



Information Technology-Based Efforts to Handle Stunting Problems in Sriwedari Village

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Article Info:

Submitted: 11 March 2023

Revised: 5 July 2023

Accepted: 5 August 2023

Publisher: 19 August 2023

Keywords: Monitoring System, Stunting, Community Empowerment, creative economy

Abstract

This integrated community service activity was carried out to address the problem of stunting in Sriwedari Village, Salaman District, Magelang Regency. Handling problems regarding stunting includes two aspects: the economic aspect and monitoring the development of stunting toddlers. The unavailability of a stunting monitoring system has resulted in not being monitored for child growth and development. Several factors, including the economy cause the high stunting rate. In this community service activity, assistance is carried out for MSME Dried Potatoes Ms. Dwi based on digital marketing and creating a stunting monitoring information system. Efforts to solve these problems are expected to help the problem of stunting in Sriwedari Village.

1. Introduction

Stunting is a chronic malnutrition problem caused by nutritional intake when a feeding does not match nutritional needs (Rahmadhita, 2020). Stunting is a serious nutritional problem in Indonesia, which impacts Human Resources (HR). In recent years, the government has begun to pay attention to the problem of stunting in line with the increasing number of stunting in each province in Indonesia. According to BPS data, in Central Java province in 2019, 71.17% of toddlers were included in the stunting group. This figure increased from the previous year, which amounted to 69.38%.

There are several causes of stunting, including low birth weight, which is related to nutritional status, mother's knowledge and upbringing of parents who do not know about stunting and economic status (Yanti et al., 2020). The family's economic level significantly impacts the growth and development of children (Rahayu et al., 2018). Families with less economic status have low purchasing power for foods with good nutrition, so they are at risk of malnutrition and cause stunting. Economic factors are cyclical or two-way, where economic factors are the basic cause of stunting and the long-term impact of stunting and malnutrition in the past. Reporting to data processed in the World Bank Investing in Early

Years Brief report, 2016, stunting can result in hampered economic growth and work productivity. The government's efforts to deal with the problem of stunting are also increasingly demanded to be swift, considering the impact of stunting on the economy is quite large.

In a village in Central Java, specifically in Sriwedari village, Salaman District, Magelang Regency, cases of stunting under five have increased every month. This is proven by data from the Sriwedari Village Health Center regarding toddlers in the stunting group in October-December 2022. Economic factors are one of the factors that influence the problem of stunting in Sriwedari Village. The people of Sriwedari Village, who have an average economic level, have difficulty buying food with good nutrition. This puts children at risk of stunting due to their inability to fulfil nutrition, increasing the risk of malnutrition (Tazki Fikrina, 2017).

The community needs a way to boost the economy through economic empowerment so that economic status will slowly rise and, in the end, be able to reduce the impact of stunting. One way to improve the community's economy is through micro, small and medium enterprises (MSMEs). Several MSMEs exist in Sriwedari village, including Mbak Dwi's Dried Potato MSME. MSMEs have an important role in the pace of the Indonesian economy, especially in creating jobs and empowering households that support increasing family income (Purwana et al., 2017). The strategy for empowering UMKM in Sriwedari Village is to assist business actors in implementing technology in running their businesses through digital marketing to increase sales.

In addition, there are other problems related to stunting, namely the not yet optimal recording and monitoring of the recording of data on toddlers with stunting status. Recording data on the development of stunting toddlers is still manual so that it is monitored optimally. In some cases, stunted toddlers do not carry out examinations because their parents forget or are busy, and the officers are also not monitored in detail. This resulted in the handling of stunting toddlers not being optimal. One solution to this problem is to use a recording and monitoring information system.

The Integrated Community Service Team (PPMT) of the University of Muhammadiyah Magelang (Unimma) carried out community service activities in Sriwedari Village, focusing on addressing stunting problems. Efforts include empowering Mba Dwi Dry Potato MSMEs through digital marketing and creating a monitoring system for recording stunting toddlers.

MSME empowerment through digital marketing is carried out to expand market share. Making a system for recording and monitoring stunting toddlers is very much needed in Sriwedari Village. The system is used to monitor stunting reduction and measure the performance of government programs to reduce stunting. Both of these efforts were carried out by utilizing information technology as outlined in the work program of PPMT activities.

2. Methods of Implementation

The method for implementing PPMT activities consists of 3 stages, namely planning, implementation and reporting, as shown in Figure 1

