

The Empowerment of Sukoharjo Magpie Breeders in The Role of Strengthening Production Capacity and Financial System Management

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Abstract

The bird industry has a promising opportunity because in a year it can generate a turnover of 1.7 trillion, so the bird business is much favored by the community. One of the bird breeding UD Murai Batu Tarto Jaya., can earn a turnover of 50-80 million per month. This turnover can still grow, but there is a market gap of 20%. This gap occurs due to market demand that is not met because the production approach is still manual and the condition of the birdhouse space is inadequate. Another problem is the inseparable use of finances between business and household needs, which results in unmeasured financial performance and causes difficulties in accessing business capital loans from financial institutions. This community service aims to provide solutions for strengthening production capacity through improved incubation techniques, clean production-based birdhouse design, strengthening the managerial side through a simple financial system implementation package, and entrepreneurial management training. The method used in building a complete solution in this community service acquired Borg and Gall R&D with the calculation of the questionnaire used to measure the achievement of knowledge and skills induction based on the three-box method. The implementation of the community service program has shown an increase in the skills of partner SMEs by 87%, an increase in knowledge by 88.09%, and the development of ideas for sustainability by 96.3%, as well as providing instrument strengthening by providing automatic hatching machines and cages. This community service provides a complete solution to strengthening the production and management of financial systems in Murai Batu Tarto Jaya SMEs.

Keywords: Community Service, Entrepreneurial Management, Financial System Management, Magpie Breeding, Production Capacity

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INTRODUCTION

Indonesia has high biodiversity (Indraswari, et al., 2020). One of the biodiversity in Indonesia is birds. The number of bird species in Indonesia reaches 1,974 species, or 17% of the total bird species in the world (Rintelen, et al., 2017; Alfatriyan, 2022), making Indonesia the fourth country with the richest bird diversity in the world (Iswandaru, et al., 2020). The diversity of these birds can certainly be utilized as a business opportunity, one of which is by breeding (Iskandar & Iskandar, 2019). Bird farming is a business that has received direct encouragement from the Minister of Cooperatives and SMEs for industrial growth because it has a wide-open market capable of generating a turnover of 1.7 trillion in a year (Kominfo, 2020), and frequent

bird race festivals are held. Bird breeding units in Indonesia alone reached 428 out of 1018 animal breeders (Humas, 2018). This shows that one of the most popular animals is birds. Birds are favored for their beautiful chirping (Hujatulatif, et al., 2022) and often compete in festivals and communities that consciously encourage birds' release into the wild. This has caused the sector to flourish. Some bird species that are favorites for competition include the cucak rawa, madu pengantin, ciblek, and the Magpie. The Magpie, also known as the Kucica Hutan, is a species of bird that belongs to the Muscicapidae family (Luking, et al., 2019; Gaur, 2020). Murai Batu is a popular and widely kept bird with Cucak Jenggot, Kenari, and Lovebird because it has the best and most beautiful singing voice (Turut, 2010). In addition to its beautiful song, this bird has a relatively high price (Mustaqim, et al., 2016). The price of one magpie chick can be priced from 2-5 million IDR (Heryadi, et al., 2022). The high price with promising potential makes the Magpie the right choice for SMEs who want to start a bird breeding business.

Murai Batu Turbo Jaya (MBTJ) is a partner SME located in Sonorejo Village, Sukoharjo Regency, one of the pioneers of magpie breeding in Central Java. Magpies in partner SMEs start to breed from hatchlings to adult harvests that can chirp and are ready to sell. This stone magpie breeding is not just a hobby, this bird breeding is able to bring business opportunities that can bring profits if managed properly and optimally (Akdiatmojo, 2018). This can be seen through the sales turnover of stone magpies at Tarto Jaya Stone Magpie Partners (MBTJ) reaching an average of 65 million per month. This turnover can continue to grow because the partner SME is a magpie breeder whose good production is always hunted by hobbyists and sought after by the community, bought in large parties to be released into the wild habitat. However, the increasing market demand is inversely proportional to the availability of magpies (Iskandar & Iskandar, 2015) because the partner SMEs currently still have two core problems in the field of production and management.

