

Innovation-Based Human Resource Empowerment in MSMEs as a Strategy for Strengthening Entrepreneurial Spirit

Abdul Aziz¹, Irsal Fauzi², Eko Nur Hermansyah³

^{1,2,3} Universitas Ngudi Waluyo

E-mail Corresponding Author : abdulaziz@unw.ac.id

Abstract

This community service program aims to enhance human resource (HR) capacity in fostering an innovation-based entrepreneurial mindset among MSMEs, particularly within the mushroom farmers association in Sragen. The program addresses key challenges faced by the community, including limited product innovation, weak business management, and low digital literacy in marketing practices. A participatory and capacity-building approach was employed, integrating training, mentoring, and hands-on practice. The activities were conducted by a team of lecturers from Universitas Ngudi Waluyo, focusing on entrepreneurship development, product innovation, and digital marketing strategies. The results indicate significant improvements in participants' entrepreneurial mindset, managerial skills, and ability to develop value-added mushroom-based products. Participants also demonstrated initial adoption of digital marketing tools to expand market reach. The program highlights that HR empowerment through innovation-oriented interventions can effectively improve MSME competitiveness and sustainability. This initiative contributes to strengthening local economic development and provides a replicable model for community-based empowerment programs.

Keywords: Human Resource Development; Innovation-Based Entrepreneurship; MSMEs; Mushroom Farmers; Community Empowerment

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role as a key pillar of the national economy, particularly in generating employment opportunities, reducing unemployment, and improving community welfare (Law of the Republic of Indonesia Number 20 of 2008). MSMEs have also demonstrated resilience in times of economic crisis due to their flexibility and reliance on local resources (Tambunan, 2012). In Sragen, the agriculture-based MSME sector shows significant potential, especially within mushroom farmer associations that utilize local resources as a leading commodity. Mushrooms offer high economic value and broad opportunities for product diversification, ranging from fresh products to innovative value-added processed goods (Saragih, 2017).

This potential has not been fully optimized due to limitations in the quality of human resources (HR) among business actors. Most members of the mushroom farmer association still face challenges in business management, product innovation, marketing strategies, and the use of digital technology (Riyanti, 2018). Limited entrepreneurial literacy and innovation capabilities lead business actors to focus primarily on selling raw products without further processing. Such conditions result in low product competitiveness and high dependence on market price fluctuations (Porter, 1990). Restricted access to market information and business networks further constrains sustainable business development (Hisrich, Peters, & Shepherd, 2017).

Human resource empowerment is a critical aspect in addressing these challenges. Efforts to empower HR should not only focus on improving technical skills but also on strengthening managerial capacity, fostering an entrepreneurial mindset, and enhancing

innovation capabilities (Noe et al., 2019). An integrated empowerment approach through training, mentoring, and knowledge transfer is believed to improve MSMEs' ability to create value-added products and expand market access. This perspective aligns with the view of Peter F. Drucker, who emphasized that innovation is a key instrument of entrepreneurship in creating new economic opportunities (Drucker, 1985), and is further supported by the community empowerment approach proposed by Robert Chambers, which places communities as the central actors in the development process (Chambers, 1997).

This community service program involves a team of lecturers from Universitas Ngudi Waluyo who possess expertise in human resource management, entrepreneurship, and MSME development. The service team acts as a facilitator in enhancing HR capacity through systematically designed and participatory programs. Activities include entrepreneurship training based on innovation, mentoring in the development of mushroom-based processed products, and strengthening marketing strategies, including the utilization of digital platforms (Kotler & Keller, 2016). The involvement of lecturers serves not only as knowledge providers but also as strategic partners in fostering independence and sustainability among community businesses (Etzkowitz & Leydesdorff, 2000).

The implementation of this community service program entitled "Empowering Human Resources in Fostering Innovation-Based Entrepreneurial Spirit" is expected to enhance the competence and competitiveness of MSMEs within the mushroom farmer association in Sragen. The outcomes of this program are expected to encourage the emergence of creative and adaptive entrepreneurs capable of producing high value-added innovative products (Schumpeter, 1934). This initiative is also anticipated to strengthen the local economy and serve as a model for community-based HR empowerment that can be replicated in other MSME sectors.

IMPLEMENTATION METHOD

The implementation method of the community service program entitled "Empowering Human Resources in Fostering Innovation-Based Entrepreneurship" is designed in a systematic, participatory, and sustainable manner. The approach integrates training, mentoring, hands-on practice, and outcome-based evaluation. The program is carried out by a team of lecturers from Universitas Ngudi Waluyo in collaboration with MSMEs from the mushroom farmer association in Sragen.

