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Digital Mindset Deficit in MSMEs Leadership: A Grounded Theory Study of Pottery Enterprises in Lombok

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Abstract

The digital economy has significantly transformed the global business environment, making digital technology a critical determinant of business competitiveness and sustainability. Despite their strategic importance, many small and medium enterprises (SMEs) face significant challenges in implementing digital transformation initiatives. This study investigates leadership-related barriers to digital transformation among Pottery SMEs in Lombok, Indonesia, with a particular focus on how deficiencies in digital mindsets emerge and shape managerial decision-making. Adopting a grounded theory approach, qualitative data were collected through in-depth interviews and participant observation involving SME owners and managers. Data analysis was conducted through systematic open, axial, and selective coding procedures, supported by NVivo software, to generate substantive theory grounded in empirical findings. The results reveal a persistent gap between awareness of digital technologies and their effective integration into daily business practices. Cognitive limitations, uncertainty, and sociocultural norms influence leaders' perceptions of digital technologies and limit their confidence in adopting digital solutions. Consequently, decision-making regarding digital initiatives remains largely intuitive and reactive rather than strategic and forward-looking, reflecting limited digital leadership capabilities. Despite this, SME leaders expressed a generally optimistic view of digital transformation, particularly regarding market expansion and business sustainability. They emphasized the importance of practical training, ongoing mentoring, and accessible digital infrastructure to facilitate digital adoption. This study provides context-specific insights into the barriers to digital mindsets in SME leadership and underscores that successful digital transformation requires not only technological readiness but also cognitive readiness and supportive institutional and socio-cultural conditions.

Keywords: *Digital Transformation, Human Resouces, Leadership, Mindset, MSMEs*

1. Introduction

The digital economy era has fundamentally changed the global business landscape, where the use of digital technology has become a key factor in business competitiveness and sustainability. The World Economic Forum's 2023 report estimates that around 70% of new economic value in the next decade will be supported by technology-based business models. This transformation not only impacts large corporations but also significantly affects Micro, Small, and Medium Enterprises (MSMEs), which form the backbone of the global economy. In Indonesia, MSMEs contribute more than 60% of the Gross Domestic Product (GDP) and employ 97% of the workforce (Ministry of Cooperatives and SMEs, 2022), making them a crucial sector in the national digital transformation agenda. However, this sector faces the greatest challenges in adopting digital technology.

Various studies show that the failure rate of digital transformation among MSMEs is still relatively high. (Verhoef et al., 2021) states that around 70% of digital initiatives do not achieve their initial goals, mainly due to human and organizational barriers rather than technical factors. Research (Li et al., 2022) reinforces these findings by emphasizing that the gap in digital leadership capabilities is a critical obstacle that has been overlooked. Policy and assistance efforts have mostly focused on providing infrastructure, basic technical training, and funding support, while the cognitive and behavioral aspects of leaders, who play a key role in driving transformation, are often neglected. This condition creates what this study refers to as a digital mindset deficit.

Digital mindset refers to a set of beliefs, mindsets, and tendencies that enable individuals to function effectively in a digitized and dynamic environment (Neeley & Leonardi, 2022). In the context of leadership, digital mindset

includes the ability to understand data flows, lead teams in an agile manner, facilitate innovation, and view technology as a driver of value rather than merely an operational tool (Solis, 2023). Without this mindset, MSME leaders tend to position technology as an administrative necessity or business complement, rather than as a core strategy for creating new value. Traditional mindsets oriented toward short-term sustainability hinder an organization's adaptive capacity in the face of digital change.

Theoretically, this study is rooted in the Resource-Based View (RBV) perspective, which emphasizes that sustainable competitive advantage depends on valuable, scarce, and difficult-to-imitate resources (Barney, 1991). In the digital era, this thinking has evolved with the emergence of the concept of digital dynamic capability, which is the ability of organizations to reconfigure resources and respond quickly to environmental dynamics (Bendig et al., 2023). However, the literature shows that the application of RBV in the context of MSMEs, especially in developing countries, is still limited in explaining how these capabilities are formed and inhibited at the individual leader level. Thus, it is important to expand our understanding of the digital mindset as an intangible resource at the micro level.

