International Journal of Business and Quality Research

https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

Analysis of the Effectiveness of Human Resource Training and Development in Increasing the Competitiveness of MSMEs in Indonesia.

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Abstract

This study aims to understand the role of training and human resource development (SDM) in enhancing the quality of micro, small, and medium enterprises (UMKM) in the digital era in the midst of the development of the digital era. This study uses the Systematic Literature Review (SLR) approach and content analysis on various empirical studies, this study evaluates the contribution of HR training to improving the competence of business actors, mastery of digital technology. The results of the analysis show that training programs that are contextually designed based on local needs, and combined with participatory methods and post-training mentoring have been proven to be effective in improving operational efficiency, product quality, and the adaptability of MSMEs to market changes. In addition, training that integrates digitalization also encourages the transformation of MSMEs into more modern and competitive businesses.

Keywords: human resource development, training effectiveness, MSMEs, competitiveness, digitalization

INTRODUCTION

In the increasingly competitive digital era and open market, effective human resource (HR) management is crucial for increasing the productivity and competitiveness of MSMEs, requiring not only high-quality products but also modern and adaptive management. One strategic effort to address these challenges is through structured and sustainable human resource training and development. Appropriate training encourages improvements in the

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knowledge, skills, and work attitudes of MSMEs, while strengthening their competitiveness in local, national, and even international markets.

Research by Adiguna et al. (2024) shows that digital-based training in the context of food production can improve MSMEs' understanding of modern business management, such as the use of digital applications for financial recording, digital marketing strategies, and understanding efficient supply chains. The study also confirms that human resource development coupled with mastery of digital technology not only improves operational efficiency but also opens access to broader markets.

Furthermore, research by Tapaela et al. (2023) on human resource management training activities for assisted MSMEs in Lampung Province demonstrated a positive relationship between involvement in training activities and improvements in the quality of human resource management at the small business level. MSMEs involved in training were able to implement new, more effective techniques, such as performance evaluation systems, team building, and technology utilization.

Similarly, a study conducted by Paroli (2025) demonstrated that training designed based on local needs and combined with a simple technological approach was proven to improve the capabilities of business actors in Rancasalak village in developing human resource plans, developing employee careers, and recording performance using digital applications. This type of training is considered more relevant and easier to implement by MSMEs in the region. (Shamsudin et al., 2023) examined the influence of human resource management practices such as training and development, employee performance evaluation, and awards on MSME performance. (Iskandar, n.d.) emphasized the importance of human resource (HR) management in Indonesian MSMEs along with digital transformation. The results of the study indicate that these factors will determine the digital future of MSMEs in Indonesia.

However, the effectiveness of human resource training is determined not only by the material and methods, but also by the sustainability of the program and post-training support. This is because MSMEs often require guidance in implementing their knowledge into their business practices. One key factor that can drive improved employee performance is through training programs balanced with work motivation, encouraging them to continuously develop their competencies. On the other hand, limited time, budget, and infrastructure also pose challenges to providing equitable and high-quality training, particularly in rural areas.

Based on this background, this study aims to explore the effectiveness of human resource training and development in improving the competitiveness of micro, small, and medium enterprises (MSMEs). The main focus of this study is how appropriately designed

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E-ISSN: 2985-9468

training can develop competent, adaptive, and competitive human resources amidst the dynamics of the digital economy. The analysis will be conducted by referring to various empirical studies and relevant conceptual approaches to provide applicable and sustainable recommendations for MSMEs in Indonesia.

THEORETICAL BASIS

Human resource training and development is one strategy for improving individual abilities and skills to meet job demands and adapt to changes in the work environment, particularly in the digital era. (Adiguna et al., 2022)

Human resource training and development are important components in the strategy to increase the competitive capacity of MSMEs so that they can survive and thrive in the global era of competition (Mohd Pajri, 2024).

Training is an effort to improve short-term skills, while development focuses on enhancing employee competency in preparation for facing greater responsibilities in the future (Yusuf and Hendra, 2023). They emphasize the importance of training and development being conducted fairly, transparently, and evaluated to determine the results.

A study by Adiguna et al. revealed that human resource management training focused on digital skills development for MSMEs needs to be accompanied by efforts to modernize business systems and implement structured and effective policies. This approach is believed to encourage increased efficiency and innovation in production activities, thereby increasing MSME competitiveness in both domestic and international markets.

Training and development can:

1. Improve the ability to adapt to new abilities
2. Increase productivity and product quality
3. Increase the confidence of MSME actors in managing their business

METHOD

This study employed a systematic literature review (SLR) combined with a content analysis approach. The SLR method itself is a systematic and organized approach to collecting, critically assessing, integrating, and presenting the results of various studies related to a topic or set of research questions. The collected data were then analyzed using content analysis, a research technique that allows for systematic and replicable inferences while considering the context of the data. The analysis was conducted in-depth to produce reliable and accurate findings. This method is considered effective and appropriate for use in qualitative studies to gain a deeper understanding of this research topic, namely the

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effectiveness of human resource training and development in increasing the competitiveness of MSMEs.