Preparation Stage

This initial stage focuses on needs assessment and problem mapping of the partner community. Activities include field observations, in-depth interviews with members of the mushroom farmer association, and focus group discussions (FGD). The results of this assessment are used to identify the existing conditions of human resources, levels of entrepreneurial literacy, production patterns, and marketing strategies. Training modules and program designs are then developed based on these findings to ensure that the interventions are relevant and targeted.

Socialization and Coordination Stage

This stage aims to build mutual understanding between the service team and the partners. Activities include presenting the objectives, benefits, and implementation flow of the program to the members of the mushroom farmer association. Coordination is also conducted to determine schedules, roles, and commitments for active participation. A participatory approach is emphasized to ensure that partners act not only as beneficiaries but also as active contributors.

Training Stage (Capacity Building)

Training is delivered in a structured manner using an andragogical approach that emphasizes experiential learning. The training materials include:

- a. Entrepreneurial Mindset Development: fostering innovative, creative, and adaptive thinking in response to market changes.
- b. Mushroom-Based Product Innovation: techniques for product diversification such as mushroom chips, mushroom nuggets, shredded mushroom, and ready-to-eat products with added value.
- c. Business Management: basic financial management, business planning, and cost control.
- d. Digital Marketing: utilization of social media and online marketplaces to expand market reach.
- e. The methods applied include interactive lectures, case studies, simulations, and group discussions.

Intensive Mentoring Stage

Mentoring is conducted continuously to ensure the implementation of training outcomes. The lecturer team from Universitas Ngudi Waluyo acts as facilitators, providing direct guidance to MSME actors. Mentoring activities include:

- a. Practical training in developing innovative mushroom-based products
- b. Assistance in preparing simple business plans
- c. Guidance in branding and product packaging
- d. Support in using digital platforms for marketing
- e. This stage is carried out periodically through field visits and online communication to monitor business progress.

Implementation and Action Stage

This stage involves the direct application of all knowledge and skills acquired during training and mentoring. Partners begin producing innovative products, conducting market trials, and implementing newly learned marketing strategies. The service team provides direct feedback to ensure continuous improvement and refinement.

Monitoring and Evaluation Stage

Monitoring is conducted regularly to measure the effectiveness of the program.

Evaluation indicators include:

- a. Improvement in participants' knowledge and skills
- b. Number and variety of innovative products developed
- c. Changes in marketing approaches (from conventional to digital)
- d. Increase in business income or turnover
- e. Evaluation methods include questionnaires, interviews, and direct observation. The results serve as a basis for program improvement.

Sustainability Stage

The final stage focuses on ensuring the long-term sustainability of the program outcomes. Strategies include:

- a. Establishing innovation-based business groups
- b. Strengthening marketing networks and partnerships
- c. Developing standard operating procedures (SOPs) for production and marketing
- d. Providing recommendations for further development

This program is expected to enhance the independence and competitiveness of MSME actors within the mushroom farmer association in Sragen, enabling them not only to survive but also to grow sustainably through innovation and human resource development.

RESULTS AND DISCUSSION

Overview of Community Service Partners

The partner involved in this community service program is a group of micro, small, and medium enterprises (MSMEs) organized within a mushroom farmers association in Sragen. This association represents a community-based business group operating in the agribusiness sector, particularly in the cultivation and processing of mushrooms as their primary commodity. The association serves as a collaborative platform for farmers to manage production activities, share knowledge, and strengthen their bargaining position in the market. Its members consist of micro- and small-scale entrepreneurs, most of whom run their businesses independently or within family-based operations.

The business activities carried out by the partner are still largely focused on the cultivation of fresh mushrooms, especially oyster mushrooms, using relatively simple and conventional production methods. The production process includes baglog preparation, maintenance of growing media, and harvesting, most of which are conducted manually with limited technological support. Production capacity tends to fluctuate depending on environmental conditions, availability of raw materials, and the skill levels of individual members. Harvested products are generally sold in fresh form to local traders or traditional markets, resulting in relatively low profit margins.

Post-harvest processing activities have not yet been optimally developed. Most members of the association have not engaged in product diversification that could generate higher added value, such as innovative processed mushroom-based food products. This limitation is primarily caused by a lack of knowledge and skills in food processing, limited access to information on food technology, and minimal experience in developing creative products. In addition, product packaging and branding remain basic, which reduces the attractiveness of the products in broader market segments.

