



Empowering Financial and Digital Literacy to Build Resilience of MSMEs: Proposed Implementation in Bandung City

Ana Rizki¹, Achmad Fajar Hendarman²

^{1,2}School of Business and Management, Institut Teknologi Bandung, Indonesia

ABSTRACT: This study investigates the factors that influence financial and digital literacy among MSMEs in Bandung. Through semi-structured interviews with 5 key stakeholders, including banks, the MSMEs Agency, entrepreneurs, business incubators, and Financial Services Authority (OJK), the research revealed significant gaps in financial literacy, particularly in financial management and reporting, which hinder MSMEs' access to credit and growth. Many entrepreneurs rely on simple calculations and struggle to create accurate financial reports. Digital literacy challenges, such as limited adoption of digital technology and uneven internet access, also hinder MSMEs participation in the digital economy. Key barriers include difficulty changing financial habits, limited mentorship, and limited budgets to support the program. The study emphasises the importance of financial education, noting that businesses with large lines of credit often lack comprehensive financial literacy. Based on these findings, targeted interventions are proposed, including comprehensive financial education program and digital skills training. The study emphasised the need for collaboration between the government and financial institutions to improve financial inclusion and literacy. The study proposes a Digital Creative Academy that aims to improve the digital marketing capabilities of MSMEs, particularly in video content creation and live streaming on e-commerce platforms. The program targets 750 micro-entrepreneurs in 30 sub-districts, addressing the need for digital skills in a growing market. This research contributes to understanding the challenges of MSMEs development in Indonesia and offers practical recommendations for policymakers and educators to strengthen MSMEs resilience in the digital age.

KEYWORDS: Digital Literacy, Financial Literacy, MSME (Micro Small and Medium Enterprises), Resilience, and Intervention Program.

1. INTRODUCTION

Indonesian MSMEs have historically shown their resilience, especially during the 1998 economic crisis when large enterprises collapsed due to the weakening of the Rupiah by almost 208%, leading to mass layoffs. In contrast, MSMEs emerged as the backbone of the economy, with GDP growing by 4.8% in 2000 and estimated to grow by around 3.4% in 2001, recovering from a negative growth rate of 13.1% in 1998 (Nasution, 2002). However, the COVID-19 pandemic poses significant challenges, especially in terms of financial and digital literacy, which is crucial for MSMEs growth and access to credit. Despite government efforts such as the National Economic Recovery (PEN) programme, many MSMEs still struggle to overcome this literacy gap.

In 2019, the financial literacy rate in West Java was lower than other provinces in the Java-Bali region, at 37.53%, compared to the national average of 38.03% (OJK, 2020; Garin, 2022). This implies that around 62 out of every 100 residents do not have an accurate understanding of financial matters. During the 2020 recession caused by COVID-19, MSMEs faced severe social restrictions (PSBB) that prevented them from engaging in business activities, leading to a substantial decline. Government intervention through programmes such as PEN helped many MSMEs to recover, as shown in Figure 1, where the number of debtors undergoing restructuring dropped significantly from 4.6 million in December 2020 to 3.1 million in November 2021.

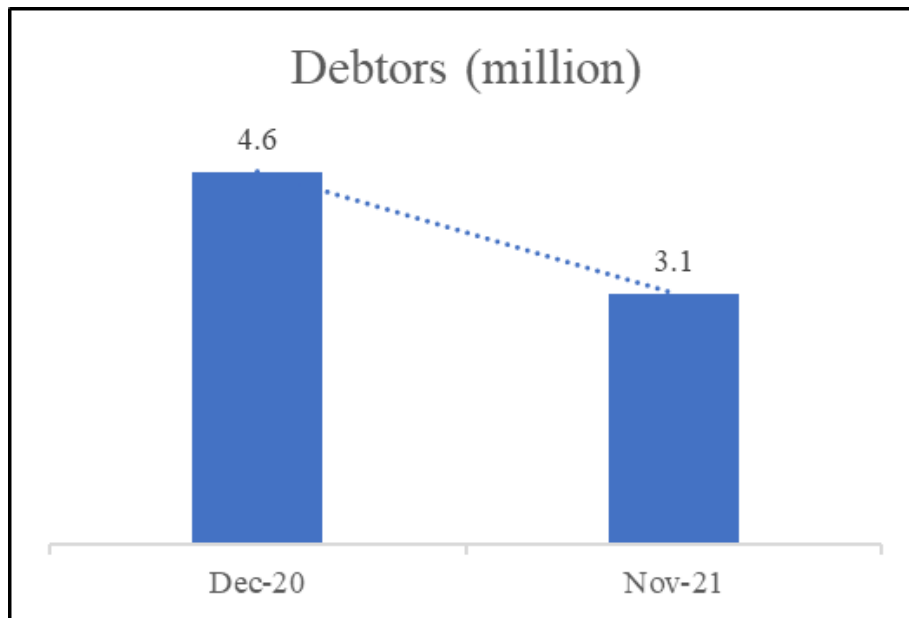


Figure 1. MSME Recovery through PEN Programme

Despite these efforts, considerable challenges remain. The financial literacy gap, evidenced by the 35.42% gap between financial literacy and inclusion (Sidik, 2023), hinders MSMEs' ability to utilise financial resources effectively. Many MSMEs are non-bankable, making it difficult for financial institutions to assess their creditworthiness. Predominantly cash-based operations and poorly organised financial transactions often lead to the mixing of personal and business funds. A survey by Bank Indonesia indicated that 69.5 per cent of MSMEs have not received credit or IDR 1.605 trillion in KUR funds due to inaccessibility to banks or other financial institutions (MSME Empowerment Report, 2022).

Digital literacy challenges, especially among women and the older generation, further hinder the growth of MSMEs. According to a survey conducted by the Association of Indonesian Internet Service Providers (APJIII) in 2022, women spend less time using the internet compared to men and use it more for social media than accessing public services, information, news or financial services. This trend exposes them to misinformation and hoaxes prevalent on platforms such as Facebook and WhatsApp. Only 21% of MSMEs utilise digital technology to market their products and services. Unequal internet access and a significant digital literacy deficit, especially among the older generation, are pressing issues that need to be addressed by the government and relevant stakeholders.