This issue is becoming increasingly acute and urgent to address in Indonesia, especially for MSMEs outside major economic centers such as Java. In Lombok, which is a strategic tourism and economic area in West Nusa Tenggara, the potential for digitization in the crafts, tourism, and agriculture sectors is enormous. However, a report (NTB Cooperative and SME Office, 2023) shows that only about 15% of MSMEs in this region have optimally utilized digital platforms, while the majority are still struggling with basic adoption. This challenge is even more relevant given that the acceleration of digital transformation is an important factor for regional economic resilience in the post-pandemic era and in facing ASEAN market competition.

The socio-cultural dimensions of Lombok add to the complexity. The characteristics of kinship-based business structures, variability in digital literacy, and dependence on traditional sectors create a different leadership dynamic (Hadiningrum et al., 2021). Previous research by (Sari et al., 2022) on e-commerce adoption in Lombok MSMEs identified infrastructure and financial barriers, but did not examine in depth the mindset of leaders, which could be the root cause of the low level of digital transformation maturity.

A literature review reveals several important gaps. First, methodologically, research on digital leadership is still dominated by quantitative approaches that emphasize testing variable relationships (Kraus et al., 2022). This approach struggles to capture the complexity of processes and the dynamics of meaning associated with digital transformation in MSMEs. Second, conceptually, attention to cognitive dimensions, particularly mindset, is still limited, while the literature focuses more on the technical skills of digital leadership (Nambisan et al., 2019). Third, very few studies have utilized the Grounded Theory approach to construct context-based theories, especially in MSMEs in regions with distinctive socio-cultural characteristics such as Lombok.

Based on these gaps, this study aims to investigate the digital mindset deficit among MSME leaders as a major obstacle to digital transformation using the Grounded Theory approach. This study develops a substantive theory that explains the dimensions of this deficit, its manifestation in leadership actions and decisions, and the mechanisms that link it to the failure of digital transformation.

Theoretically, this study contributes to the development of knowledge on digital leadership and dynamic capabilities through a micro perspective that focuses on MSME leaders in developing countries. Practically, the research results provide strategic guidance for local governments, training institutions, and business associations in designing more contextual, targeted, and sustainable leadership development interventions with an emphasis on shaping a digital mindset as the foundation for successful MSME digital transformation.

2. Research Methods

2.1 Research Design

This study uses a qualitative approach with a Grounded Theory strategy developed by (Corbin and Strauss, 2015). This approach was chosen because the study aims to develop substantive theory sourced directly from empirical data, rather than testing established theories. According to (Urquhart, 2022), Grounded Theory is effective for exploring complex, unstructured, and poorly understood social processes such as the cognitive dynamics and

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behavior of leaders in the digital transformation of MSMEs. Through this design, the researcher sought to gain an in-depth understanding of how the digital mindset deficit is formed, interpreted, and manifested in leadership practices. Data collection and analysis were conducted simultaneously and iteratively. Initial findings from the field were used to guide the selection of subsequent participants and direct the focus of data collection until theoretical saturation was achieved (Charmaz, 2020).

2.2 Data Collection Methods

The main methods used were semi-structured in-depth interviews and participant observation. Semi-structured interviews were chosen because they provide flexibility for participants to express their experiences and cognitive processes naturally, while ensuring that core issues related to digital mindset and leadership remain discussed (Bryant, 2022). Participant observation was conducted to observe the actual behavior of leaders in operational and strategic decision-making contexts, such as how technology is selected and implemented (Mills et al., 2023). The observation data served as a cross-check on the interview narratives and enriched the context of the analysis. The sampling technique used theoretical sampling, in which participants were selected based on initial concepts or categories that emerged from continuous data analysis. Thus, participant selection was not based on numbers or demographic characteristics, but on theoretical relevance (Corbin & Strauss, 2015).