From a business management perspective, MSME actors within the association face several challenges, particularly in financial management, transaction recording, and long-term business planning. Most businesses have not yet implemented well-structured administrative systems, making it difficult to accurately assess business performance. Marketing practices are still predominantly conventional, relying on direct selling and local networks without significant utilization of digital technology. This condition limits market reach and reduces competitiveness in the increasingly digital business environment.

The human resource characteristics within the mushroom farmers association indicate that most members possess practical experience in cultivation but lack adequate entrepreneurial competencies. The prevailing business mindset tends to focus on production rather than value creation and innovation. Levels of digital and entrepreneurial literacy remain relatively low, resulting in slow adaptation to market changes and technological advancements. This situation highlights a gap between the existing resource potential and the capacity to manage and develop it effectively.

Despite these challenges, the mushroom farmers association in Sragen holds significant potential for further development. The availability of raw materials, basic cultivation experience, and strong social cohesion among members serve as valuable social capital for business growth. Support from various stakeholders, including educational institutions such as Universitas Ngudi Waluyo, provides opportunities to enhance human resource capacity through structured empowerment programs.

The existing conditions of the partner serve as the primary basis for designing the community service program. Intervention efforts are focused on improving human resource quality through strengthening innovation-based entrepreneurial competencies, developing value-added products, and enhancing the use of digital technology in marketing. These efforts

are expected to facilitate the transformation of businesses from conventional practices toward more modern, adaptive, and competitive enterprises.

Implementation of Community Service Activities

The implementation of this community service program was designed in a systematic and phased manner, emphasizing participatory, collaborative, and needs-based approaches. The activities were carried out by a team of lecturers from Universitas Ngudi Waluyo, actively involving MSMEs from the mushroom farmer association in Sragen as the main subjects throughout the program. Each stage of the implementation focused not only on knowledge transfer but also on fostering a shared learning process that encourages active participation and independence among participants.

The initial phase began with a program socialization session aimed at building mutual understanding regarding the objectives, benefits, and implementation mechanisms of the community service. This stage involved direct meetings with members of the association and served as a forum for discussion to explore their expectations and needs. This early interaction played a crucial role in establishing trust and commitment between the service team and the participants. The outcome of this phase included agreements on activity schedules, forms of participation, and priority issues to be addressed.

The next phase involved training activities focused on enhancing human resource (HR) capacity, particularly in innovation-based entrepreneurship. The training was delivered using an interactive and andragogical approach, enabling participants to actively engage through discussions, case studies, and simulations. The training materials covered entrepreneurial mindset development, innovation in mushroom-based products, business management, and modern marketing strategies. The primary emphasis was on transforming participants' mindset from being mere producers to becoming entrepreneurs capable of creating added value and identifying market opportunities.

Following the training phase, intensive mentoring was conducted as the core component of the empowerment process. This mentoring took place directly at the participants' business locations, allowing the service team to provide contextual and practical guidance. Activities included hands-on practice in producing processed mushroom products, developing innovative product variations, and improving product quality. Participants also received guidance in preparing simple business plans, including financial management and business development strategies. This process facilitated direct skill transfer while simultaneously enhancing the confidence of the MSME actors.

The implementation also included strengthening the marketing aspect, particularly through the utilization of digital technology. Participants were trained and assisted in using social media and digital platforms as tools for product promotion and sales. Activities included creating business accounts, managing marketing content, and developing effective communication strategies with customers. The shift from conventional to digital marketing became a key focus, considering the importance of broader market access in improving MSME competitiveness.

All activities were carried out in a sustainable manner with structured monitoring mechanisms. The service team conducted regular evaluations of participants' progress, including improvements in knowledge, skills, and the implementation of training outcomes. Monitoring was conducted through field visits, evaluative discussions, and follow-up mentoring to address challenges faced by participants. This approach ensured that the program extended beyond training and delivered tangible impacts on business development.

The implementation of this community service program reflects a strong synergy between academia and society in promoting local economic empowerment. The involvement of lecturers from Universitas Ngudi Waluyo served not only as knowledge providers but also

as strategic partners in facilitating business transformation. A structured, participatory, and sustainable implementation process is expected to generate significant improvements in both HR capacity and innovation-based business development among the mushroom farmer association in Sragen.

Results of Human Resource Capacity Improvement

The implementation of this community service program has generated a significant impact on improving the human resource (HR) capacity of MSMEs within the mushroom farmer association in Sragen. These improvements are reflected in changes across knowledge, skills, and entrepreneurial attitudes before and after participation in the training and mentoring activities.