This research aims to address these important issues by examining the challenges and opportunities for improving financial and digital literacy among MSMEs in Bandung City, West Java. It identifies key factors that drive this literacy and proposes targeted interventions, including comprehensive financial education programmes and digital skills training. The research emphasises the need for collaboration between government agencies and financial institutions to improve financial inclusion and literacy. The scope of this research is limited to MSMEs in Bandung City, West Java, focusing on underlying factors such as access to technology, educational resources, and government policies. The research differentiates between urban and rural areas to address diverse environmental and economic contexts, but is limited by its regional focus and reliance on qualitative data, which may introduce bias.

2. LITERATURE REVIEW

II.1 Micro, Small and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are vital to the Indonesian economy, with unique characteristics that set them apart from large enterprises. According to Bank Indonesia and LPPI (2015), MSMEs are categorised into four groups: informal sector enterprises such as street vendors, micro enterprises with handicraft skills but limited entrepreneurial drive, dynamic small enterprises capable of exporting and subcontracting, and fast-moving small enterprises ready to transform into large enterprises.



MSMEs aim to grow their businesses based on the principles of economic democracy, inclusiveness, sustainability, and national economic unity. However, they face challenges such as non-standardised product quality, limited design and variety, limited capacity and pricing, inconsistent raw materials, and erratic product continuity due to inadequate technological capabilities and know-how. MSMEs in Indonesia can be further classified based on characteristics as shown in Table 1.

Table 1. MSMEs Criteria Based on Characteristics

Business Scale	Characteristics
Micro-scale	Variable product types, flexible locations, no financial administration, mixed personal and business finances, low education, limited banking access, no business permits. Example: Street vendors.
Small-scale	Fixed product types, stable locations, basic financial management, separate personal and business finances, business permits, some banking access, entrepreneurial experience, basic business planning. Example: Wholesaler traders.
Medium-scale	Better management, regular financial systems, labor management, legal requirements, banking access, trained human resources. Example: Mountain stone mining for construction.

By following these principles and addressing the challenges outlined, MSMEs can contribute significantly to the development of a resilient and democratic Indonesian economy.

II.1.1 Resilience MSMEs

Resilience in the context of MSMEs refers to their ability to maintain good performance under difficult conditions and quickly adapt to change, as defined by various researchers (Gunderson & Holding, 2022; Sutcliffe & Vogus, 2023; Reeves & Whitaker, 2020; Folke et al., 2010). McKinsey (2023) emphasises that true resilience is not just about recovering but also thriving in adverse environments. Factors that enhance MSMEs resilience are divided into micro and macro levels, with micro factors related to individual businesses and macro factors related to the government and economic environment (Kotsios, 2023). Research underscores the importance of innovation, leadership and government support in fostering MSMEs resilience. For example, Rusliati and Mulyaningrum (2020) highlight innovation in process, product design and market expansion, while Hidayat et al. (2020) and Afriza (2021) emphasise the positive impact of entrepreneurial personality and government support on crisis management and resilience. Tirtayasa (2021) identified key priorities for MSMEs resilience, including performance improvement, institutional effectiveness, and utilisation of social media for marketing. To illustrate, Table 2 summarises various business resilience indicators from various studies.

Table 2. Business Resilience Indicators

Indicator	Description
Leadership and Management	Awareness of organizational weaknesses, soft skills in leadership (Kotsios 2023).
Situational Awareness	Knowledge of internal and external environments (Z. Sapeciay et al., 2016 & Webb et al., 2002).
Network Robustness	Effective networks of physical and social capitals for resilience planning (Webb et al., 2002).
Planning and Preparedness	Infrastructure to mitigate changes.
Adaptive Ability	Dynamic capacity to respond to changes, crucial in hospitality and community networks (Sydnor-Bousoo et al., 2011 & Kamalahmadi & Parast, 2016).
Market Sensitivity	Understanding economic perceptions and commodity pricing's impact (W.F. Sharpe, 1995).
Innovation and Diversification	Creating additional revenue sources (W.F. Sharpe, 1995).
Access to External Resources	Accessing external aids, such as financial aid during crises (Neill et al., 2013 & Ministry of Social Development of New Zealand, 2011).
Leveraging Knowledge and Information	Awareness of and access to available aids such as government funding.



Indicator	Description
Compliance & Regulations	Operating in accordance with rules and regulations.
Reflective Business Model	Self-monitoring performance for future decisions (P.E. Bierly & J. Spender, 1995).
Core Competence of Staff	Emphasizing collaborative teamwork and individual contributions to resilience (P.E. Bierly & J. Spender, 1995).
Risk Anticipation	Identifying and evaluating potential risks before they occur (Lyons et al., 2020).
Readiness and Response	Planned strategies to respond to disruptions (Yadav & Shaikh, 2023).
Recovery	Speed and effectiveness in restoring operations post-disruption (Kass-Hanna et al., 2021).
Inclusivity and Literacy	Increasing digital financial literacy for sustainability and growth (Permadi et al., 2022).

II.2 Financial Literacy

Financial literacy includes knowledge of basic financial concepts, the ability to understand and use that knowledge in decision-making for individuals and businesses (Remund, 2010; Manurung & Barlian, 2012; Lusardi & Mitchell, 2014). This includes aspects such as basic financial knowledge, savings and loans, protection or insurance, and investment (Hidajat in Darmawan & Fatiharani, 2015). The Financial Services Authority (OJK, 2018) emphasises financial literacy as a process to improve consumers' knowledge, confidence and skills to better manage their finances. For MSMEs, financial literacy is critical as it impacts their ability to make informed financial decisions, navigate the complex financial landscape and access external funding (Saifurrahman & Kassim, 2021). Financially literate organisations exhibit better financial behaviours and have a competitive advantage.

