Article

The Role of Training and Innovation to Improve the Performance of Culinary Sector MSMEs in the Digital Era

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Abstract. This study aims to analyze the relationship of human resource management strategies to increase employee retention in the digital era in culinary sector MSMEs located in Jombang, East Java. This research uses a quantitative approach using a survey method on 30 MSME employees. The sampling process uses a census technique, the data analysis technique used in this study uses SPSS software. The regression analysis results show that digital training has a significant positive influence on MSME performance (regression coefficient = 0.549; $p < 0.05$), while innovation also has a significant positive relationship (regression coefficient = 0.325; $p < 0.05$). Simultaneously, these two variables are proven to make a major contribution to MSME performance. This study supports the theory that technology-integrated human resource management strategies can increase employee loyalty and engagement in MSMEs. The practical implication of this study is the need for MSMEs to adopt technology-based training and innovation in structured business management strategies to improve MSME performance. This research also contributes to the literature related to HR management strategies in the digital era, especially in the context of MSMEs.

Keywords: Career Development, Digital Era, Employee Performance, MSMEs, Training.

1. Introduction

Digital transformation has a global impact on economic movement through micro, small and medium enterprises (MSMEs) which is very significant, especially during the COVID-19 pandemic in Indonesia (Amalia & Melati, 2021; Ikawati et. al., 2023). The Indonesian government also supports digital transformation as an effort to mitigate the various negative impacts arising from the COVID-19 pandemic, one of which is on economic growth.

MSMEs are one of the sectors that are considered capable of contributing to economic growth, namely in terms of employment of (97%) and contributing (61.07%) to GDP, which is equivalent to 572.5 billion USD (Harini et. al., 2023). In East Java itself, data from the Office of Cooperatives and MSMEs of East Java Province in 2024 (diskopukm.2024), cooperatives and MSMEs have increased since 2021 by 44% and in 2022 by 46%. In Jombang district itself, from 2021 to 2023 there was an increase in the number of Micro, Small and Medium Enterprises (MSMEs) described in the table below:

Table 1. Data on the number of MSME players in Jombang Regency, East Java.

Years	UMKM
2021	6375
2022	9061
2023	13.128

Source: Dinkopukm Kabupaten Jombang (sambang.jombangkab.go.id)

Based on these results, it shows that MSMEs play an important role in terms of economic growth. However, the digital era, which is growing more rapidly today, provides quite complex business challenges in terms of adaptation to digital technology in order to be competitive with shifting market conditions that are changing relatively quickly.

Since the COVID-19 pandemic, all forms of MSME activities have been transferred online such as optimizing marketplaces and e-commerce for marketing culinary type products to fashion and other household needs, analyzing consumer needs, and others. on the financial side of digitalization such as ease of transactions for the use of various banking products digitally, as well as online shopping. In the context of Human Resources management, the recruitment process, training and development, and evaluation have also begun to shift to digitalization such as linkedin, etc. so that people find it easy to stay productive even from home.

One of the main challenges faced by micro, small and medium-scale businesses is the management of business operations that are digitally integrated to improve the effectiveness and performance of MSMEs, especially in HR management. This is due to the limited literacy regarding digital-based business management obtained by business actors so that the results obtained cannot be, especially in the culinary sector MSMEs can potentially hamper the operational sustainability and efficiency of the business being run. The competitiveness of MSMEs is a crucial issue in maintaining the stability of micro, small and medium scale businesses, especially to compete amid shifting market needs. In this context, training and innovation can be used as strategies to improve and develop business performance. The existence of digital-based training such as e-learning and other mobile applications has proven effective in increasing stability which has proven effective in improving skills. Digital innovation contributes to business sustainability and HR development such as creating a more efficient and environmentally friendly training system (Mardikaningsih &Wardoyo, 2024).

Millennials and Gen Z dominate the workforce today. However, there are differences in characteristics and expectations of work that are inevitable, so it can be a special challenge for business people. The potential possessed by millennials and gen Z who are very adaptive to fast-paced technology makes their mindset towards work also different from before, especially in terms of their mentality in responding to something. Especially in the culinary sector, each individual is required to be able to do work precisely and thoroughly to minimize complaints from consumers so that the performance of MSMEs does not decrease in service quality.

