

STRATEGY FOR HUMAN RESOURCE COMPETENCY DEVELOPMENT IN MICRO, SMALL AND MEDIUM ENTERPRISES IN THE 3T REGION (NIAS ISLANDS) IN THE FACE OF DIGITAL TRANSFORMATION

By

Fatolosa Hulu¹, Meiman Hidayat Waruwu²

^{1,2}Universitas Nias

Email: fatoshulu@gmail.com

ABSTRACT

Digital transformation is an important demand in increasing the competitiveness of MSMEs, including in the Frontier, Disadvantaged, and Outermost (3T) areas. This study aims to analyze the condition of human resource competencies in MSEs in the 3T area, identify challenges, and formulate competency development strategies to be ready to face digitalization. The research uses a descriptive qualitative approach with in-depth interviews with MSME actors and policy makers in North Nias and South Nias Regencies. The results of the study show the low digital literacy of MSME human resources, limited access to training, and weak mentoring. The suggested strategies are locally-based practical training, routine mentoring, and the use of cooperation with BUMDes and educational institutions. The implications of this research are expected to be an input for local governments in designing programs to strengthen the competence of MSME human resources in the 3T area

Keywords: MSMEs, HR competence, digital transformation, 3T regions, development strategies

STRATEGI PENGEMBANGAN KEMAMPUAN SUMBER DAYA MANUSIA DI USAHA MIKRO, KECIL, DAN MENENGAH DI DAERAH 3T (PULAU-PULAU NIAS) DI HADAPAN TRANSFORMASI DIGITAL

ABSTRAK

Transformasi digital merupakan tuntutan penting dalam meningkatkan daya saing UMKM, termasuk di wilayah Terdepan, Tertinggal, dan Terluar (3T). Penelitian ini bertujuan untuk menganalisis kondisi kompetensi sumber daya manusia pada UMKM di wilayah 3T, mengidentifikasi tantangan, dan merumuskan strategi pengembangan kompetensi agar siap menghadapi digitalisasi. Penelitian ini menggunakan pendekatan kualitatif deskriptif dengan wawancara mendalam kepada pelaku UMKM dan pengambil kebijakan di Kabupaten Nias Utara dan Nias Selatan. Hasil penelitian menunjukkan rendahnya literasi digital SDM UMKM, terbatasnya akses pelatihan, dan lemahnya pendampingan. Strategi yang disarankan adalah pelatihan praktik berbasis lokal, pendampingan rutin, dan pemanfaatan kerja sama dengan BUMDes dan lembaga pendidikan. Implikasi penelitian ini diharapkan dapat menjadi masukan bagi pemerintah daerah dalam merancang program penguatan kompetensi SDM UMKM di wilayah 3T.

Kata kunci: UMKM, kompetensi SDM, transformasi digital, wilayah 3T, strategi pengembangan

INTRODUCTION

Micro, Small and Medium Enterprises are the backbone of the Indonesian economy with a contribution of 61.07% to the national GDP and 97% labor absorption (Ministry of Cooperatives and SMEs, 2024). However, MSMEs in the 3T region face major challenges in adopting digital transformation, which is increasingly important after the COVID-19 pandemic. Based on BPS data (2023), only 18% of MSMEs in disadvantaged areas make optimal use of digital technology. Research (Dhamayantie & Fauzan, 2017) also confirms the low competence of MSME human resources in digital literacy, managerial, and technological adaptation. This study examines more deeply the competency conditions of MSME human resources in the 3T area, the challenges faced, and formulates the right competency development strategy to be able to compete in the digital era.

LITERATURE REVIEW

a. MSMEs and Their Role in the Economy

MSMEs are the dominant sector in Indonesia's economic structure. Based on data from the Ministry of Cooperatives and SMEs (2024), MSMEs contribute around 61.07% to the national GDP and absorb 97% of the workforce. However, the challenges of digital transformation are significant, especially for MSMEs in the Frontier, Outermost, and Disadvantaged (3T) regions.