Financial literacy also supports technology adoption, increases business resilience through e-commerce and digital payment systems, which significantly impacts the sustainability of MSMEs (Lestari et al., 2022; Pratama et al., 2023). Financial inclusion, combined with financial literacy, improves MSMEs performance and resilience by helping owners make informed financial decisions (Nugroho & Hwihanus, 2023; Soedarmono & Prasetyantoko, 2017). Higher levels of financial literacy correlate with increased demand for financial services and better financial management, which influence decision-making behaviour and improve organisational performance (Eniola & Entebang, 2016). The three dimensions of financial literacy-knowledge, attitude and awareness-are critical to MSMEs performance, influencing sources of financing, risk-taking behaviour and business supervision, thus affecting MSMEs resilience. Figure 2 illustrates the influence of financial literacy on MSMEs performance.

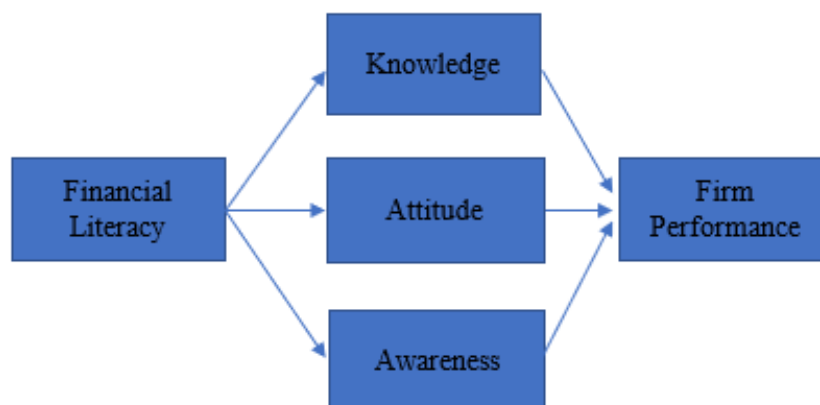


Figure 2. The Influence of Financial Literacy on MSMEs Firm Performance

II.3 Digital Literacy

Digital literacy, as defined by Paul Gilster in Edward et al. (2023), is the ability to use and understand digital information effectively and efficiently. This skill is particularly important in today's digitally-driven world, where the ability to interact through digital media is a significant advantage. Hague and Payton (in Edward et al., 2023) further define digital literacy as the ability to select information, create, and interact with others. Beginning in the 1960s with the advent of computer technology, digital literacy has evolved from the broader term technological literacy. Reddy et al. (in Diptyana et al., 2022) describe it as the ability to use



technology to generate new insights. Digital literacy includes six components: information literacy, computer literacy, media literacy, communication literacy, visual literacy and technological literacy. Each component includes specific skills, such as finding and evaluating information, using digital tools, communicating effectively online, interpreting visual data, and utilising digital technologies to improve productivity (Reddy et al., in Diptyana et al., 2022).

For MSMEs, digital literacy is essential to utilise digital tools and technologies to improve business performance and competitiveness. The study by Van Laar et al. (in Putra et al., 2023) highlights the importance of 21st century digital skills for MSMEs. Digital literacy impacts the success of small business owners, especially during post-pandemic recovery (Sari et al., 2023). Digital literacy fosters dynamic capabilities, strategic planning and innovation, which are critical to the survival and development of MSMEs (Wirawan et al., 2021). According to UNESCO (2018), digital literacy includes competencies such as accessing, managing, understanding, integrating, communicating, evaluating and creating information through digital technologies, which are essential for employment and entrepreneurship. Understanding these aspects can help MSMEs face challenges and capitalise on opportunities in an increasingly digitalised business landscape.

II.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, is a framework designed to understand how users accept and use new technologies. The model is based on the earlier Theory of Reasoned Action by Fishbein and Ajzen. TAM identifies two main factors that influence technology acceptance: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU refers to the belief that using the technology will improve performance, while PEOU relates to the belief that the technology will be easy to use. This model suggests that if a technology is perceived as easy to use, it will be perceived as useful, which in turn will shape users' intention to use it and will eventually lead to actual use. TAM's simplicity and focus on PU and PEOU have made it widely applicable, but it has also faced criticism for not considering a wider range of factors. To overcome these limitations, extensions such as TAM2 and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been developed. These extensions incorporate additional elements such as social influence and cognitive processes, thus making the model more comprehensive and applicable to various technological contexts.

Applying TAM to financial literacy can help identify factors that encourage or discourage the use of financial technology. Understanding these factors can guide the development of educational tools that are useful and easy to use, thereby increasing their acceptance. For example, showing how financial technology can help achieve personal financial goals or simplify financial decisions can increase its usability. Ensuring these apps are intuitive can lower barriers to entry, making financial education more accessible. Through targeted development informed by TAM, financial technology can effectively advance financial literacy across diverse populations.

II.5 Conceptual Framework

A conceptual framework for improving financial and digital literacy among MSMEs in West Java identifies key internal and external factors, such as management skills, technology access and economic conditions. The framework addresses challenges such as limited internet access and high technology costs, while capitalising on opportunities through digital tools and government support. The framework proposes government initiatives in policy development, education, and infrastructure to support MSMEs. The approach includes resource and stakeholder collaboration, training and policy implementation, and results in improved literacy and competitiveness, with feedback mechanisms for continuous improvement. Figure 3 illustrates these relationships, highlighting a comprehensive strategy for MSME literacy and resilience.