2.3 Research Subjects

The research subjects were leaders or managers of pottery MSMEs on Lombok Island who held leadership roles in operational processes and decision-making. The pottery sector was chosen because it is a local creative industry with high digitalization potential but faces strong barriers to technology adoption, particularly related to traditional leadership practices (Sari et al., 2022). The inclusion criteria for participants were:

a. Operating a pottery business for at least three years.
b. Having initiated or been involved in the process of digital technology adoption, such as digital marketing, e-commerce, or digital accounting.
c. Willingness to participate in in-depth interviews and observations.

2.4 Data Analysis Tools

Data analysis was conducted through three main coding stages of Grounded Theory: open coding, axial coding, and selective coding (Corbin & Strauss, 2015). In the open coding stage, interview and observation data are broken down in detail to produce initial codes. The axial coding stage connects these codes into more abstract categories based on conditions, context, interactions, action strategies, and consequences. The selective coding stage integrates core categories and constructs a consistent and coherent theoretical model (Williams & Moser, 2019). The entire analysis process was assisted by NVivo software to support data management, transparency of the analysis process, and the creation of an audit trail.

2.5 Data Sources

The primary data sources for this study came from in-depth interviews with five MSME leaders in Lombok and field notes from observations. To strengthen the analysis and contextualization, secondary data was also collected from supporting documents such as company profiles, sales reports, and social media archives belonging to the relevant MSMEs (Mills et al., 2023). The combination of these data enabled the construction of source triangulation to increase the depth and validity of understanding (Flick, 2022).

3. Results and Discussions

Data analysis in this study was conducted using NVivo, which can systematically manage qualitative data by grouping themes, mapping relationships between concepts, and maintaining transparency in the analysis process. The use of NVivo has been methodologically recognized as a best practice in qualitative research because it supports consistency of interpretation and audit trails (Bazeley & Jackson, 2013). From the organized data, four

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main categories of coding results emerged, revealing the complexity of the reality of digital transformation in pottery MSMEs in Lombok. The four categories of research results show the following:

3.1. *Understanding and Experience of Digital Technology (Exploring the Digital Mindset)*

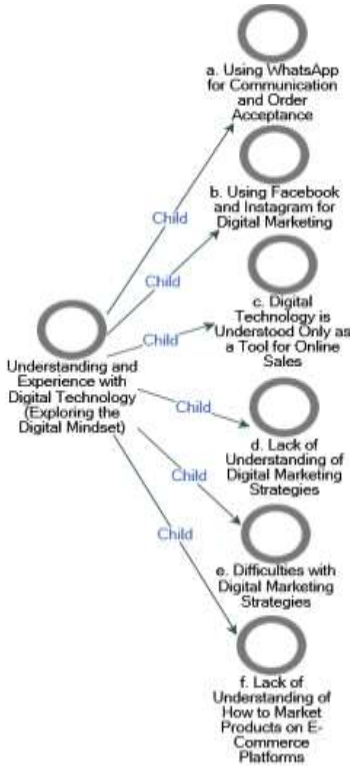

Figure 1. Understanding and Experiencing Digital Technology Analysis Map (Exploring the Digital Mindset)

Figure 1 shows that the understanding and experience of pottery MSMEs leaders in Lombok regarding digital technology is still at a basic level. The use of technology is mostly limited to daily operational activities such as communication and transactions, while strategic capabilities and orientation towards the use of technology for business development are relatively low. These limitations reflect a digital mindset that is still minimal, where technology is seen as a practical tool rather than a source of long-term competitive advantage.