The existence of appropriate technology-based Human Resources (HR) management is expected to increase their loyalty to work in the digital era. This strategy is expected to help MSME business actors in maintaining business stability in facing modern era business challenges starting from paying attention to the potential possessed by employees and so that the business being run has high competitiveness.

2. Literature Review

Training

Training is a systematic process whose main purpose is to broaden the horizons, improve skills, and work attitudes of individuals so that work productivity can increase significantly Robbin & Judge, 2021). Appropriate training tailored to organizational needs can improve individual skills and adaptability to technology and innovation (Noe, 2017). In the context of culinary MSMEs in the digital era, training is not only oriented towards technical expertise (such as food processing), but also includes digital training such as digital marketing, and the use of digital platforms.

Millennials and Gen Z are the majority of the current workforce who have unique preferences in the world of work. A study by Nugroho et. al. (2024) shows that both generations want flexibility, speed of adaptability to technology, and transparency in organizational management. So that technology-based structured training and development suits their needs in order to increase satisfaction, loyalty, engagement, and work productivity.

The results of a study by Utomo et. al. (2024) on training through digital applications can provide an increase in digital literacy for MSMEs to develop their business efficiently, which can then be used as training material for employees. In this study, MSME actors realized the importance of understanding and applying digital technology for business management in order to compete positively and sustainably. This is in line with a study conducted by Srigouri & Muduli (2024) that application-based job training by utilizing digital technology tools can improve employee performance so that various gaps in the limitations faced by MSMEs can be overcome.

Innovation

Innovation is the process of introducing new ideas, methods, products, or different services to increase value and competitive advantage. Schumpeter (1934) stated that innovation is a key factor in economic growth and small business competitiveness. Systematically well-managed innovation is able to make small businesses survive and develop rapidly in the face of various challenges (Tidd & Bessant, 2020). Innovation in MSMEs acts as the main driver for improving MSME performance, which is implemented through product development, services, and business operations. In the culinary sector MSMEs, business actors are required to continue to innovate in order to survive in a rapidly changing market, especially in the digital era.

Digital transformation not only creates new things in business operations, but also the dynamics of employee engagement with the organization. Purnomo et. al. (2024) highlighted digitalization related to increased employee interaction with technology-based platforms such as cloud-based applications for employees, even though they are at a distance. The results of another comprehensive study by Rahayu & Day (2023) also show that the implementation of technology in employee training and development increases high work engagement, especially in the scale of MSMEs that require high efficiency.

MSME Performance

Performance is the result of a person's job function in an organization, which is influenced by ability, effort, and perception of role (Gibson 2020). Furthermore, Mangkunegara (2005) views performance as the result of work in the form of quality and quantity that has been achieved by a person against the given work duties and responsibilities. Organizational performance includes three specific areas of results obtained by the organization including financial performance, product market performance, and returns from cooperating parties (Richard et.al., 2019).

The main indicators or often known as the balance scorecard theory initiated by Kaplan & Norton (1996) used in measuring the level of success of an organization are generally assessed from four perspectives: (1) finance; (2) customers; (internal processes; and (4) learning. Based on the explanation of the opinions of experts, performance in the context of MSMEs refers to the achievement of business objectives of a business both from the financial, operational, innovation, and competitiveness aspects of MSMEs against the market dynamics of the modern era which are closely related to digital technology.

3. Proposed Method

This study uses a quantitative approach to examine the relationship between training and innovation to improve the performance of MSMEs (Sugiyono, 2021). The method used in this research is cross-sectional from data obtained through a survey of 30 micro, small and medium scale business actors in the culinary sector registered at the Office of Cooperatives and MSMEs located in diwek sub-district, Jombang district, East Java. The population used in this study was 30 MSME players in the culinary sector in Jombang Regency, East Java. The sampling technique is a census, where the entire population is the sample used in this study. The census sampling technique is used because the population is relatively small and limited,

The data collection technique uses a structured questionnaire with a rating scale of 1 (strongly disagree) to 5 (strongly agree) which is divided into four sections, the first section is the demographic conditions of the respondents including gender, age, and latest education. The second section discusses training in a digital context, the third section discusses employee career development, and the fourth section discusses employee retention. The survey approach was chosen because it is considered quite effective in collecting data in a relatively short time, making it possible for researchers to analyze trends and patterns in diverse samples (Creswell, 2014).