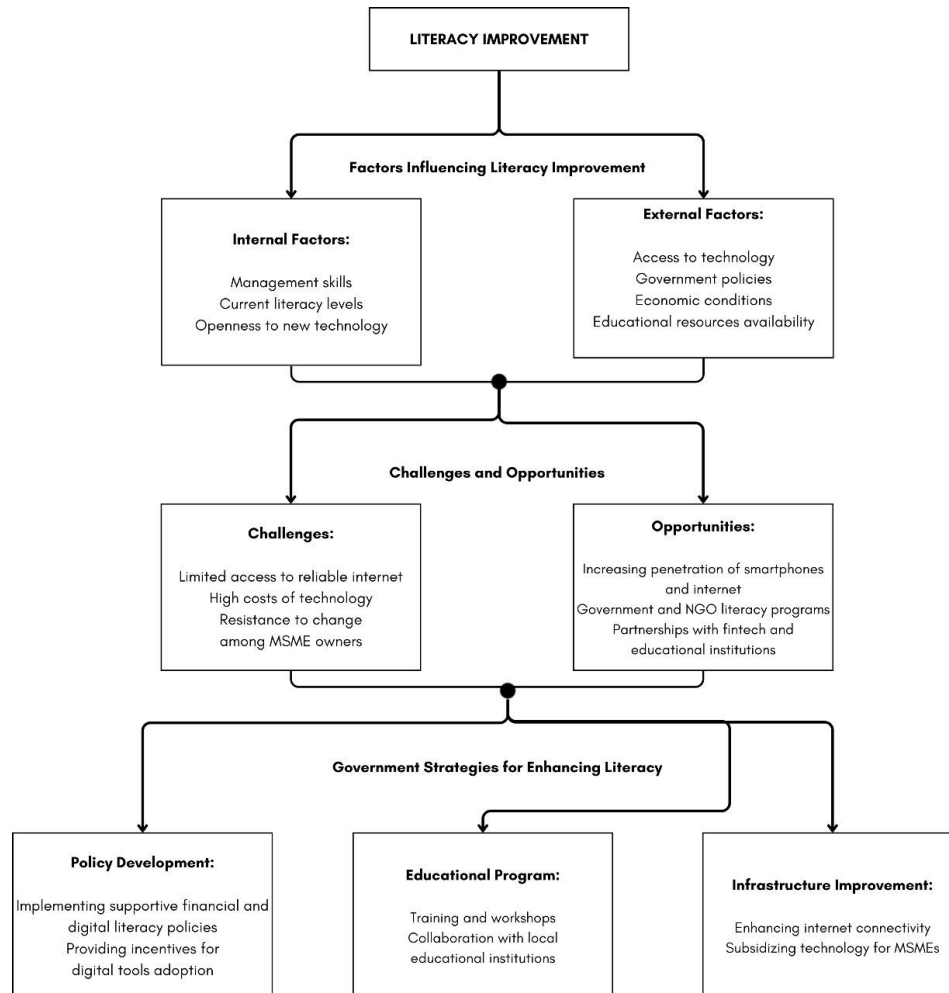


Figure 3. Conceptual Framework

3. RESEARCH METHODOLOGY

The research design for this qualitative study on improving financial and digital literacy among MSMEs in Bandung City began with formulating research questions that addressed key influencing factors, challenges, opportunities and potential government initiatives. After conducting a thorough literature review to identify gaps and establishing theoretical frameworks such as the Technology Acceptance Model (TAM), the study used semi-structured interviews, focus group discussions and document analysis to gain deeper insights.

Before starting data collection, thorough preparations were made, including developing data collection tools such as semi-structured interview guides and focus group discussion prompts. Training sessions ensured the research team could use these tools effectively and ethically. Semi-structured interviews were conducted with MSMEs owners, government officials, business incubators, financial institutions and the Financial Services Authority (OJK), allowing flexibility in answering questions to gain in-depth insights on financial and digital literacy. The interview guide included open-ended questions tailored to each group of participants, exploring the role, challenges and impact of literacy on business operations and policy effectiveness.

Focus group discussions complemented the interviews by encouraging interactive dialogue among participants, resulting in diverse perspectives on literacy issues. Document analysis systematically reviewed relevant documents, including government policies and training materials, to understand the formal context of financial and digital literacy initiatives. This analysis provided the background for interpreting the interview and focus group data. Data management involved transcribing digital recordings and digitising physical records, to ensure data integrity and confidentiality. Data was stored securely with access limited to the research

team, complying with data protection regulations, ensuring reliability and ethical handling of the information collected. Furthermore, thematic analysis and narrative analysis were used to interpret the data, with feedback to revisit data collection where necessary. This structured approach ensured a comprehensive understanding, linked the findings to the theoretical framework and provided valuable recommendations for policy makers and educators in Bandung.

4. RESULTS AND DISCUSSION

IV.1 External Data

External data was collected from various sources, including government reports, industry publications, academic studies, and market research, thus providing a broader context for understanding the challenges faced by MSMEs in Indonesia. Key sources include a report from the Ministry of Cooperatives and Small and Medium Enterprises (Kemenkop UKM), which highlights that Indonesia has 64.2 million MSMEs that contribute 61% to GDP and employ 97% of the workforce. Despite this huge economic impact, digital adoption among MSMEs is relatively low, with only around 21 million utilising digital ecosystems and e-commerce platforms. The government targets to increase the export contribution of MSMEs to 17% by 2024, up from 14.7% in 2022, but still faces challenges compared to neighbouring countries such as Singapore, Thailand, and China (Coordinating Ministry for Economic Affairs, 2022). In addition, a survey conducted by the Indonesian Internet Service Providers Association (APJII) and the Ministry of Communication and Information Technology (Kemkominfo) revealed that Indonesia's digital literacy index is 3.49, indicating a moderate level. In 2022, 89.03% of internet users access the internet through mobile phones or tablets, while only 0.73% use computers or laptops, and only 24.36% have fixed broadband at home. These findings underscore the need to empower MSMEs through improved internet access and digital literacy to achieve economic growth and export targets.

IV.2 Rich Picture Diagram

The rich picture diagram of MSMEs resilience (Figure 4) illustrates some of the key issues which mainly centre on difficulties in accessing capital. This capital is critical for business growth and can be generated through effective marketing and funding from investors such as banks or business investors. However, MSMEs face significant challenges due to insufficient financial and digital literacy, leading to poor financial management and ineffective digital marketing. MSMEs usually receive guidance from mentors affiliated with the MSMEs Agency, which is often passive and underfunded. Business Companion provide training and technical guidance, but lack clear SOPs and KPIs. In addition, business incubators from academia offer mentoring, counselling, education and training, successfully identifying and addressing MSME issues. While banks offer lower interest rates, poor financial literacy hinders MSMEs' ability to secure loans. MSMEs are also often unaware of fintech services with easier terms but higher interest rates. The Financial Services Authority (OJK) plays an important role in MSMEs development by setting policies and supervising financial institutions to ensure proper distribution of loans and financial transactions.