3.1.1 Overview of Findings by Category

Coding analysis shows that all MSMEs use digital technology in its most basic form, primarily social media and digital payment platforms. However, the majority do not yet understand how technology can support improved marketing, business strategy, or market expansion. This phenomenon indicates a gap between technology use and strategic understanding of its benefits.

3.1.2 Patterns of Technology Use in Daily Activities

The majority of MSME leaders use WhatsApp as their primary means of communication for receiving orders and serving customers. A small number use Facebook and Instagram, but their use is not yet directed towards digital marketing strategies. Social media functions more as a means of uploading products without content planning or understanding of algorithms. Some MSME leaders understand technology as a transaction tool, especially in the use of e-wallets or mobile banking. However, this usage is still not linked to increased business efficiency or data-based financial management. These findings are in line with literature stating that MSMEs in developing countries tend to be in the early stages of digital adoption, where technology is used for practical needs but has not yet become the basis for business transformation (Sari et al., 2022).

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3.1.3 Barriers to Strategic Understanding

Most MSME leaders admit that they lack knowledge about digital marketing strategies, such as content management, customer data analysis, or e-commerce platform optimization. This inability causes technology to not be integrated into business decision making and does not support market expansion. The lack of understanding of the concept of digital marketing reinforces the digital divide between generations, where business owners often leave digital activities to their children or younger family members. This pattern shows the limitations of ownership in the digital transformation process. The literature states that a lack of digital capability often hinders the process of strategic technology utilization and causes MSMEs to only operate at a partial adoption level (Mills et al., 2023).

3.1.4 Conceptual Interpretation: Digital Mindset as an Intangible Capability

Based on the digital mindset theory perspective, understanding technology should include the ability to see the relationship between technology, strategy, and business opportunities (Urquhart, 2022; Bryant, 2022). However, research findings show that MSME leaders still have a traditional paradigm in viewing technology, so that technology is positioned as a tool, not as the foundation for business innovation. This is in line with the view that digital mindset is an intangible capability that influences the ability of individuals or organizations to read digital opportunities, respond to change, and utilize technology. The lack of digital mindset found among MSME leaders shows that digital transformation does not only depend on the provision of technology, but also on the ability and effectiveness of business leaders in understanding the benefits of technology.

3.2 Role & Leadership Patterns in Digital Decision-Making

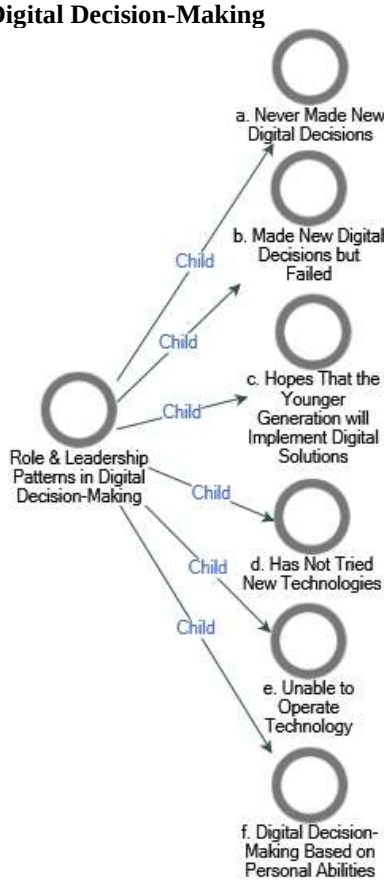

Figure 2. Role & Leadership Patterns in Digital Decision-Making Analysis Map

Figure 2 shows that the leadership pattern in the digital decision- making process of pottery MSMEs in Lombok is still dominated by a traditional approach centered on the business owner. Leadership is more focused on maintaining operations and business stability, while future orientation and the use of technology for business

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development are still limited. This pattern has a direct impact on the slow adoption of technology and the lack of digital integration in business strategies.