The problems in this community service are divided into two main problems. The first problem is the traditional production approach of manually hatching bird eggs are ineffective (Hage, et al., 2022) and result in relatively high hatching failure; further problems are due to the condition of the aviary space, which is attached to the house, resulting in poor air circulation, pollution, and unhygienic cages. The second is a managerial problem. The managerial cash flow in and out was not recorded well. The SME partners have not separated the use of finances for business and household needs, so finances are mixed and characterized by traditional financial management. It results in an unmeasured rate of business performance and difficulties in borrowing capital from banks. The last problem is that the SME business partner have not taken a good managerial approach, with limited knowledge of planning, managing, and evaluating the business. This inhibits partner SMEs from becoming effective entrepreneurs (Miller & Breton-Miller, 2017). As a result, partner SMEs will miss opportunities to improve business performance and growth (Al-Awlaqi, et al., 2021) and impact business sustainability.

Performance improvement in SMEs is focused both from the back line related to production efficiency, front line related to customer relations, human resource management, and in terms of financial management. Financial management is important to see the condition of the business being run. This is in line with a study conducted by (Maris, 2022) which states that with good financial management it can be used by SMEs to make decisions for further business strategies. However, this study has not explained the discussion related to human resource management in SMEs, only focusing on finance. The study of resource management is also important to do because it is useful for increasing the productivity of SMEs. Such as the study conducted by (Nsereko & Kiwanuka, 2018) which recommends for government and non-government organizations and individuals to engage and support SMEs to obtain entrepreneurship training that allows SMEs to maintain and develop their business. Then in a further study conducted by (Zainal, et al., 2021) only discusses improving human resource management through entrepreneurship training but has not discussed financial aspects. The next study focuses on the production aspect by providing tool incubation to support SME businesses (Rachmanda, 2022) but in this study has not discussed training in terms of human resource management and financial management, both of which are important to discuss because they affect the sustainability of SME business efforts not only from the production aspect which is important but from the managerial and financial side it is important to get attention. In contrast, the study (Sopanah, et al., 2023) has conducted socialization and training from the aspect of human resource management but has not provided incubation tools to assist SMEs in running their business.

This community service aims to provide a complete solution in strengthening production capacity through improved incubation techniques elaborated by conducting further hygienic cage design to improve SME managerial performance and sustainability by expanding partner SMEs' knowledge of financial management and accountability (Iskamto, et al., 2020; Basriani, et al., 2021; Iskamto 2021) through the adoption of Android-based financial system of the SMEs. The use of android, which is integrated with easy internet access,

encourages partner SMEs to be technologically literate (Hermawan & Suharnomo, 2021). Another strengthening in the field of management is to provide entrepreneurial knowledge induction.

METHOD

The method used in building this community service design is a modified Research and Development (R&D) approach (Borg, et al., 1983). This research method is used to produce certain products and test the effectiveness of these products (Feriyanti, et al., 2019).

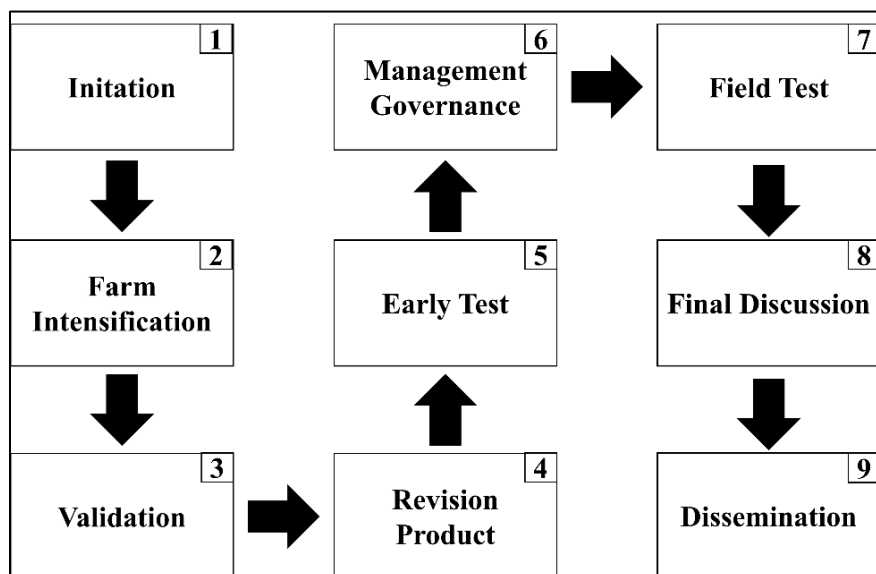


Figure 1. RnD Method (Borg, et al., 1983) Modified (Yuliani & Banjarnahor, 2021)