According to (OECD, 2023) and (Bank, 2022), the digitalization of MSMEs in developing countries faces obstacles at the infrastructure level, digital literacy, and the lack of a supporting ecosystem. This is also in line with research (Farhan et al., 2022) which found that only a small percentage of MSMEs make optimal use of digital technology for marketing and business management.

b. Human resource competencies in MSMEs

Human resource competence is a combination of knowledge, skills, and attitudes that affect individual performance (Spencer & Spencer, 1993). In the context of MSMEs, human resource competence is one of the determining factors for the success of digital technology

adoption. Research by Ahmad & Nugroho (2022) shows that the majority of MSME human resources in Indonesia are still low in digital literacy, including the use of financial applications, marketplaces, and digital marketing. Meanwhile, (Widyadana et al., 2025) in a case study of MSMEs in disadvantaged areas also found low managerial competence and technological adaptation that hinder digital transformation.

c. Challenges of MSME Digital Transformation in 3T Regions

MSMEs in 3T areas face greater structural barriers. Limited internet access, high cost of devices and training, and lack of local companions are the main problems (Maimunah et al., 2021) In addition, (Fatimah et al., 2024) emphasizes the importance of human resource readiness in utilizing e-learning as an alternative to training, but is often hampered by signal and device problems. This is reinforced by (Salmah et al., 2022) who found that clustering and local mentoring are effective solutions to overcome geographical constraints.

d. MSME Human Resources Competency Development Strategy

There is a lot of literature that emphasizes the importance of practical strategies to develop the competence of MSME human resources. (Malikhah et al., 2024) in the principles of HRM suggests a work-based training approach (on the job training) so that competencies are internalized faster.

On the other hand, multi-stakeholder collaboration such as with BUMDes, universities, and private institutions is also a recommended strategy (Rosiani & Siyami, 2023) (Amelinda, 2022) mentioning local companions as the key to the success of strengthening the competence of MSMEs in the 3T area.

e. Research Theoretical Framework

Based on the literature review above, this research is based on the concept:

- Spencer & Spencer (1993) competency theory which emphasizes the importance of skills, knowledge, and work behavior in supporting performance.
- Armstrong's (2020) HRD model is relevant for formulating HR development strategies based on practical training and mentoring.
- The local context of MSMEs in the 3T area has special characteristics so that it requires an adaptive strategy.

RESEARCH METHODS

This study uses a descriptive qualitative approach. The research location was carried out in North Nias Regency, which is one of the 3T areas. The informants consist of MSE owners, MSE workers, and the local cooperative & MSME office. Data collection techniques include in-depth interviews, direct observation, and documentation. Data analysis was carried out using a model (Schoch, 2020) which included data reduction, data presentation, and conclusion drawn.

RESULTS AND DISCUSSION

a. The Competency Conditions of MSME Human Resources

The majority of MSME human resources only master traditional operational skills. Not yet familiar with digital applications such as marketplaces or online cashiers. "We only used to use cellphones for WA, we didn't dare to open an online store."

b. Competency Development Challenges

Some of the key challenges found:

- Limited internet access
- The cost of digital training is relatively expensive
- Lack of local companions

c. Competency Development Strategy

The strategies proposed by the informants include on the job training in the village, regular assistance from local institutions, and collaboration with BUMDes and universities.

Table 1. Summary of Research Findings

No.	Aspects Examined	Key Findings
1	The Competency Conditions of MSME Human Resources	Low digital literacy, dominant Traditional skills
2	Challenge	Limited internet access, training fees, Lack

		of companions
3	Development Strategy	Local practical training, mentoring routine, collaboration between BUMDes and campuses

CONCLUSION

This study found the low digital competence of MSME human resources in the 3T area, plus the main challenges in the form of access, costs, and lack of assistance. Effective strategies for competency development are locally-based practical training, regular mentoring, and multi-stakeholder collaboration. These findings can be the basis for strengthening local government programs in improving the quality of MSME human resources to face the digital era.