3.2.1 Dominant Leadership Characteristics

Category analysis shows that business owners play a central role as single decision-makers. Decisions related to the use of technology, such as social media, digital recording, or e-commerce platforms, are generally made based on personal intuition rather than data analysis or strategic considerations. This owner-driven leadership approach reflects the traditional leadership pattern of MSMEs, where the owner acts as the center of control. The literature states that an overly centralized leadership pattern has the potential to hinder digital innovation due to the lack of team member involvement in the decision-making process (Mills et al., 2023). In addition, owners' preference for manual work and uncertainty about the benefits of technology also reinforce resistance to change at the organizational level.

3.2.2 Limited Delegation in Digital Activities

Some MSME leaders show a tendency to delegate digital activities such as uploading products or replying to messages on social media to their children, nieces, nephews, or younger family members. However, this delegation is technical in nature, so that digital activities are not connected to strategic business objectives. This pattern of delegation also reveals a digital generation gap within the MSME structure, where owners are more comfortable maintaining control over core aspects and only delegate digital tasks as additional work. This phenomenon illustrates the disconnect between digital enactment and strategic leadership, as explained by (Kerres & Buntins, 2021), that digital leadership requires integration between technological understanding and organizational direction formulation.

3.2.3 Decision-Making Patterns in Digital Transformation

Digital decision-making in MSMEs generally follows three patterns:

a. Reactive and problem-based.
   Technology is used only when there is an urgent need, for example, when customer demand increases or when competitors become active on a particular platform. This reactive pattern shows that technology is not yet part of business planning.

b. Imitative and trend-following.

   Some technology-related decisions are made because other MSMEs are doing the same thing. An imitative approach without evaluating the internal context risks resulting in suboptimal adoption.

c. Intuitive and practical experience.
   Owners rely more on personal experience than data or evidence. This is consistent with the characteristics of MSMEs, which often rely on experiential knowledge in decision-making.

These findings are in line with grounded theory literature, which shows that leaders cognitive and interpretive patterns greatly determine how they respond to technological change (Bryant, 2022).

3.2.4 Implications for the Speed of Digital Transformation

Traditional leadership patterns have an impact on the slow process of MSME digital transformation. Unclear digital direction, lack of vision, and absence of data-based decision-making structures will hinder technology integration into business models. The literature states that digital transformation depends not only on the availability of technology but also on the capacity of leaders to build inclusive, adaptive, and long-term decision-making structures (Urquhart, 2022; Mills et al., 2023). In the context of pottery MSMEs in Lombok, this leadership pattern shows the need to improve digital leadership capacity so that technology can be used to increase business value, not just as an operational support.

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3.3 Cognitive & Socio-Cultural Barriers (Mindset Deficit)

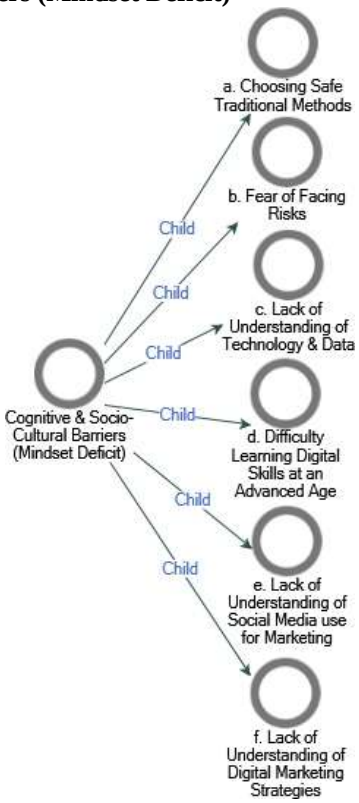

Figure 3. Cognitive & Socio-Cultural Barriers Analysis Map (Mindset Deficit)

Figure 3 shows that mindset barriers are the most fundamental factor preventing MSMEs leaders in the pottery industry from consistently adopting and utilizing digital technology. These barriers are not only individual in nature, but are also shaped by the socio-cultural conditions inherent in the traditional working patterns of MSMEs in Lombok. This mindset deficit manifests itself in the form of limitations, negative perceptions of digital risks, and cultural values that perpetuate manual working methods.