The targets of this community service are oriented towards increasing production capacity, improving financial management, and training entrepreneurial management to increase the productivity of partner MSEs. Then the steps of the activity are in line with Figure 1. (1) Initiation: The community service begins by doing initial planning related to the activities to be approved out. At this stage, a solution is formulated regarding the problem in the community service and the purpose of each step taken. At this stage, it has also estimated the budget for the needs during the community service. (2) Farm Intensification: At this stage, automatic hatching machines and aviaries are selected to solve the community service problem through limited bird egg production capacity in partner SMEs. (3) Validation: The validation stage is accepted to ensure that the incubated product meets the partners' needs. (4) Revision product: At this stage, temperature adjustments are made to the hatching machine to ensure the magpie egg hatching process's success and adjust the cage's layout so that air circulation is smooth and hygienic.

Then, (5) Early test: Early test is agreed upon by partner SMEs by testing cage intensification and hatching machines to determine the feasibility of the equipment. Testing is done to get the best results in strengthening production capacity. (6) Management Governance: This stage strengthens the managerial side through a simple financial system implementation package and entrepreneurial management training in partner SMEs. (7) Field test: This stage tests the suitability of the output with problems related to strengthening the managerial side through a simple financial system implementation package and entrepreneurial management training at partner SMEs. (8) Final discussion: The final discussion measures the achievement of community service goals approved using the three-box method. (9) Dissemination: The results of this community service are published in international journal articles.

After these steps are taken, the success level of the activity is measured through questionnaires distributed to participants. The following indicators in Table 1 are used as measurement materials.

Indicators on the questionnaire (see in Table 2) are rated on a Likert scale of 1-6 (Joshi, Kale et al. 2015). The lowest item scale starts from 1 which means strongly disagree to 6 which indicates strongly agree. An even number was chosen to ensure that respondents were not neutral towards the statements submitted. In addition, the scale item range of 6 is considered sufficient to represent the level of respondents' answers to each statement.

Table 1. Questionnaire Indicators

No	Indicators
1	This program meets today's business challenges
2	The material provided is easy to understand
3	Development of sustainable ideas
4	This community service program activity increases knowledge.
5	This knowledge induction can be practiced.

Table 2. Rated on a Likert scale of 1-6 (Joshi, et al., 2015)

Item Scale	Category
1	Strongly Disagree
2	Disagree
3	Less Disagree
4	Moderately Agree
5	Agree
6	Strongly Agree

The data from the questionnaire were collected and analyzed descriptively with an index value. The index value results are used to determine the description of the perceptions of community service participants. The index value is 100 and is grouped with three-box-method criteria (Ferdinand, 2006), which later results from the percentage used to determine the activity's success level. The ranges obtained in this method are show in Table 3.

Table 3. Three-Box Method Criterion Index (Ferdinand, 2006)

Range	Rate	Category
Range 1	16.67% – 44.44%	Low
Range 2	44.45% – 72.23%	Medium
Range 3	72.24% - 100%	High

RESULTS AND DISCUSSION

The results obtained through the implementation of community service on Murai Batu Turbo Jaya (MBTJ) using the Research and Development (R&D) method (Borg, et al., 1983) and questionnaire measurement with the three-box method are as follows:

a. Increased production capacity of magpie birds

The problem of production capacity is still using manual hatching incubators. Automatic incubators can make it easier for breeders to produce more (Idoko, et al., 2019). In solving these problems, incubation of supporting equipment is needed to improve production. This production improvement is expected to increase the capacity of magpie hatching. The first incubation equipment is a hatching machine with a capacity of 45-60 bird eggs with a size of 60cm long, 40cm wide, and 32cm high, digital thermostat using a 5-watt 2-lamp incandescent lamp heater, an automatic sliding rack system so that the eggs turn over automatically every 3.5 hours, using a timer drive, and equipped with two water tanks.