Data analysis in this study used SPSS software, by conducting multiple regression analysis to test how strong the relationship between variables partially and simultaneously. (Ghozali, 2018). The regression model includes the dependent variable, namely training and career development, and the dependent variable employee retention with the statistical significance of the regression coefficients which are considered capable of determining the impact of each independent variable on the dependent variable.

4. Results and Discussion

Validity and Reliability Test

In this study, the research instrument was tested using the Validity Test and Reliability Test. Validity test is used to measure the accuracy of the respondents' answers. The Validity Test is used by comparing the significance (2 tailed) with Cronbach Alpha (a)> 0.60. If the sig value (2 tailed) < a then the statement item on the respondent's answer is declared valid or accurate. Reliability test is a test of the consistency of respondents' answers to the statement items presented in the questionnaire. Reliability testing uses the Cronbach Alpha (CA) coefficient> 0.70. The results of Validity and Reliability testing of the instruments in this study are as follows:

Table 2. Validity and Reliability Test Results

Variable	Range R count	Validity	Cronbach Alpha	Reliability
X1 – Digital Training	0,744 – 0,837	Valid	0,955	Reliabel
X2 –Innovation	0,733 – 0,945	Valid	0,909	Reliabel
Y – MSMEs Performance	0,862 – 0,946	Valid	0,947	Reliabel

Source: Primary Data Processed (2025)

Multiple Linear Regression Analysis

The results of multiple linear regression analysis related to the relationship between training and employee career development on employee retention are presented in the table below:

Table 3. Multiple Linear Regression Test

Variable	Regression Coefficient	T Value	P Value	Description
X1 – Digital Training	0,549	5,185	0,000	Significant
X2 –Innovation	0,325	3,067	0,003	Significant
Dependent Variabel : MSMEs Performance				

Source: Primary Data Processed (2025)

Based on table 2, the results of multiple linear regression tests related to the relationship between digital training and innovation on the performance of MSMEs show that there is a coefficient on the training variable of 0.549 with a sig value of 0.000, which means that the significance value is <0.05 (a = 5%). In the beta coefficient of career development (X2) 0.325 and a sig value of 0.000 and a sig value of 0.003 which means that the significance value is <0.05 (a = 5%). This shows that digital training and innovation have a strong correlation with MSME performance.

Classical Assumption Test

The classical assumption test used to test the regression model is carried out to determine whether the regression model is a good regression model or not.

a. Multicollinearity Test Results

The multicollinearity test is used to determine if a data occurs multicollinearity or not by paying attention to the Variance Inflaction Factor (VIF). If the VIF value <5 then there is no multicollinearity and vice versa. The VIF value can be found in the table as follows:

Table 4. Multicollinearity Test Results

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	X1 – Digital Training	.318	3.146
	X2 – Innovation	.318	3.146

a. Dependent Variable: Y – MSMEs Performance

Source: Primary Data Processed (2025)

Based on table 3 shows that the results of the calculation of the Variance Inflation Factor (VIF) 3.146 < 5, so in this study there is no multicollinearity between the independent variables so that there is no linear relationship between the independent variables.

b. Autocorrelation Test Results

The autocorrelation test is used to analyze the presence or absence of autocorrelation between the pengganggup variables in a certain period and the previous period. In this study, autocorrelation testing used Durbin Waston statistics. The regression model is said to be autocorrelated if the Du<DW<4-dU test is met. If it is not met, the test cannot produce

conclusions in the regression model. The results of the Autocorrelation Test in this study are shown in the table as follows:

Table 5. Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.837[a]	.711	.704	3.39638	.711	103.174	2	84	.000	2.134

a. Predictors: (Constant), X2 – Inovasi, X1 – Digital Training
b. Dependent Variable: Y – MSMEs Performance

Source: Primary Data Processed (2025)

Based on table 15, it is known that the Durbin Watson (d) value is 2.134, then the value is compared with the Durbin Watson table value at 5% significance. The Durbin Watson test results with a value of dU < d < 4 - dU = 1.6046 < 2.134 < 2.2999 can be concluded that there are no autocorrelation symptoms in this research model.