3.3.1 Cognitive Barriers in Understanding Technology

Several MSME leaders expressed difficulties in understanding technological concepts, especially those related to data, digital marketing, and device operation. These difficulties arise not only because of limited technical capabilities but also because of a lack of learning experiences related to technology. The tendency to be “afraid of making mistakes”, “afraid of damaging devices,” or “not daring to try” emerged as strong cognitive responses. This attitude is in line with the findings (Bryant, 2022) which emphasize that cognitive barriers can limit an individual's capacity to interpret technological opportunities strategically. When leaders do not understand the logic behind technology, they tend to avoid making decisions that involve digital innovation. In addition, the ability to learn technology in adulthood is a limiting factor. Older MSME leaders stated that they needed more time to understand digital applications. The literature supports this phenomenon, where age factors affect the speed of digital adaptation and patterns of learning new technologies (Flick, 2022).

3.3.2 Perceptions of Digital Risk and Uncertainty

Some MSME owners view digital technology as risky, particularly in relation to transaction security, marketing uncertainty, and concerns about online fraud. This perception of risk shapes a defensive attitude that leads to low adoption of digital platforms. The concern that the use of social media “does not always generate sales” encourages MSME leaders to return to conventional marketing methods. This shows that the conflict between perceived value and perceived risk is an important obstacle in the formation of a digital mindset. In the context of organizational behavior theory, high risk perception without adequate understanding can hinder innovation and reinforce traditional work patterns (Williams & Moser, 2019).

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3.3.3 Socio-Cultural Barriers in Traditional Work Patterns

Mindset barriers do not only stem from individual factors, but are also influenced by social norms and local work cultures that remain very strong. Most MSME leaders place greater trust in word-of-mouth marketing methods, personal networks, and long-term relationships between craftsmen. This approach has proven effective for many years, so they view digital change as less urgent. The literature mentions that the local cultural context can hinder digital adoption when traditional values are prioritized over innovation (Sari et al., 2022). These socio-cultural factors reinforce resistance to change. In the grounded theory approach, this can be categorized as a contextual condition that influences leaders' interpretation of digital innovation (Corbin & Strauss, 2015).

3.3.4 Interaction of Cognitive and Socio-Cultural Barriers

Analysis shows that cognitive and socio-cultural barriers do not work separately, but reinforce each other. For example:

a. Limited understanding of technology makes leaders more dependent on old ways of working.
b. Traditional ways of working are safer than using new technology, or it can be said that MSME leaders fear risks that may or may not occur.

This interaction creates a consistent and difficult-to-change deficit mindset pattern. The developing grounded theory model shows that digital transformation requires not only improved technical skills but also a change in mindset related to how leaders perceive risks, opportunities, and the future of their businesses.

3.4. Future Vision & Support Needs

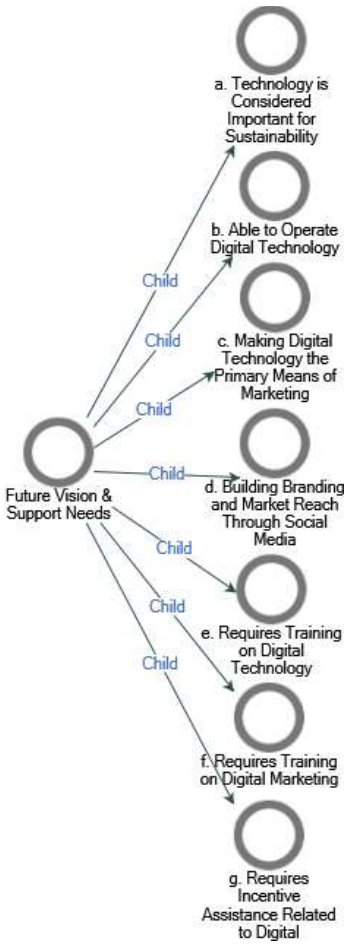

Figure 4. Future Vision & Support Needs Analysis Map

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Figure 4 shows that although MSME leaders in the pottery sector face various obstacles, most of them have a positive view of the potential of digital technology for long-term business development. However, this optimism is not yet fully matched by capacity readiness, in terms of knowledge, skills, and structural support.

