledge improvement.
- b. Direct observation of participant activities.
- c. Training satisfaction questionnaires.

- d. Reflective discussions with participants and village partners.
The evaluation results served as a basis for improving future training modules and program design, as well as for reporting to the organizing institution and sponsors.

Findings

1. RESULTS AND DISCUSSION

The implementation of e-commerce application development training in Sorkam Village showed significant results that positively impacted the capacity of micro-enterprise actors in digitalizing their businesses. Below is a detailed explanation of the outcomes and their discussion:

1. Participant Engagement

The training was attended by 25 participants, who were UMKM actors from the food processing, agriculture, and handicrafts sectors. The majority of participants were aged between 25–45 years, with a high school or equivalent educational background. All participants attended the full three-day training and displayed high enthusiasm for learning new skills. This demonstrates a clear interest and need for business owners to adopt digital technologies.

2. Improvement in Digital Literacy

To measure the impact of the training, pre-tests and post-tests were conducted with all participants. The evaluation results revealed a significant improvement in understanding e-commerce concepts:

- a. Before the training, only 20% of participants knew how online store platforms worked; this increased to 88% after the training.
- b. The number of participants able to create and manage an online store independently increased from 8% to 76%.
- c. The activity of promoting through social media (Instagram, WhatsApp Business), previously done by only 28% of participants, rose to 64%.

3. Implementation of Training Outcomes

During the training, participants were facilitated in creating their own online stores using free platforms (TokoTalk and Google Sites). The results were:

- a. A total of 18 online stores were successfully created and actively published.
- b. Participants were able to upload at least 5 products, complete with photos, descriptions, and prices.
- c. Some participants have already started receiving orders from outside the village via their digital platforms.

4. Effectiveness of Mentoring

During the one-month post-training mentoring period, the following outcomes were observed:

- a. 15 participants regularly updated their product catalogs and utilized social media for promotion.
- b. 6 participants reported an increase in product sales after using the online platforms.

- c. There was collaboration between business actors and local youth as digital administrators who assisted with the daily operations of online stores.

5. Challenges and Obstacles

Despite the success of the training, several challenges were encountered:

- a. Technical Issues: Some participants had difficulties accessing stable internet connections and using product design software.
- b. Device Limitations: Not all participants owned personal laptops or computers, requiring the training to be conducted in turn using the facilitator's devices.
- c. Sustainability: Long-term coaching and advanced training, particularly in digital marketing and financial management, are needed to ensure sustained progress.

6. Key Learnings

The activity demonstrated that:

- a. Rural communities are highly adaptable to technology when given the proper training and a hands-on approach.
- b. Collaboration between business owners and the younger generation in the village is highly effective in driving digital transformation.
- c. Training programs tailored to local needs have a high potential for sustainability when supported by consistent mentoring.

2. Activity Documentation

As part of the transparency and reporting of the community service activity, documentation of the e-commerce application development training was systematically compiled. This documentation includes the entire process, from the preparation stage, through the training implementation, to the mentoring sessions and evaluations. Photos, screenshots, and quotes from participants serve as visual evidence of active participation and enthusiasm from the Sorkam Village community throughout the activity. This documentation also serves as material for reflection and learning for the implementation of similar programs in the future.





Figure . 1 Activity Documentation: E-Commerce Application Development Training to Promote Digitalization of Micro Enterprises in Sorkam Village.

Conclusion

Based on the results of this community service activity, it can be concluded that the e-commerce application development training in Sorkam Village successfully had a positive impact on improving digital literacy, technical skills, and the entrepreneurial spirit of micro-enterprise actors. Through a participatory approach, practice-based training, and intensive mentoring, participants were able to understand e-commerce concepts, create their own online stores, and promote their products digitally.

Digital transformation is no longer an option, but a necessity, especially in the post-pandemic era that has driven consumer behavior toward digital platforms. Therefore, interventions like this training are highly relevant and needed to strengthen the competitiveness of rural UMKM. Several successes that can be noted include:

1. The increased ability of participants to create and manage online stores.
2. The establishment of collaborative networks between UMKM actors and local youth in digital management.
3. The beginning of utilizing social media as a more effective and efficient marketing tool.

However, challenges such as limited infrastructure, devices, and the need for advanced training remain important issues that need to be addressed.

Recommendations:

1. Organize advanced training on digital marketing, branding, and application-based financial management.
2. Establish a digital UMKM forum in the village for sharing information, experiences, and innovations.
3. Encourage continued collaboration between educational institutions, village governments, and micro-enterprise actors to support the sustainability of the digitalization program.
4. Improve access to internet infrastructure and technological devices in rural areas.

With the continuity of the program and support from all parties, it is expected that the digitalization of UMKM in Sorkam Village can continue to grow and become a model for technology-based local economic empowerment.

This activity would not have been possible without the support from the Sorkam Village Government, local business actors, as well as funding from [supporting institution]. A special thank you to the team of volunteer students and training facilitators for their dedication and hard work.

References

1. Kementerian Koperasi dan UKM. (2022). *Transformasi Digital UMKM Indonesia*.
 2. OECD. (2021). *The Digital Transformation of SMEs*.
 3. Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
 4. Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson.
 5. Prasetyo, A. (2021). "Pemberdayaan UMKM Berbasis Teknologi Digital di Daerah Tertinggal". *Jurnal Inovasi dan Pemberdayaan Masyarakat*, 3(1), 45-59.
 6. Laudon, K. C., & Traver, C. G. (2021). *E-commerce 2021: Business, Technology, Society*. Pearson.
 7. Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing*. Pearson Education.
 8. Mulyani, N. (2020). "Analisis Pemanfaatan E-Commerce oleh UMKM dalam Meningkatkan Pendapatan". *Jurnal Ekonomi Digital Indonesia*, 2(2), 112–119.
 9. Handayani, P. W., Hidayanto, A. N., & Budi, I. (2018). "Penggunaan Teknologi Digital oleh UMKM di Indonesia". *Jurnal Sistem Informasi*, 14(1), 1-10.
 10. Tambunan, T. (2019). *Usaha Mikro, Kecil dan Menengah di Indonesia: Isu-Isu Penting*. LP3ES.
 11. Wibowo, A., & Irawan, D. (2022). "Transformasi UMKM Menuju Ekonomi Digital di Wilayah Rural". *Jurnal Ekonomi dan Bisnis Terapan*, 6(3), 89–98.
 12. BPS. (2021). *Statistik E-Commerce Indonesia 2021*. Badan Pusat Statistik.
 13. Al-Fadhat, S. (2020). "Peran Generasi Muda dalam Pendampingan Digitalisasi UMKM Desa". *Jurnal Pengabdian Masyarakat Madani*, 4(1), 23–31.
 14. Rahayu, R., & Day, J. (2017). "Determinants of E-commerce Adoption by SMEs in Developing Country". *Information & Management*, 54(1), 142-152.
 15. Utami, C. W. (2020). "Pelatihan Digital Marketing bagi UMKM di Masa Pandemi". *Jurnal Pemberdayaan Ekonomi Rakyat*, 5(1), 50–58.
-