RESULTS AND DISCUSSION

Based on the results of the literature review and content analysis, it was found that training programs and human resource development play a significant role in increasing the competitiveness of MSMEs. This is evident in the increased capacity of individual business actors and in the overall performance of the organization. This study aims to analyze the effectiveness of training and human resource development in boosting the competitiveness of MSMEs, particularly in terms of readiness to face the digital era, strengthening managerial capabilities, and efforts to improve business performance sustainably. Training designed according to local needs and relevant to digital developments has been proven to strengthen the understanding of MSME actors in terms of business strategy, workforce management, and the use of information technology in operational activities.

The Importance of Human Resource Training and Development in MSMEs

Human resource (HR) development and training play a strategic role in strengthening the adaptability and competitiveness of MSMEs in the challenging digital era. Today's MSMEs are not only required to produce quality products or services but also to have responsive and efficient management systems to cope with technological developments and changing market dynamics. Therefore, the urgency of human resource training and capacity building is increasingly apparent, as these aspects are key elements in facing and overcoming these challenges.

The results of the study indicate that the implementation of a structured training program has been proven to foster an entrepreneurial spirit, deepen understanding of business feasibility studies, and support the process of starting and developing businesses. Furthermore, this training also contributes to improving the competence of MSMEs in various important areas, such as managerial skills (Latara Indah et al., 2025), utilization of information technology, and the preparation of strategic business plans. These results are supported by field findings that show significant improvements in operational efficiency, accuracy in financial management, and increased product and service quality after MSMEs participated in digital-based training and human resource management. Humaira et al. (2024) reported that training and workshops on digitalization of micro, small, and medium enterprises in their village, Riau Islands, were successful in improving the digital capabilities of MSMEs. These activities not only provided theory but also direct practice, such as content design for social media, business logo creation, and promotional song creation. The

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evaluation conducted showed a significant increase in the participants' understanding and digital skills, which is expected to increase the competitiveness and sustainability of these MSMEs.

Research conducted by (Aos & Markos, 2023) revealed that training has a significant impact and influence on MSME performance. This means that the more intensive the training received, the more MSME performance will improve (Lentera Pengabdian et al., n.d.). Training also plays a crucial role in raising awareness of the importance of human resource management, as stated by Adiguna et al. (2024), who emphasized that digital-based training in the food sector not only impacts the production process but can also change the mindset and professionalism of managing a business. This proves that human resource training can trigger transformation at the individual and organizational levels.

Tapela et al.'s (2023) research in Lampung Province even demonstrated that digital-era HR management training improved recruitment processes, performance evaluations, and more systematic workforce management in the MSMEs they assisted. This demonstrates that training not only provides technical knowledge but also helps MSMEs build more efficient and professional work systems. Furthermore, training plays a role in strengthening MSME capacity by providing relevant insights, skills, and tools to face challenges in the digital era.

It was found that barriers to human resource training and development come not only from employees but also from owners or managers. Therefore, implementing human resource training and development for both parties is crucial (Putri and Lataruva, 2024). Therefore, HR training and development are not only crucial as a means of skill enhancement but also as a strategy to improve the sustainability and competitiveness of MSMEs as a whole. Through appropriate and relevant training, MSMEs can transform from mere conventional businesses into modern, resilient business entities capable of competing in an increasingly complex digital ecosystem.

Effective Training Strategies and Methods

Selecting appropriate strategies and methods can determine the success of human resource development in the MSME sector. From the research, it was found thatTraining effectiveness is influenced by the relevance of the material to participants' needs, a participatory approach, and post-training sustainability and mentoring. This study shows that training that combines group discussion methods, hands-on practice, case simulations, and the use of simple digital applications is easier for MSMEs to understand and implement, especially those in areas with limited access to technology and formal education. Sagala and Őri (2024) emphasize the importance of continuous learning and digital skills development

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for MSMEs. They recommend that MSMEs adopt a phased approach to the digital transformation process, starting with a basic understanding of technologies relevant to their business needs. Furthermore, investment in ongoing education and training is considered vital to ensuring effective and sustainable technology adoption.

One example of this success can be seen in the locally-based training conducted by P., Paroli, P., & Kunci, K. (nd) in Rancasalak village. In this activity, MSMEs experienced a significant increase in understanding, reaching 45% in developing human resource plans and performance recording using simple digital technology. This approach, adapted to the local context, proved more effective than conventional training, which is usually one-sided. Furthermore, research by Adiguna et al. (2024) shows that training strategies involving direct practice in the digital food production process have a real impact, both in improving product quality, time efficiency, and managerial skills of business actors.

Kääriäinen et al. (2023) revealed that trained digital trainers play a crucial role in supporting micro, small, and medium enterprises (MSMEs) in understanding and implementing digital transformation. In their study, 30 digital trainers were trained to use various methods and tools to analyze the level of digitalization of target organizations and identify improvement ideas. The results showed that training conducted with direct mentoring can accelerate technology adoption among MSMEs.