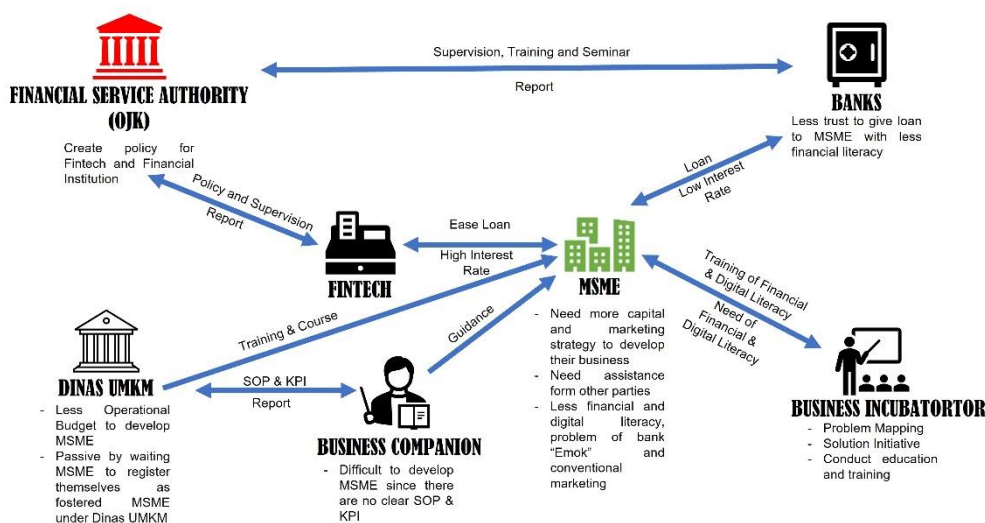


Figure 4. Rich Picture Diagram

IV.3 In-depth Analysis

IV.3.1 Fishbone Diagram Explanation

The fishbone diagram in Figure 5 illustrates the factors that contribute to MSME resilience, with a focus on financial and digital literacy. These literacies affect MSMEs' ability to weather economic crises and utilise digital technologies for sustainable growth. The diagram identifies key subfactors that influence financial and digital literacy:

1. Financial Literacy:
 - a. Limited Access to Capital: In 2020, 71% of MSMEs did not have access to capital from banks or non-bank financial institutions. This limited access limits their growth potential and financial stability.
 - b. Low Credit Absorption: Despite various credit programmes, 69.5% of MSMEs have not received credit, leading to a significant gap in financial support for business development. Regional disparities in financial literacy affect the optimal uptake of government programmes such as KUR, with some provinces showing a link between high financial literacy and credit uptake. This leads to uneven support and benefits for MSMEs in different regions.
2. Digital Literacy:
 - a. Unequal Internet Access: Gaps in internet penetration prevent MSMEs from fully participating in the digital economy. Infrastructure challenges, especially in rural and remote areas, limit access to reliable and affordable internet connectivity, thereby impacting digital participation.
 - b. Limited Adoption of Digital Technology: Most (68%) MSMEs have not utilised the digital space for business development, indicating a need to improve digital literacy. Age and skill gaps, especially among older generations such as baby boomers and Gen X, create barriers to adopting digital tools and platforms. These generations are more accustomed to conventional methods and less exposed to technology early in their careers, leading to reluctance or lack of knowledge in utilising digital platforms for business development. Socio-economic factors also contribute to the digital divide, where individuals with limited access to technology or who cannot afford the latest devices are left behind.

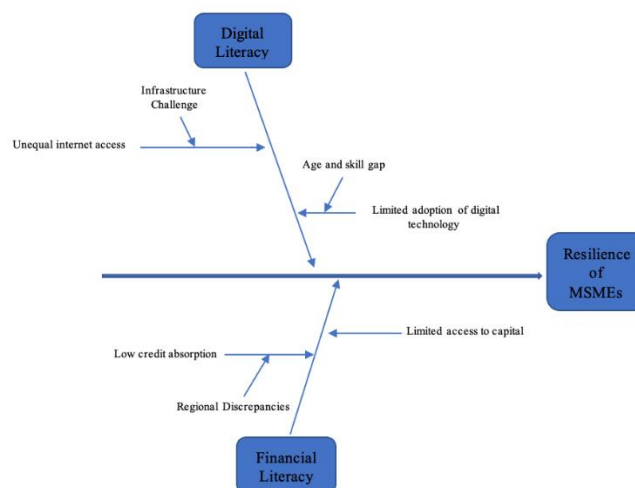


Figure 5. Fish Bone Diagram (Source: author analysis)

IV.3.2 Data Interpretation

The analysis of financial literacy among micro and small entrepreneurs highlights some critical areas that need attention (Table 3). The "financial literacy gap" (3 counts) is significant, driven by a lack of systematic financial literacy, basic financial tracking, and overall literacy deficiencies. Entrepreneurs rely on simple financial calculations, which limits their ability to engage in detailed financial analysis and planning. Developing financial reporting is critical for business growth and understanding banking products. Financial literacy assistance (4 counts), including support in financial reporting, use of sales and purchase receipts, and overcoming reporting difficulties, is essential for effective financial management. Practical application and verification of financial literacy (2



counts) is essential, encouraging the use of various banking products to build trust and efficiency in credit applications. Challenges in changing financial literacy (2 counts) mindsets remain, with difficulties in changing financial habits and managing reports. Education on financial literacy (5 counts), including explaining banking products and ensuring understanding through targeted training, is critical, especially given the low level of education among incubator participants. Improving financial literacy through systematic education, practical support and mindset change is critical to the growth and sustainability of MSMEs.