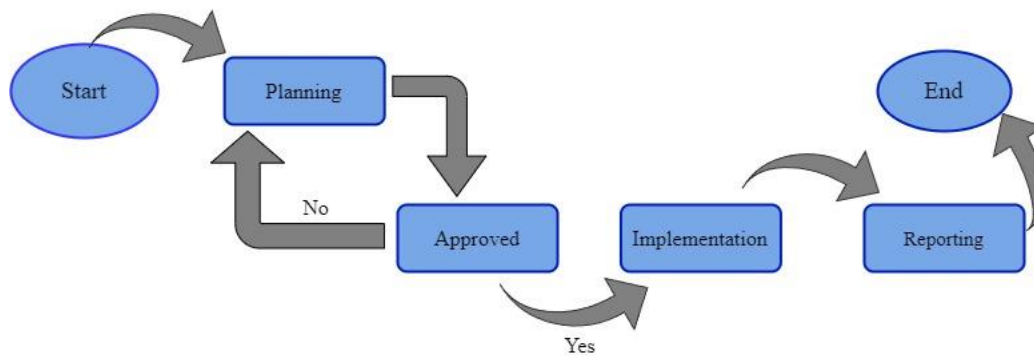


Figure 1. Stages of PPMT Implementation

a. Planning

The planning stage of integrated community service activities in Sriwedari Village involves debriefing, obtaining permits and filing. The next activity carried out was surveying the Sriwedari village hall to observe and interview to gather information on the problem of stunting and information on several MSMEs that still needed to be developed. The next stage is a survey of several MSMEs to conduct interviews about the problems experienced and find solutions to solve these problems. After the identification of the problem is obtained, prepare a proposal that contains details and a schedule of activities and outputs that must be met.

b. Implementation

The implementation stage is the stage of implementing the PPMT work program activities, namely creating a stunting monitoring system and assisting with applying digital marketing to Mba Dwi's dried potato MSMEs. In addition, in the implementation activities, socialization and training are also carried out for partners regarding the work programs that have been implemented.

c. Reporting

The reporting stage is the final stage of PPMT activities which includes preparing activity reports and producing outputs, including final activity reports, logbooks, scientific articles, publications in mass media and videos.

3. Results and Discussion

This community service activity produced several outputs, including:

a. Stunting Monitoring System (SIMOTING)

The system created is a stunting monitoring system that includes the child's condition, such as age, height and weight. The purpose of creating this system is to determine the development of children who still have signs of stunting by displaying a monthly graph. Stunting will be handled by providing Supplementary Feeding (PMT). This monitoring system will make it easier for Human Development Cadres to determine children who still need PMT and children who already need PMT or are not indicated to be stunted. The main SIMOTING display for displaying child data, as shown in Figure 2 and Figure 3, is an example of a graphical display of child development each month.

No	Nama Lengkap	Alamat	Jenis Kelamin	Aksi
1	JIHAN SHAFIA RUMAISHA	Sriwedari	perempuan	Detail Edit Hapus
2	ADILA NISA ARDAN	Sriwedari	perempuan	Detail Edit Hapus
3	QORITA NAIWA	Sriwedari	perempuan	Detail Edit Hapus
4	ZASKA AMIRA SASABILA	Sriwedari	perempuan	Detail Edit Hapus
5	AHMAD ZAKI NUR	Sriwedari	laki-laki	Detail Edit Hapus
6	AQILA SILMI GEHANYAH	Sriwedari	perempuan	Detail Edit Hapus

Figure 2. Display of child data on the system

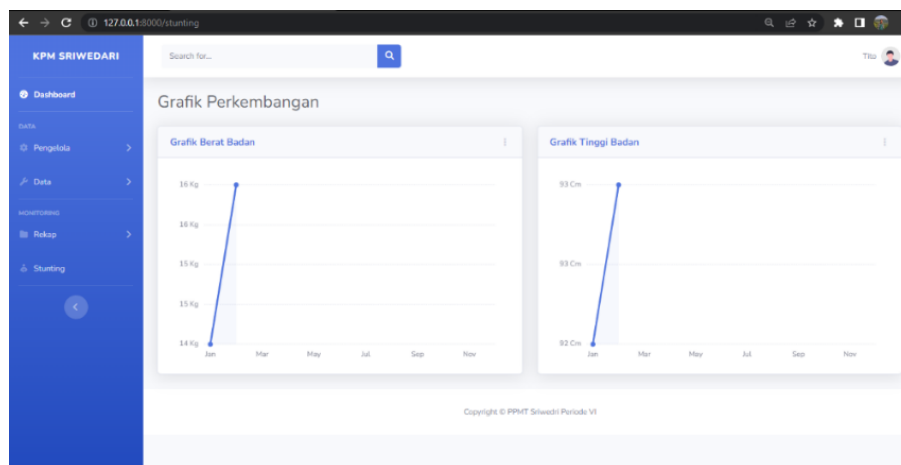


Figure 3. Graph display of stunted child development

Through the SIMOTING application, data recording can also contribute to increasing overall system efficiency with continuous graphs that can be monitored every month. The SIMOTING application that has been made is then disseminated to the village administration and also to stunting management cadres in Sriwedari village, as shown in the figure.



Figure 4. SIMOTING socialization

This PPMT activity aims to deal with stunting problems in Sriwedari Village. The SIMOTING application can help make it easier to reduce the number of existing stunting rates. So the program continuity plan in the future can be developed to make the SIMOTING Application an information system that contains stunting.