Analysis of the Relationship between Training and MSME Performance

Based on the regression test results, it shows that there is a significant positive relationship between all components related to training and MSME performance with a coefficient value of 0.549 (p < 0.005). The results of this analysis support the results of research by Utomo et. al. (2024) that by optimizing digital-based training can optimize MSME competencies. Digital transformation makes it possible for MSME actors to overcome resource limitations through the provision of effective and efficient training. The existence of training programs is expected to help MSME actors to increase their confidence in completing all operational activities related to technology-based skills, so they are likely to stay in the organization where they work.

Analysis of the Relationship between Innovation and MSME Performance

Based on the results of the regression test, it shows that there is a significant positive relationship between all components related to employee career development and employee retention with a coefficient value of 0.325. The results of this analysis are in line with Tidd & Bessant (2020) that well-managed innovation is systematically able to make small businesses survive and thrive in the face of various challenges.)

Analysis of the Relationship between Training and Career Development with Employee Retention

Based on the simultaneous regression test results, it shows that digital training and innovation together contribute to improving the performance of MSMEs. The Adjusted R-square value of 0.704 indicates that the combination of these two variables explains 70.4% of the variation in employee retention, while the rest is influenced by other factors outside this study.

This result supports the study conducted by Srigouri & Muduli (2024) that application-based job training by utilizing digital technology tools can improve employee performance so that various gaps in the limitations faced by MSMEs can be overcome.

Digital transformation has created new opportunities for MSME players in implementing their business management strategies to be more innovative and efficient by utilizing the use of digital technology. This includes training systems, assessments, and maintaining the involvement of business people to develop technology-based competencies.

Practical Implications

The findings from this study are expected to be used by MSME actors to understand the importance of training oriented towards strengthening digital skills, and developing innovations in products, services, and organizational management so as to build competitive competitiveness in the digital era. The importance of the government's role as a facilitator to encourage digitalization and innovation by creating coaching programs for MSME actors to be more adaptive to the demands of the digital era by considering the real needs in the field by involving strategic partners including academics, and local digital communities and various other agencies that are able to support MSME actors to grow and develop. This provides opportunities for strategic collaboration in the form of business assistance, provision of business capital, or technology development based on the needs of MSME actors. In other words, strengthening training and innovation is not only an internal factor for MSMEs, but also an entry point for the involvement of various parties in encouraging culinary MSMEs towards competitive digital transformation.

The results of this research can be a reference in developing entrepreneurship-based curricula and contextual community service programs. Collaboration between campuses and MSMEs, such as through internships, training, or culinary business incubation programs, can create a direct transfer of knowledge and skills. Thus, the synergy between the academic world and small business actors can encourage the sustainable growth of MSMEs.

5. Conclusions

This research shows the importance of awareness of the utilization of digital technology to improve the performance of MSMEs. The results of this study show that technology-based training and innovation have a strong correlation to increase competitiveness for MSME players. Technology-based training not only improves competence, but is able to support business continuity that is adaptive to technological changes.

Innovation in the form of strategy development by utilizing technology encourages competitive advantages for MSME actors amid increasingly dynamic business competition. The existence of innovation makes it possible for MSME actors to survive and develop through the orientation of meeting customer needs that are changing very rapidly, as well as expanding markets so that business can be sustainable. Digital transformation provides a great opportunity for MSME players to create innovations as a form of implementing the right strategy to increase MSME competitiveness, ensure business sustainability, and make a positive contribution to national economic growth.

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