Table 3. Frequency of Variables

Variable	Sub-variable	Count
Financial literacy gap	Lack of systematic financial literacy, Basic financial tracking, Overall lack of literacy	3
Financial literacy	Developing financial reporting, Critical for growth, Importance of understanding loans, Credit application priority, Understanding loans	5
Financial literacy assistance	Supporting in financial reporting, using sales and purchase notes, Creating financial reports, financial reporting difficulties	4
Financial literacy verification	Proving financial data	2
Financial literacy importance	Critical for growing, Importance of understanding loans, Credit application priority, Understanding loans	5
Financial literacy scope	Lack of diverse product understanding, Lack of understanding on diverse products	2
Financial literacy application	Encouraging use of multiple products, Regular using of banking products, Credit application efficiency, Regular banking product using	4
Financial literacy evaluation	Annual credit performance review, Measuring program effectiveness	2
Financial literacy measurement	Clear KPIs for employees	1
Financial literacy mindset	Difficulty in changing mindset, Difficulty in changing financial habits	2
Financial literacy management	Difficulty in managing financial reports, Mixing personal and business finances	2
Financial literacy education	Explaining banking products, ensuring understanding of banking, speaking engagements by OJK, Low education level among incubator participants, Low education impacting financial literacy	5
Financial literacy practices	Simple financial management practices	1
Financial literacy through experience	Understanding through experience	1

Furthermore, in Table 4, the Bank emphasises the importance of literacy and systematic financial reporting for loan approval, highlighting the challenges in changing the mindset of entrepreneurs towards systematic management. They encourage the use of diverse banking products and maintain clear KPIs for financial literacy. The Bank measures the effectiveness of its financial literacy programme through increased usage of banking products and improved loan account performance.

Table 4. Banks Views and Quotations

Main Viewpoint	Supporting Quotations
Emphasize the importance of systematic financial literacy and reporting for loan approvals.	"For credit up to 1 billion, they usually haven't. They use simple financial calculations, not systematic or accountable." "For those who already have financial reports, we prioritize their credit applications."
Encounter challenges in changing the mindset of entrepreneurs towards systematic financial management.	"The challenge lies in changing the mindset of entrepreneurs, who are often used to simple, non-systematic financial management." "Ensuring that entrepreneurs regularly use banking products helps in building trust and makes future credit applications smoother."



Highlight the importance of using diverse banking products and maintaining clear KPIs for financial literacy.	"We encourage cross-selling to increase their transactions with us, making future credit evaluations easier." "The key performance indicators for bank employees are very clear, ensuring accountability and tracking progress."
Focus on the effectiveness of financial literacy programs and the importance of clear financial reporting for loan access.	"The effectiveness of these programs is measured by reviewing the usage of banking products and the performance of credit accounts annually." "Financial literacy is crucial for business growth, including understanding banking products and processes."

Entrepreneurs have great difficulty in making accurate financial statements and understanding the various banking products (Table 5). Many of them rely on simple financial methods such as recording sales and stock, and they generally do not have detailed financial statements. This limited financial literacy extends to a poor understanding of various banking products beyond basic savings, such as insurance or retirement savings. As a result, this lack of understanding hinders their ability to fully utilise the financial services available to them, thus affecting their financial planning and overall growth potential.

In addition, entrepreneurs face considerable operational challenges, often mixing personal and business finances, which complicates their financial management. Being busy with day-to-day operations, they often do not have the time to prepare comprehensive financial statements or liaise with banks. There is considerable resistance to adopting new banking products and practices, with a preference for simpler and more familiar methods. This resistance is partly due to their reliance on experience-based understanding rather than formal learning. In addition, many entrepreneurs lack sufficient capital and a clear understanding of how to access loans, which directly impacts their business growth. They often require significant assistance in financial reporting, further highlighting the gaps in their financial literacy and management capabilities.

Table 5. Entrepreneurs Views and Quotations

Main Viewpoint	Supporting Quotations
Struggle with creating accurate financial reports and understanding diverse banking products.	"Most don't have detailed financial reports but use simple calculations like sales and stock." "Most of our debtors don't understand other banking products like insurance or pension savings, sticking to basic savings."
Face operational challenges and often mix personal and business finances, complicating financial management.	"Their feedback is that they are already busy with their operations. Sometimes they don't have time to prepare financial reports or deal with banks." "Moreover, they mix personal and family finances with their business finances."
Exhibit resistance to adopting new banking products and practices, preferring simpler, familiar methods.	"We face resistance when introducing new banking products like insurance, but they often see the benefits once they experience the coverage." "Although their financial management is simple and not accounting-based, they still understand it. But they understand through experience, not through learning."
Often lack sufficient capital and understanding of how to access loans, impacting their business growth.	"Many entrepreneurs lack sufficient capital and don't understand how to access bank loans, affecting their growth." "For micro and small businesses, we usually have to create their financial reports for them, which is challenging."

Moreover, the MSME Office emphasises the importance of digital and financial literacy for microenterprise sustainability and growth (Table 6). Recognising the need for entrepreneurs to be proficient in these areas, they strive to teach digital and financial literacy as fundamental components for successful business operations. This focus aims to equip entrepreneurs with the necessary skills to navigate the digital landscape and manage their finances effectively, thus ensuring long-term business sustainability.

To support entrepreneurs, the MSME Office provides various programmes and collaborations, offering legal and financial assistance. These initiatives include partnerships with sharia cooperatives and financial programmes designed to help micro enterprises with budgeting, cost management, and investment planning. However, the office faces significant challenges in changing the mindset of entrenched entrepreneurs, who often favour simple and unsystematic methods of financial management. In addition, the limited availability of mentors also hampers the effectiveness of guidance and mentoring efforts. Despite these challenges, the MSME Office facilitates various training programmes and hands-on learning sessions to build practical skills and operational



knowledge. However, budget constraints limit the level of support they can provide, hindering initiatives such as the creation of comprehensive guides for entrepreneurs. Through government initiatives such as exhibitions and digital platforms, the MSME Office aims to increase market presence and sales opportunities for micro enterprises, showcase local products and promote broader market engagement.