Thus, an effective training strategy for MSMEs should be applicable, contextual, and focused on the real needs of business actors. Furthermore, incorporating digitalization elements into core training materials is crucial to enable MSMEs to keep pace with ever-changing technological developments. In this study, the training model recommended a tiered approach. This approach begins with needs identification, and then proceeds to locally based curriculum design, practice-oriented implementation, and then to post-training evaluation and mentoring. This method has been proven to not only improve individual capacity but also help build a more structured and professional management system at the MSME level.

The Effectiveness of Human Resource Training in Increasing the Competitiveness of MSMEs

The effectiveness of training in MSME development can be measured by its impact on increasing business actors' capacity, both in terms of managerial and technical skills, as well as market competitive strategies. Research shows that training designed with consideration of the context and real-world needs can significantly improve MSMEs' productivity, work efficiency, and skills in utilizing digital technology to support their businesses.

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The success of human resource training can be measured by increased productivity, operational efficiency, and the ability to adapt to market changes. Research conducted by Valentina Monoarfa and colleagues (2025) shows that training related to cost management and financial management for Micro, Small, and Medium Enterprises (MSMEs) can directly improve skills in transaction recording, financial analysis, and business decision-making. This contributes to increased business competitiveness. Valentina Monoarfa et al. (2025) emphasized that accounting training for MSMEs has the capacity to strengthen skills in transaction recording, financial analysis, and business decision-making. Therefore, such training can have a positive impact on business competitiveness. A cost-benefit analysis also shows that investment in training can be combined with increased revenue derived from more efficient financial management. On the other hand, Kwaido (2023) conducted research on the effect of human resource management practices (HRMPs) on employee innovation performance (EIP) in MSMEs. The results of this study indicate that effective implementation of HRMPs can improve employee innovation performance, with entrepreneurial orientation (EO) acting as a mediator and organizational learning capability (OLC) as a moderator. These findings confirm that training focused on developing innovative and entrepreneurial skills has the potential to strengthen the competitiveness of MSMEs.

Meanwhile, Saidun Umar et al. (2024) revealed that training strategies combined with digital marketing can significantly increase the visibility and selling value of MSME products. This finding confirms that human resource (HR) development combined with strengthening business strategies is key to MSME success amidst intense competition. Strengthening HR through digital marketing training is a crucial factor in creating competitive MSME brands in the digital era (Zaky et al., n.d.).

Furthermore, the success of training is greatly influenced by program continuity and ongoing evaluation. One-off training without follow-up or mentoring tends to have less of an impact on behavioral change and management practices in MSMEs. Therefore, it is crucial to integrate training with mentoring, coaching, and post-training monitoring programs. This step is a crucial strategy to ensure optimal implementation of the material taught. In this way, training will function not only as a learning process, but also as a learning experience.knowledge transfer, but also as a transformation process in overall business management.

Furthermore, training tailored to local characteristics and the literacy level of MSMEs has proven to be more easily accepted and implemented. As demonstrated by a study in Rancasalak Village, the use of hands-on training methods and simple technology can encourage MSMEs to be more proactive in managing their businesses digitally. This demonstrates that a contextual and applied training approach is more effective than

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conventional methods that are theoretical and general. Adapting to the local context also helps reduce barriers to participation, especially in areas where access to formal education and technology is still limited.

Finally, training that encompasses soft skills such as leadership, communication, and strategic decision-making has been shown to have a positive effect on improving the competitiveness of small and medium enterprises. Many small businesses have high-quality products, but they often struggle with confidence in marketing their offerings or managing their teams. Training that focuses on strengthening personal capacity can boost entrepreneurs' confidence, improve internal management, and expand their business networks. Therefore, a comprehensive training design, encompassing both technical and non-technical aspects, is key to encouraging MSMEs to achieve sustainable advancement.

CONCLUSION AND SUGGESTIONS

Based on a literature review and analysis of various studies, it can be concluded that human resource (HR) training and development play a strategic role in increasing the competitiveness of MSMEs, particularly in facing the challenges of digitalization and market dynamics. Training designed with a contextual approach, based on local needs, and integrating digital technology has proven effective in improving managerial skills, information technology utilization, and operational efficiency of MSMEs.

This training not only impacts technical aspects, but also contributes to developing a professional mindset and strategic awareness in business management. Therefore, an effective training strategy should be participatory, applicable, and tailored to the local context of MSMEs. A hands-on approach, case simulations, and the use of simple digital technology are considered easier to understand and implement, especially for entrepreneurs with limited access to technology and formal education. Training effectiveness will also increase if accompanied by post-training evaluation and mentoring. Such training programs not only provide technical knowledge but also help build a more professional and adaptive work system to adapt to market changes.

As a recommendation, the government and MSME support institutions should expand sustainable human resource training programs, addressing the specific needs of each business sector and region. Training materials should encompass digital skills, financial management, and applicable modern marketing strategies. Furthermore, an integrated training ecosystem, including mentoring and access to digital resources, is needed to enable MSMEs to continue to develop as innovative, highly competitive economic actors and make a positive contribution to national economic development.

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