3.4.1 Future Orientation and Perceptions of the Role of Technology

Almost all MSME leaders expressed awareness that digital technology will be an important element in the sustainability of their businesses. They believe that online marketing, product documentation, and the use of e-commerce platforms have the potential to expand their market share, especially for foreign tourists and the domestic market. This optimism indicates a future-oriented mindset, namely the tendency to view technology as an opportunity to strengthen the competitive position of the business. The literature supports this finding, where readiness to adopt digital technology is influenced by perceptions of future benefits (Nambisan et al., 2019). In the context of MSMEs, expectations of increased sales and market accessibility are often the main drivers of digital orientation. However, this optimism is still conceptual and has not been integrated into practice. MSME leaders admit that they do not fully understand the strategic steps to utilize technology sustainably. This shows a gap between perceived importance and actionable capability.

3.4.2 Need for Technical Training and Digital Capacity Building

Most MSME leaders consider training to be the most urgent need. They need training that is not only technical, but also applicable and contextual to the craft business. Training needs include:

a. Use of basic digital applications (e.g., WhatsApp Business, Facebook Marketplace, Instagram).
b. Digital marketing and content strategy.
c. E-commerce and digital order management.
d. Digital bookkeeping and simple financial management.

This is in line with literature that emphasizes that improving digital competence through practical training can accelerate MSME technology adoption (Mills et al., 2023). Structured and continuous training can help leaders form a new mindset about technology as part of their business strategy, not just a supporting tool. MSME leaders also emphasize that training needs to be personalized, gradual, and in easy-to-understand language.

3.4.3 Structural Support: Incentives, Mentoring, and Infrastructure Access

In addition to training needs, MSME leaders highlighted the need for more systematic external support. They emphasized the importance of:

a. Long-term mentoring, rather than one-time training.
b. Government incentives, such as platform subsidies, digital tool assistance, or promotional facilities.
c. Community based business development programs, which utilize craft groups as a medium for collective learning.

The literature shows that ecosystem-based interventions, which combine infrastructure, mentoring, and policy, are key factors in strengthening the digital readiness of MSMEs (Li et al., 2022). This approach is particularly relevant because social and geographical dynamics demand adaptive and collaborative support.

3.4.4 The Need to Develop a Digital Mindset

Although technical training and structural support are considered important, MSME leaders indirectly describe a change in mindset as a more fundamental need. They want a better understanding of:

a. How technology works in the pottery business.
b. Why digital marketing is crucial in an era of regional competition.
c. How digital strategies can provide added value, not just follow trends.

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These findings indicate that capacity building interventions need to incorporate a mindset transformation approach, such as:

a. Training based on local MSME case studies
b. Reflection sessions on the role of technology in business sustainability
c. Collaborative learning between MSME owners.
d. Reframing technology as an opportunity, not a threat.

This is consistent with the idea (Leonardi & Neeley, 2022) that a digital mindset is the main foundation before an organization can build more complex digital capabilities.

Figure 5. Word Cloud

Based on Figure 5, it can be concluded that the words or topics that frequently appear are digital transformation, leadership, mindset, competency, and adaptation.

This study shows that digital transformation in pottery MSMEs in Lombok is influenced by a number of interrelated factors, particularly those related to leadership, decision-making patterns, understanding of technology, and organizational conditions. Although MSME leaders understand the importance of digitization to increase competitiveness and expand markets, the adoption process does not happen automatically. There are structural and non-structural barriers that slow down change.