Table 6. MSMEs Office Views and Quotations

Main Viewpoint	Supporting Quotations
Emphasizes the importance of digital and financial literacy for business sustainability and growth.	"The digital world requires significant digital literacy for successful business operations." "We need to teach digital and financial literacy to ensure business sustainability."
Provides various support programs and collaborations to aid entrepreneurs, including legal and financial support.	"We offer support through various programs and collaborations, such as with sharia cooperatives." "Our financial programs focus on aiding micro-businesses with budgeting, cost management, and investment planning to enhance their financial stability."
Faces challenges in changing the mindset of entrepreneurs and dealing with limited mentorship availability.	"The challenge lies in changing the mindset of entrepreneurs, who are often used to simple, non-systematic financial management." "Mentorship and guidance are critical, but we face challenges like the limited number of mentors available."
Facilitates numerous training programs and hands-on learning sessions to build practical skills and operational knowledge.	"Training programs and field mentorship help micro-businesses develop practical skills and operational knowledge." "Learning sessions and practical training in the field have been conducted to aid business operations."
Struggles with budget constraints that limit the extent of support provided to micro-businesses.	"We suggested creating a comprehensive guide for entrepreneurs, but budget constraints halted the initiative." "The government's role is to facilitate training and provide resources, but budget constraints limit the extent of support."
Aims to enhance the market presence and sales opportunities for micro-businesses through government initiatives.	"Government initiatives, such as exhibitions and digital platforms, enhance the market presence and sales opportunities for micro-businesses." "We organize exhibitions, bringing local products nationwide, such as in APEKSI and Ina Craft, promoting local UMKM products."

For OJK, the focus is on improving financial literacy to prevent fraud and improve the financial management capabilities of MSMEs (Table 7). By understanding the risks associated with investments, many people can avoid falling victim to fraudulent schemes. Effective financial literacy programmes are critical as they significantly improve MSMEs' ability to manage finances and access credit, thereby contributing to overall growth and stability. Supervising and regulating fintech to ensure they operate within a legal and consumer-friendly framework is another priority for OJK. Regulatory bodies such as OJK play an important role in maintaining the legality and consumer protection aspects of fintech operations. Continuous monitoring and adjustment of fintech regulations is necessary to keep up with the evolving financial landscape, ensuring that fintech solutions remain safe and beneficial to consumers.

OJK also supports collaboration between fintech and traditional financial institutions to improve the accessibility of financial services. By working together, these institutions can bridge the financial services accessibility gap, especially in unreached areas. Addressing the financial literacy and inclusion gap between urban and rural areas is critical, as significant disparities still exist. While financial literacy is high in some areas, financial inclusion is still low due to limited access to financial services. OJK's efforts also include ensuring that fintech interest rates are competitive for productive sectors, encouraging digital transformation to improve financial literacy and inclusion, and emphasising the importance of comprehensive data on the use of fintech by MSMEs to better understand and meet their financing needs. In addition, OJK identifies and addresses negative perceptions of fintech to build trust and enhance fintech's reputation among users.



Table 7. OJK Views and Quotations

Main Viewpoint	Supporting Quotations
Enhancing financial literacy to prevent fraud and improve MSME financial management capabilities	"Many people still get caught in fraudulent investments because they don't understand the risks." "Effective financial literacy programs can significantly enhance the ability of MSMEs to manage finances and access credit."
Supervising and regulating fintech to ensure legal and consumer-friendly operations	"Regulatory bodies like OJK play a crucial role in ensuring fintech operates within legal and consumer-friendly frameworks." "Continuous monitoring and adjustment of fintech regulations are necessary to keep up with the evolving financial landscape."
Supporting collaboration between fintech and traditional financial institutions to improve financial services accessibility	"More collaboration between fintech and traditional financial institutions can help bridge the gap in financial services accessibility."
Addressing the gap in financial literacy and inclusion between urban and rural areas	"There is still a significant gap in financial literacy and inclusion between urban and rural areas." "Despite high financial literacy in some areas, financial inclusion remains low due to limited access to financial services."
Ensuring fintech interest rates are competitive for productive sectors	"Government regulations aim to make fintech interest rates competitive, especially for productive sectors."
Promoting digital transformation to enhance financial literacy and inclusion	"The government's push for digital finance aims to increase both financial literacy and inclusion across the country."
Ensuring fintech can adapt to local contexts and needs	"The success of fintech in providing financial services depends on its ability to adapt to local contexts and needs."
Emphasizing the importance of comprehensive data on MSMEs' use of fintech	"There is a need for comprehensive data on MSMEs' use of fintech to better understand and address their financing needs."
Identifying and addressing negative perceptions of fintech	"Despite fintech's potential, its reputation is often tainted by reports of high-interest rates and aggressive collection tactics."

Finally, business incubators play an important role in overcoming the limitations of legality and mentorship within the microenterprise sector (Table 8). With more than 30 units supervised per sub-district, mentors can only effectively manage a maximum of 30 units, highlighting the need for a structured approach to mentorship. The incubator promotes digital literacy and e-commerce engagement, encouraging MSMEs to register on e-commerce platforms to expand their digital presence and competitiveness. Improving financial literacy and legal financial practices is also a priority, addressing illegal practices such as "retention by gepok" and promoting the use of Islamic cooperatives through programmes such as 'Kampung Bebas Rentenir' (KBR). The incubator focuses on addressing mindset challenges and promoting entrepreneurial spirit among MSMEs, especially addressing challenges related to generation and ego. Through practical training, mentorship, and collaborative coaching, the incubator creates an environment conducive to the growth and success of MSMEs.

Table 8. Business Incubator Views and Quotations

Main Viewpoint	Supporting Quotations
Addressing legality and mentorship limitations	"According to the MSMEs Office data, there are more than 30 supervised units per sub-district. However, Mr. Pran pointed out that each mentor can only handle a maximum of 30 units, raising the question of how to manage the surplus."
Promoting digital literacy and e-commerce engagement	"Have the MSMEs businesses started registering on e-commerce platforms?"
Enhancing financial literacy and legal financial practices	"The practice of retaining people, known as 'retention with emok,' is actually illegal. However, people rely on it because it's convenient, unlike the cumbersome process at banks or cooperatives that require guarantees."



Main Viewpoint	Supporting Quotations
Supporting and optimizing the use of sharia cooperatives through programs	"The MSMEs Office operates two key programs: one focused on MSMEs and the other on 'Kampung Bebas Rentenir' (KBR), which aims to optimize the use of sharia cooperatives."
Overcoming mindset challenges and promoting entrepreneurial spirit	"The MSMEs mindset often revolves solely around financial gain, but it's crucial they first grasp the necessary knowledge to sustain their businesses."
Providing practical training and mentorship	"For MSMEs, we can gather people and provide direct, field-based training. I've conducted three types of training: online business strategies and direct business practices."
Addressing generational and ego-related challenges	"Younger generations are more engaged with these initiatives, but the older ones are not as involved, highlighting a generational gap in digital engagement."
Ensuring data-driven decision making and support	"I need to compile the data first. If necessary, I'll provide it later to support our discussions..."
Facilitating collaboration and multi-party support	"We provide robust support for MSMEs through partnerships with KB. If required, we can initiate new collaborations swiftly."