BIBLIOGRAPHY

- Amelinda, P. (2022). Peran Pendamping Lokal Desa Dalam Pelaksanaan Program Pembangunan Dan Pemberdayaan Masyarakat di Desa Kedai Durian Kabupaten Deli Serdang. 1(2), 160–168. <http://repository.umsu.ac.id/handle/123456789/19931>
- Dhamayantie, E., & Fauzan, R. (2017). Penguatan Karakteristik Dan Kompetensi Kewirausahaan Untuk Meningkatkan Kinerja Umkm. Matrik : Jurnal Manajemen, Strategi Bisnis Dan Kewirausahaan, 6(September), 210–221. <https://doi.org/10.24843/matrik:jmbk.2017.v11.i01.p07>
- Farhan, M. T., Eryanto, H., & Saptono, A. (2022). Pengaruh Literasi Digital Dan Orientasi Kewirausahaan Terhadap Kinerja Usaha Umkm. Transekonomika: Akuntansi, Bisnis Dan Keuangan, 2(6), 35–48. <https://doi.org/10.55047/transekonomika.v2i6.265>
- Fatimah, A. N., Imsa, M. A., Sugiarto, A., & Hadinayu, A. (2024). Optimalisasi pengalaman belajar pada program pelatihan daring melalui adaptasi alat ukur e-learning learning experience. Jurnal Pembelajaran Pemberdayaan Masyarakat (JP2M), 5(4), 957–967. <https://doi.org/10.33474/jp2m.v5i4.22314>
- Maimunah, S., Afifuddin, & Suyeno. (2021). Efektivitas Kinerja Pendamping Lokal Desa dalam Pembangunan Desa (Studi di Desa Kedok Kecamatan Turen Kabupaten Malang). Universitas Islam Malang Jurnal Respon Publik, 15(3), 24–35.
- Malikhah, I., Nst, A. P., Sari, Y., Sain, F. S., Pembangunan, U., & Budi, P. (2024). Implementasi Kompetensi SDM Terhadap Kinerja UMKM. MANEGGGIO : Jurnal Ilmiah Magister Manajemen, 7(2), 225–235.
- OECD. (2023). No Title. Digital Transformation of SMEs.

- Rosiani, T., & Siyami, N. (2023). Dampak Tata Kelola Bumdes Dan Peran Kolaborasi Pentahelix Dalam Mewujudkan SDGS Desa. *Syntax Literate ; Jurnal Ilmiah Indonesia*, 7(9), 15835–15851. <https://doi.org/10.36418/syntax-literate.v7i9.13573>
- Salmah, Andria, F., & Rahmi, A. (2022). Klasterisasi desa melalui idm sebagai fondasi dasar pembangunan desa di Kabupaten Bogor. *PALAR: Pakuan Law Review*, 8(4), 143–170.
- Schoch, K. (2020). Case study research. *Research Design and Methods: An Applied Guide for the Scholar-Practitioner*, 31(1), 245–258.
- Widyadana, K. A., Farisi, H., & Safitri, A. (2025). Transformasi Digital UMKM Banyumas : Identifikasi Hambatan dan Rekomendasi Solusi Digital Transformation of Banyumas MSMEs : Identification of Obstacles and Solution Recommendations. 3054–3062.
- Harahap, S. A., Ichsan, R. N., & Elanda, Y. (2025). Pengaruh Label Halal, Citra Merek dan Harga Terhadap Keputusan Pembelian dengan Minat Beli sebagai Variabel Intervening. *Economics and Digital Business Review*, 7(1), 102-115.
- Giawa, P., Ichsan, R. N., & Hiya, N. (2025). Pengaruh Lokasi dan Promosi Terhadap Minat Masyarakat Menggunakan Jasa Pegadaian Melalui Kepuasan Nasabah Sebagai Variabel Mediasi Pada PT. Pegadaian (Persero) Upc Pelajar Medan. *Economics and Digital Business Review*, 6(2), 1303-1314.
- Barus, E. E., Nasution, V. F. H., Ichsan, R. N., Syahbudi, M., & Barus, I. I. (2025). DEVELOPMENT OF CANVAS MODEL BUSINESS-BASED COOPERATIVES: IDEAS IN THE DEVELOPMENT OF INDEPENDENT HOUSES OF WORSHIP IN MEDAN CITY. *Strategic Management Business Journal*, 5(01).