Figure 2 shows a picture of an Automatic Egg Hatching Machine and a Batu Murai Bird Cage in response to the problems faced by the partners. In this picture, we can see the design and functionality of the Automatic Egg Hatching Machine, the use of technology that supports optimal hatching of bird eggs. Then there is also a picture of a magpie bird cage that is able to create a suitable environment for the maintenance and development of magpie birds.



Figure 2. Egg-Hatching Incubator and Rock Magpie Birdcage

As shown in the picture above, the equipment procurement aims to help the magpie hatching process. Improvements in the production equipment of partner SMEs can reach a wider market due to increased hatching capacity.

b. Increasing the number of magpie cages

The problem of the number of cages that are still limited and not commensurate with production capacity can be solved by increasing the number of cages to increase the capacity of magpie breeding. The second incubation equipment is an iron bird cage that is 180 cm high, 80cm wide, and 160cm long; with the number of cages increasing, the birds will have a good environment and air circulation. This also has a positive impact on the chirping process.

c. Simple financial system training with Android

Financial system training to solve partner problems, namely the use of still manual records that are prone to loss and damage (Ismawati, et al., 2021), so partners are given training on recording financial systems with android, namely with stall books which are currently widely used by SMEs for financial recording, where using financial applications can make it easier in all matters of financial preparation (Ozbayoglu, et al., 2020). The implementation of a technology will also have a direct strategic impact on partner SMEs (Hermawan & Suharnomo, 2020). The following is documentation of simple financial system training with android. This training will improve the financial management skills of business partners.

Figure 3 shows the Android-based Simplified Financial System Training, where participants engaged in intensive and collaborative discussions. In this image, we see interactions focussed on understanding and applying the Android-based financial system "Buku Warung", which includes transaction management, financial tracking, and integration of the latest technology. The training provided participants with in-depth knowledge, enabling them to develop skills relevant to today's digital era.



Figure 3. Android-based Simple Financial System Training

Figure 4 provides a clear illustration of the "Buku Warung" App as an innovative digital financial recording solution. In this figure, you can see the user-friendly interface and functionality of the application designed to make it easier for users to record and manage financial transactions.

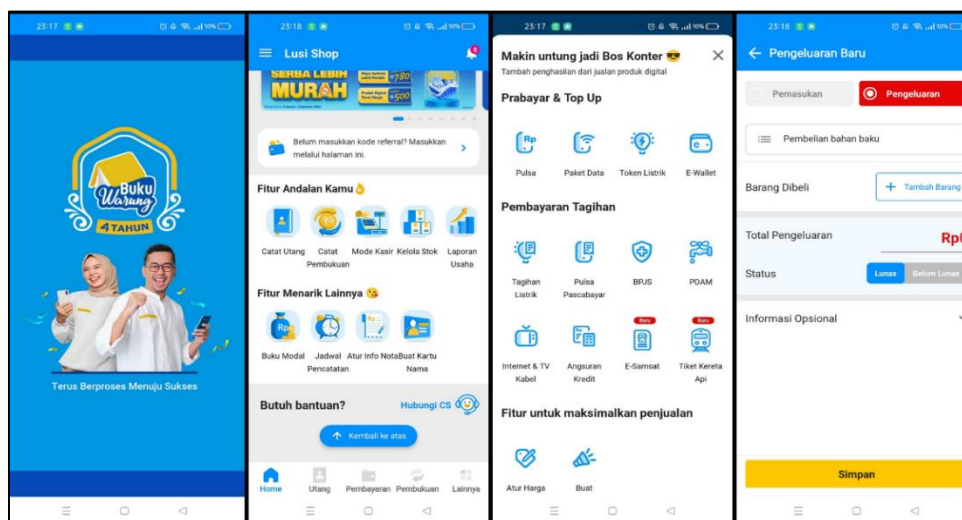


Figure 4. Application "Buku Warung"

d. Entrepreneurship training for partners

Entrepreneurship training to solve managerial problems such as planning, control of feed raw materials, supporting materials, employee salaries, financial administration, and marketing. Partners are given entrepreneurship training to improve entrepreneurial knowledge and skills (Galvão, et al., 2020). This training aims to provide partners with entrepreneurial knowledge starting from the planning process, feed and supplier management, and marketing and business evaluation approaches.