The results of the questionnaire regarding the SIMONTING application concerning understanding the flow of using the application and how useful the application is to help with problems regarding stunting can be seen from the graph

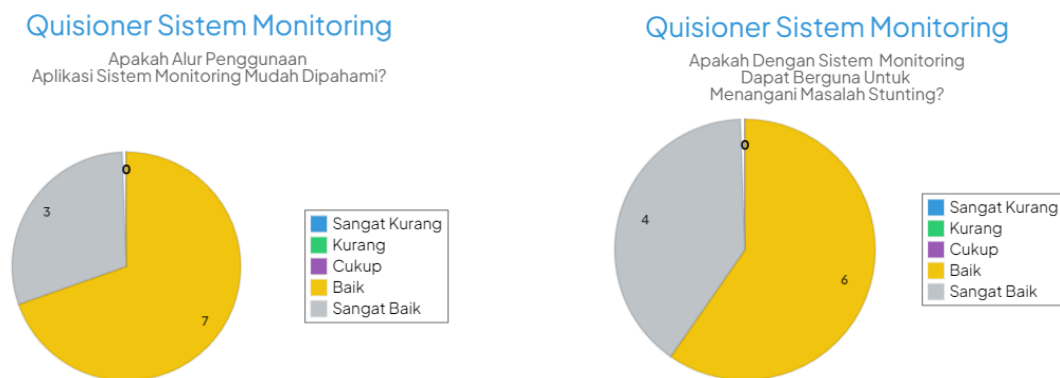


Figure 5. Results of the SIMONTING Application Questionnaire

b. Digital Marketing

At Mbak Dwi's Crispy Potato MSMEs, they still lack technology knowledge and have difficulty understanding digital marketing concepts. Content marketing is a marketing strategy in which MSME actors plan, create and distribute content (Hidayati et al., 2020). Therefore, to increase sales value, online promotions are carried out using social media by making promotional pamphlets and feeds containing details of dry potato products on the Shopee marketplace and Instagram social media, as shown in Figure 6.

Assistance in implementing digital marketing for partners is one of the efforts to increase product sales. The use of technology in marketing products is one of the techniques that must be mastered by MSMEs so that consumers are more familiar with the products

produced by these MSMEs (Robby Aditya & R Yuniardi Rusdianto, 2023). Assistance activities for Mbak Dwi dry potato SMEs, as shown in Figure 6, are carried out in stages so that partners can understand and understand the things that must be done with their products.

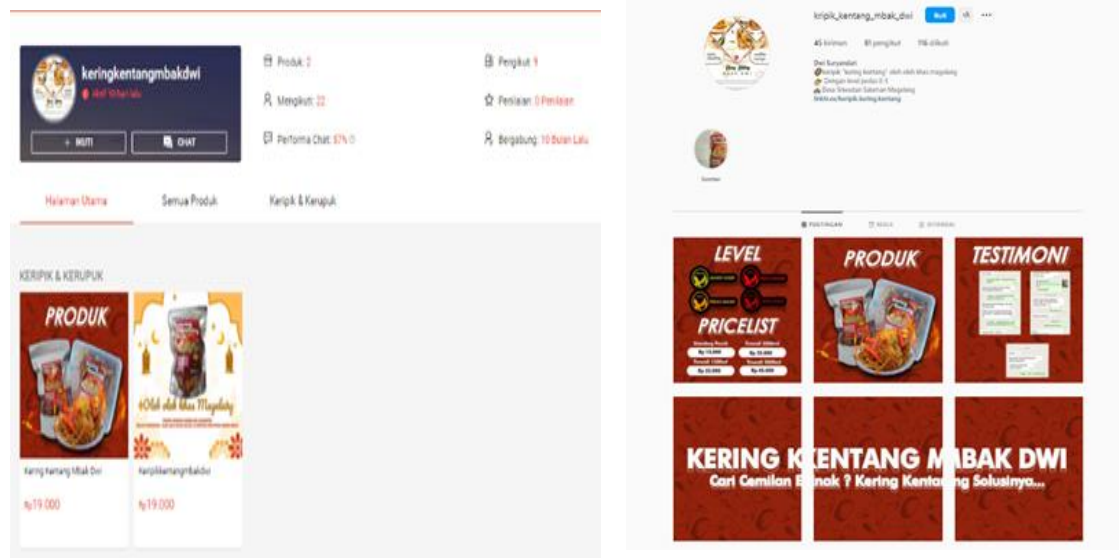


Figure 6, Promotion Through Instagram and Shopee



Figure 7. MSME Partner Assistance

4. Conclusion

Success in this community service program will ultimately provide mutual benefits between partners and students. The advantage for students is knowing the activities carried out by partners and their problems. As for the partners themselves, it is increasing the desire to continue developing a positive mental attitude, a critical mindset that can ultimately develop themselves and the environment. The role of partners, both materially and non-materially, helps implement integrated community service activities. Based on the discussion that has been stated, it can be concluded that the Sriwedari Village community service

program towards making a child monitoring system and implementing digital marketing as a problem solution has gone well

5. Acknowledgements

The author would like to thank Sriwedari Village, Salaman District, Magelang Regency, Village Officials, Mbak Dwi's Crispy Potato MSMEs and Sriwedari Village KPM as partners who always help make this PPMT activity successful.

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