Prior to the implementation of the program, most MSME actors had limited understanding of innovation-based entrepreneurship. Their mindset was primarily production-oriented, with little attention given to value creation or market opportunities. Business management practices were still basic, particularly in terms of financial record-keeping, business planning, and marketing strategies. In addition, the use of digital technology to support business activities was minimal, resulting in limited market reach.



Following the training and mentoring sessions, a notable improvement in HR competencies was observed. Participants demonstrated a shift in mindset toward more innovative and adaptive entrepreneurship. Their ability to develop mushroom-based processed products improved, as indicated by the emergence of new value-added product variations. From a managerial perspective, MSME actors began to recognize the importance of financial record-keeping and structured business planning. The use of digital platforms for marketing also increased, enabling broader market access.

These improvements were not only cognitive (knowledge-based) but also affective (attitudinal) and psychomotor (skill-based). Participants became more confident in managing and expanding their businesses, showed greater willingness to innovate, and were more proactive in seeking information and business opportunities. This transformation indicates that the program has not only delivered short-term outcomes but also fostered sustainable behavioral changes in entrepreneurial practices.

The following table presents a comparison of HR competencies before and after the community service program:

Comparison of HR competencies before and after the community service program		
Competency Aspect	Before the Program	After the Program
Entrepreneurial Mindset	Production-oriented, less innovative	Innovation-oriented and opportunity-driven
Entrepreneurial Knowledge	Limited to practical experience	Improved with theoretical and practical understanding

Competency Aspect	Before the Program	After the Program
Product Innovation	Products sold only in raw form	Able to develop value-added processed products
Business Management	No systematic financial records	Began implementing financial recording and business planning
Marketing	Relied on local markets and conventional methods	Started using social media and digital marketing
Technology Utilization	Low, unfamiliar with digital platforms	Increased use of digital platforms for promotion
Self-Confidence	Low confidence in business development	Increased confidence and willingness to innovate
Business Independence	Dependent on traditional practices	More independent and adaptable to change

These findings demonstrate that the intervention through training and mentoring effectively enhanced HR capacity in a comprehensive manner. The observed changes indicate the success of the program in transforming MSME actors from traditional business practices toward more modern, innovative, and competitive enterprises.

Comparison Table of HR Competency Questionnaire

No	Competency Aspect	Questionnaire Statement	Before (Average Score)	After (Average Score)	Description
1	Entrepreneurial Mindset	I have an innovative mindset in running my business	2.5	4.2	Improved
2	Entrepreneurial Mindset	I am able to identify business opportunities from mushroom products	2.8	4.3	Improved
3	Entrepreneurial Knowledge	I understand the basic concepts of entrepreneurship	2.7	4.1	Improved
4	Entrepreneurial Knowledge	I understand the importance of innovation in business	2.6	4.4	Improved
5	Product Innovation	I am able to develop processed mushroom products	2.3	4.2	Improved
6	Product Innovation	I can create new product variations	2.4	4.1	Improved
7	Business Management	I maintain financial records for my business	2.2	3.9	Improved
8	Business Management	I am able to plan business development	2.5	4.0	Improved
9	Marketing	I understand product marketing strategies	2.6	4.1	Improved
10	Digital Marketing	I use social media for promotion	2.1	4.3	Improved

No	Competency Aspect	Questionnaire Statement	Before (Average Score)	After (Average Score)	Description
11	Technology Utilization	I am able to use digital technology in my business	2.0	4.2	Improved
12	Self-Confidence	I am confident in developing my business	2.7	4.4	Improved
13	Business Independence	I am able to manage my business independently	2.8	4.2	Improved

The questionnaire results indicate a significant improvement across all HR competency indicators after the implementation of the community service program. The average scores before the program ranged from 2.0 to 2.8, reflecting low to moderate competency levels. After the program, the scores increased to a range of 3.9 to 4.4, indicating a shift toward good to very good competency levels.

The most notable improvements were observed in digital technology utilization and digital marketing, which were previously identified as major weaknesses among participants. In addition, significant progress was also evident in entrepreneurial mindset and product innovation, highlighting the program's success in transforming participants into more creative and adaptive entrepreneurs.

These findings reinforce that the community service activities conducted by the lecturers from Universitas Ngudi Waluyo have produced measurable and comprehensive impacts on improving the human resource capacity of MSMEs.