Figure 5 show the Entrepreneurship Management Training held for the SME partners. In this image, we see discussions on various aspects of entrepreneurial management aimed at providing in-depth understanding to the SME partners and participants. These discussions involved interaction between presenters and participants, covering important topics such as marketing strategies, business start-up tips, and perseverance in business. Figure 5 is a visual representation of the commitment to improve the managerial capacity of the SME partners, with the expectation that the training will have a sustained positive impact on the development and sustainability of the SME partners' businesses.



Figure 5. Entrepreneurship Management Training for SME Partners

The community service provides a program in the form of production improvements to increase the capacity of magpie hatching, training in entrepreneurial skills, and strengthening the managerial side in the

form of training in simple financial systems based on Android so that it provides a complete solution to the problems in the Murai Batu Turbo Jaya partner SME.

Based on the results of the questionnaire measurement, the following results were obtained in Table 4.

Table 4. Result Percentage

Result	Percentage
Skill Improvement	87%
Ease of Material Delivery	90.07%
Increased Knowledge	88.09%
Value of Benefit	88.9%
Answers Current Business Challenges	96.3%

a. Skills improvement

Participants' skills in this activity increased. This is evidenced by the success rate of activities with an indicator that reads "This knowledge induction can be practiced," which is classified as high through the three-box-method, namely with a percentage of 87%, which means that participants fully understand the material that has been delivered. Entrepreneurship and finance training is not only considered a learning process but a crucial strategy to improve human resource capacity in SMEs. Training can provide deep insights and broaden perspectives by honing professional entrepreneurial management skills. The enhanced capabilities focus on people management to be able to sustain the business when facing turbulence. In addition, the ability to manage finances is trained by utilising digital technology in the form of android-based applications.

b. Ease of material delivery

Measurement of the second indicator, which reads "The material provided is easy to understand," gets a percentage result of 90.07%, which means that based on the three-box method, it falls into the range with a high success rate. Participants can understand the explanation of the material provided. The availability of training materials is delivered with ease so that participants can absorb the information as expected as the output of the training. The delivery of materials is informative with simple language by optimising learning effectiveness to accelerate the learning process and support the learning achievement process.

c. Increased knowledge

The community service increases the knowledge of participants. It can be concluded because the results of measuring the indicator, namely "The activities of this service program increase knowledge" through the three-box method, obtained a percentage of 88.09%, meaning that the indicator's success rate is high. Service enables participants to gain in-depth knowledge related to business management, risk analysis, marketing strategies, and sustainable business mode development. In addition, the financial management training equips participants with efficient financial management with a structured investment strategy.

d. Value of benefits

The community service activity has a beneficial value. A high percentage of the indicator can conclude this success, namely "This training is useful", which is 88.9%, which means that participants feel they have benefited in the form of new knowledge from this activity. In addition, the Value of benefits is also indicated by the indicator "This program answers current business challenges," which gets a percentage result of 96.3%, meaning it falls into the high success criteria. Training in entrepreneurship and financial management has significant implications for SMEs in dealing with complex business dynamics. The training provides conceptual and practical understanding to address daily challenges such as changing market trends, capitalisation, and business competition. The application of knowledge gained from the training encourages SMEs to respond more adaptively by optimising financial performance based on digital systems. This becomes a solid foundation for building short and long term strategies following market dynamics.

e. Increased production capacity

The use of supporting equipment for egg hatching accelerates the production process. Previously done manually, egg hatching is now using machines to produce a larger quantity of production in a shorter time. The community empowerment programme highlighted shortcomings in production capacity that need to be increased to encourage the fulfilment of untapped market demand.

CONCLUSION

The community service program is approved to create better business continuity sustainability in the aspect of production and increase partners' knowledge of entrepreneurship and finance so that conclusions can be drawn with the implementation of the program: Increasing the production capacity of magpie birds at MBTJ is developed through equipment incubation. The results of this community service increased production capacity, Improving the source of bird production at MBTJ was developed through increasing the number of bird cages. Improvement of production sources encourages an increase in the quality of magpie birds. The service results show that the improvement of skills, Ease of material delivery, increase in knowledge, and increase in production capacity of partner SMEs are high based on the three-box method.

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