



# Empowering Youth of Nagari Koto Tuo Through Population Information Systems and Digital Marketing for Household Products

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**Abstract:** This community service activity aims to increase the digital literacy and entrepreneurial capacity of youths in Nagari Koto Tuo, Harau District, by introducing a Population Information System and training on Digital Marketing for household products. Through a series of workshops held at the computer laboratory of Politeknik Pertanian Negeri Payakumbuh, participants were taught basic data management, website creation, and strategies for marketing local products through digital platforms. This program provides solutions to the lack of a structured population data system and the limited market reach of household businesses. The outcomes include the development of a prototype village population database system and enhanced participant capability in online marketing.

**Keywords:** Community Empowerment, Digital Marketing, Household Products, Information Systems, Youth.

## Introduction

Nagari Koto Tuo is a rural area located in the Harau District of West Sumatra, Indonesia. With a population predominantly engaged in agriculture and small-scale household industries, the village has significant untapped potential. However, one of the main challenges faced by the community is the limited adoption of digital technologies among youth and local entrepreneurs. The absence of a structured and accessible population information system (Sujono, 2018; Kurniawan, 2021; Nasir and Rahmi, 2021; Kharisma et al, 2022; Gunawan and Siregar, 2022) further complicates administrative processes at the village level.

Digital literacy and access to online markets (Nugroho, 2020; Alalwanet al, 2017; Ramadhan et al, 2022) are critical for the development and competitiveness of rural areas. In response to these

challenges, this community service initiative aims to equip local youths with the necessary digital skills for population data management and marketing of local products through digital platforms. The initiative focuses on practical training in Information Systems and Digital Marketing as tools for empowering the younger generation and enhancing economic resilience.

The objectives of this Community Service (PKM) activity are: 1) To improve the digital competencies of youth in Nagari Koto Tuo by training them on basic information system development and management; 2) To assist in building and implementing a simple, web-based Population Information System for the village; 3) To empower youth with digital marketing strategies that enhance the visibility and reach of household-based products; 4) To promote youth participation in local economic development through technology adoption.

## How to Cite:

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## Method

This community service program was carried out over a two-month period and adopted a combination of participatory learning, training, mentoring, and evaluation.

### Planning Phase

We conducted a needs assessment through field observation and discussions with community leaders and youth representatives. The assessment identified two major needs: lack of a population data system and limited digital marketing knowledge.

### Implementation Phase

The activities were divided into two main streams:

1. Population Information System Development
  - a. Conducted training on basic database concepts using MySQL.
  - b. Introduced front-end web development using PHP and HTML.
  - c. Facilitated data collection and entry by participants.
  - d. Developed user-friendly modules including resident registration, household family data, demographic reports, and data search functionality.
2. Digital Marketing Training
  - a. Delivered workshops on branding, content creation using Canva, and copywriting basics (Chaffey and Ellis-Chadwick, 2019; Anggraeni, 2020).
  - b. Demonstrated platform use for Instagram, TikTok, and WhatsApp Business.
  - c. Encouraged product catalog creation and sample campaign posting.
  - d. Provided feedback and one-on-one mentoring during sessions



**Figure 1.** Workshop on Population Data Information System Development

### Evaluation Phase

Participants were evaluated based on their engagement (Zulfikar and Fitria, 2021; Agit, 2023;

Winata and Nugraha, 2024), ability to complete assignments, and a final group presentation. A survey was conducted to measure satisfaction and perceived benefits.

## Result and Discussion

### System Development Outcome

The developed Population Information System consists of four core modules:

1. Citizen Registration (with ID number, name, age, gender, address)
2. Household Card (grouping by family unit)
3. Demographic Reports (age, gender, education level)
4. Search and Print Features

The interface is designed to be simple and accessible (Kurniawan, 2021; Gunawan and Siregar, 2022), allowing non-technical users such as village staff to operate the system. Participants demonstrated good understanding in performing CRUD operations. A total of 70 dummy records were entered as part of system testing.

### Digital Marketing Outcome

Participants gained foundational knowledge in:

- a. Identifying target markets
- b. Designing marketing materials
- c. Writing engaging captions
- d. Optimizing posting schedules

Several participants created promotional content for locally made products Nugroho (2020; Alamsyah (2024) Alamsyah (2024) such as banana chips, coconut oil, and woven crafts. Their posts received encouraging engagement. They also reported increased confidence in using social media for business.

### Challenges Faced

Challenges encountered include:

- a. Limited internet access in certain areas
- b. Varied levels of digital literacy among participants
- c. Some difficulties in coordinating group activities during Ramadan

### Lessons Learned

- a. Collaborative, hands-on training is effective in skill building (Anggraeni, 2020; Zulfikar and Fitria, 2021).
- b. Localized examples help in contextualizing abstract concepts.
- c. Digital tools can bridge gaps in information access and economic participation.



Figure 2. Workshop on Digital Marketing of Nagari Koto Tuo Products

## Conclusion

This program effectively addressed the dual challenge of data management and limited market access in Nagari Koto Tuo. By targeting youth, the program nurtured a tech-savvy generation ready to support local administration and promote community products.

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