DISCUSSION

The implementation of this community service program for MSMEs within the mushroom farmers association in Sragen demonstrates significant improvements in several key aspects, including human resource (HR) capacity, entrepreneurial mindset, and business management practices. These changes did not occur instantly but were achieved through a structured and continuous learning process that integrated training, mentoring, and hands-on practice. This approach proved effective in transforming business actors from conventional practices toward more adaptive and innovation-driven behaviors.

The results indicate a notable improvement in participants' understanding of innovation-based entrepreneurship. Prior to the program, most MSME actors were primarily production-oriented, with limited attention to value creation and product differentiation. Following the training and mentoring sessions, participants began to identify market opportunities, develop new product ideas, and recognize the importance of innovation in sustaining business growth. These findings align with the perspective of Peter F. Drucker, who emphasizes innovation as a key instrument in entrepreneurship for creating new economic value and enhancing competitiveness.

From the perspective of product development, the program successfully encouraged the diversification of mushroom-based products with higher added value. Products that were previously sold only in fresh form have been transformed into various processed goods, such as ready-to-eat and snack products. This innovation not only increases the selling value of the products but also expands market segmentation. The findings confirm that HR capacity-building interventions can generate tangible impacts on business performance, consistent with value-added concepts in agribusiness that highlight the importance of processing in increasing economic value.

Improvements were also observed in business management and marketing practices.

MSME actors began to understand the importance of basic financial recording, business planning, and cost management. This reflects an enhancement in managerial capacity. In addition, the adoption of digital marketing has started to emerge, although still at an early stage. The use of social media as a promotional tool provides opportunities to reach broader markets. These results support modern marketing concepts that emphasize the role of digitalization in improving MSME competitiveness in the digital economy.

The empowerment approach applied in this program is also consistent with the participatory development concept proposed by Robert Chambers, which positions the community as the main actor in the development process. Active involvement of participants at every stage, from problem identification to solution implementation, played a crucial role in the program's success. This participation not only enhanced program effectiveness but also strengthened the participants' sense of ownership over the outcomes.

Despite these achievements, several challenges remain. Limited digital literacy continues to hinder the optimal use of technology in marketing. In addition, constraints related to business capital and production facilities affect the ability of participants to expand their businesses. Resistance to change, influenced by long-standing conventional practices, also indicates that transformation requires sustained mentoring and continuous support.

Overall, this community service program has made a positive contribution to enhancing HR capacity and fostering innovation-based entrepreneurial spirit among MSMEs in the mushroom farmers association in Sragen. The success of the program is not solely determined by the quality of the training materials but also by the participatory and sustainable implementation approach. The collaboration between the academic team from Universitas Ngudi Waluyo and the community serves as a key driver in promoting adaptive, innovative, and competitive business practices. These findings suggest that innovation-based HR empowerment can serve as an effective strategy for improving MSME performance and strengthening local economic development.

CONCLUSION

The implementation of this community service program successfully enhanced the capacity of MSMEs within the mushroom farmers association in Sragen, particularly in developing an innovation-driven entrepreneurial mindset. The integration of training, mentoring, and practical application proved effective in improving participants' knowledge, skills, and business practices. Significant outcomes include the diversification of mushroom-based products, improved managerial capabilities, and the initial adoption of digital marketing strategies.

The participatory approach played a crucial role in ensuring the effectiveness and sustainability of the program. Active involvement of participants fostered a sense of ownership and encouraged continuous learning and adaptation. Collaboration between the academic team from Universitas Ngudi Waluyo and the community further strengthened the program's impact. Future efforts should focus on continuous mentoring, strengthening digital competencies, and expanding market access to ensure long-term sustainability and scalability of the initiative.

BIBLIOGRAPHY

- Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.
- Drucker, P. F. (1985). *Innovation and Entrepreneurship*. New York: Harper & Row.
- Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: From national systems and "Mode 2" to a Triple Helix of university–industry–government relations. *Research Policy*, 29(2), 109–123.
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2017). *Entrepreneurship*. New York:

- McGraw-Hill Education.
- Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education.
- Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (2019). *Human Resource Management* (11th ed.). New York: McGraw-Hill Education.
- Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: Free Press.
- Riyanti, B. P. D. (2018). *Kewirausahaan dari Sudut Pandang Psikologi Kepribadian*. Jakarta: Grasindo.
- Saragih, B. (2017). *Agribisnis dan pengembangan nilai tambah produk pertanian*.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Tambunan, T. (2012). *Usaha Mikro, Kecil, dan Menengah di Indonesia: Isu-Isu Penting*. Jakarta: LP3ES.