MSME leaders understanding of digital technology is still limited, especially in strategic aspects such as data utilization, planned digital marketing, and technology integration in business processes. For most business leaders, digitization is still seen as merely the use of social media for promotion, not yet extending to the idea of building a more structured system. This condition shows that digital literacy is not only about technical skills, but also a way of thinking to see new opportunities through technology. The role of leadership in digital decision-making appears to be decisive. MSME owners tend to make decisions based on previous experience rather than data analysis or evaluation of alternatives. Traditional leadership patterns often lead to digital change being viewed as a risk rather than an investment in the future.

There are various organizational obstacles, including a lack of human resources who understand technology and limited funds to adopt more complex digital devices. These obstacles are not only technical, but also social and cultural. For example, some MSME leader are reluctant to learn new things or are afraid of making mistakes when trying new technologies. This mindset factor is a significant barrier to change. Despite these obstacles, MSME leaders have a clear vision for the future, namely the desire to expand their market through digital platforms, improve product quality, and strengthen the local identity of Lombok pottery. They also realize that change is inevitable, requiring external support in the form of structured training, long-term assistance, access to capital, and the provision of experts who can help them translate technical requirements into practical solutions.

Overall, the results of this study confirm that the digital transformation of MSMEs is not only a matter of providing technology, but primarily concerns human readiness as the main driver of change. Strengthening digital literacy,

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changing leadership patterns, and external ecosystem support are important elements for accelerating digital adoption. Without proper intervention, MSMEs risk being left behind despite the enormous potential for digitalization. By understanding these dynamics, this study provides an empirical basis for designing digital assistance programs that are more adaptive to the real needs of MSME owners in Lombok.

4. Conclusion

This study shows that digital transformation in Lombok's pottery MSMEs is a process influenced by the interrelationship between technological readiness, leadership conditions, and the surrounding socio-cultural context. The findings indicate that MSME leaders understanding and experience with digital technology is still developing gradually. Although there is awareness of the benefits of technology, the ability to integrate digital practices into business processes is not yet uniform, creating a gap between digital exposure and its application. The digital mindset deficit among pottery MSME leaders in Lombok is indeed a major obstacle to digital transformation. This deficit manifests itself in a limited understanding of technology that is still confined to basic operational aspects, without being balanced by the strategic capacity to leverage it as a competitive advantage. Centralized and traditional leadership patterns, with reactive, intuitive, and imitative decision-making, further hinder the integration of technology into core business strategies. This study developed a substantive theory explaining that digital mindset deficit is a multidimensional construct. This theory maps the causal relationship between cognitive individual dimensions (such as limited understanding and risk perception) and socio-cultural dimensions (such as traditional work norms) that reinforce each other. This mechanism is then manifested through non digital oriented leadership actions, which ultimately link this mindset deficit to failure in achieving holistic and sustainable digital transformation. Overall, this study confirms that the success of digital transformation depends not only on the availability of technology, but also on the readiness of mindset, leadership capacity, and ecosystem support that is in line with local socio-cultural characteristics. These findings contribute to the development of more contextual assistance strategies and policies for MSMEs in similar regions. The suggestions for further research are as follows: a). Future research could expand the number of participants to include other MSME sectors in order to gain a more comprehensive understanding of the variety of digital experiences in different industrial contexts. b). Future research could use a longitudinal design to observe changes in digital behavior, leadership patterns, and technological readiness over a longer period of time. This approach would provide a clearer picture of the gradual process of digital adaptation. c). Future research could explore in greater depth the role of supporting ecosystems such as local government, digital platforms, MSME communities, and supporting institutions in accelerating digital transformation. Analysis at the ecosystem level will help explain how these interactions influence the success of technology adoption. d). Future research could examine effective intervention strategies, such as needs-based digital training programs or adaptive mentoring models, to see how specific forms of support can overcome the social and cultural barriers identified in this study.

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