IV.3.3 Relationships Between Themes

This analysis highlights some important themes and subthemes related to financial and digital literacy among MSMEs. Entrepreneurs often rely on simple financial methods due to a lack of systematic financial literacy, which limits their ability to engage in detailed financial analysis and planning. Generating financial reports is critical for growth, but many entrepreneurs face challenges in creating accurate reports and understanding the various banking products. Assistance from banks in financial reporting is essential, although verifying financial data remains a significant obstacle. Financial literacy is critical for business growth, with an emphasis on understanding loans and access to banking products. However, changing entrepreneurs' entrenched mindsets towards systematic financial management is challenging. Practical application and regular use of banking products help build trust, but limited knowledge of financial products limits financial planning. Education initiatives and speaking engagements by OJK aim to improve financial literacy, although low education levels among participants pose additional challenges. The following table summarises the relationship between the main themes and subthemes identified in this research.

Table 9. Themes Relationship

Variable	Sub-variable	Explanation
Financial literacy gap	Lack of systematic financial literacy	Entrepreneurs use simple, unsystematic financial calculations for credit up to 1 billion.
	Basic financial tracking	Most lack detailed financial reports, relying on basic methods like sales and stock calculations.
	Overall lack of literacy	Even with credit up to 15 billion, entrepreneurs lack comprehensive financial literacy.
Financial literacy	Developing financial reporting	Necessary for growth, but many reports are incomplete.
	Importance of understanding loans	Lack of capital and understanding of loans affects growth.
Financial literacy assistance	Support in financial reporting	Banks help create financial reports using provided data.
	Using sales and purchase notes	Entrepreneurs use notes due to lack of bank statements.
Financial literacy verification	Proving financial data	Challenges in proving sales and profits without proper statements.
Financial literacy scope	Lack of diverse product understanding	Limited knowledge restricts financial planning.



Variable	Sub-variable	Explanation
Financial application literacy	Encouraging use of multiple products	Cross-selling increases transactions and trust.
	Regular banking product use	Regular use builds trust and smoothens credit applications.
Financial evaluation literacy	Annual credit performance review	Credit performance is reviewed annually.
	Measuring program effectiveness	Program effectiveness measured by product usage and credit performance.
Financial literacy mindset	Difficulty in changing mindset	Entrepreneurs used to simple methods resist systematic management.
Financial management literacy	Difficulty in managing reports	Mixing personal and business finances complicates management.
Financial education literacy	Explaining banking products	OJK and banks explain products to improve understanding and secure loans.
	Low education level	Low education impacts financial literacy, particularly among incubator participants.
Financial literacy practices	Simple financial management practices	Entrepreneurs manage finances through experience rather than formal learning.

This connection highlights the interconnected nature of the financial and digital literacy themes, emphasising the need for a comprehensive strategy that addresses both educational and practical aspects to enhance the resilience and growth of MSMEs.

IV.4 Discussion

IV.4.1 Proposal for Digital Literacy Assistance Program for MSMEs Office Kota Bandung

In today's increasingly advanced digital era, social media platforms such as TikTok and Shopee are essential tools for MSMEs to market their products and reach a wider audience. However, many MSMEs lack the necessary skills to use these platforms effectively, which limits their ability to maximise their business potential. Recognising this gap, the MSME Digital Creative Academy aims to improve digital literacy, specifically in video content creation and live streaming, to empower MSMEs in Bandung.

The concept of "Influence Appeal" highlights the significant earning potential for successful influencers who can create engaging content and build strong relationships with their audience. The programme takes inspiration from these influencers, aiming to equip MSMEs with the skills needed to replicate such success. By mastering video creation and live streaming techniques, MSMEs can increase the visibility of their products, reach more customers, and ultimately increase their sales. The academy offers comprehensive step-by-step guidance on these strategies, ensuring participants can apply what they learn effectively.

The Digital Creative Academy is designed not only to enhance participants' technical capabilities, but also to inspire them to make the most of digital platforms. This empowerment is expected to strengthen their market position and help them achieve greater business success. The programme covers mastering video editing applications such as CapCut and conducting effective live streaming on popular platforms such as TikTok and Shopee. By developing these skills, MSMEs can create more engaging and professional promotional content, increasing their competitiveness in the digital market.

The objectives of this programme are multi-faceted. The programme aims to improve the competitiveness of MSMEs by enhancing their digital skills, thus enabling them to create high-quality promotional content and reach a wider audience through live streaming. In addition, the programme also aims to increase brand development and exposure, helping MSMEs build stronger and more recognisable brands. This increased visibility and engagement is expected to drive economic growth and income for MSMEs, contributing to the overall well-being of local communities. Outcomes of the academy include promotional video content, live streaming sessions, content creation training materials, and increased networking opportunities among participants.

Targeting MSMEs that have yet to maximise platforms such as TikTok Shop and Shopee, the programme aims to provide the knowledge and skills needed to increase sales and expand their market reach. The participants, who come from various business sectors and have received basic mentoring from the UMKM Agency, will benefit from ongoing guidance and support. The programme is designed for those who are enthusiastic and ready to learn, showing a high commitment to developing new skills in



video creation and live streaming. With adequate technological readiness, creative initiative, and strong motivation to improve their business, participants are well-positioned to implement the learnings from this programme into their daily operations.

4. CONCLUSION

Based on the result of the final project, here is the answer of the research questions. The first questions are challenges and opportunities. Here challenges are (1) Lack of awareness among micro-entrepreneurs to improve their business knowledge is due to their low level of education. Most of them calculate how many rupiahs they earn from training as compensation for having left their business. (2) Ninety percent of micro businesses under the guidance of the MSME Office, Bandung City do not yet have proper financial records. The financial records are simple and not yet systematic (receipts). Micro businesses with good financial records tend to have higher revenue. (3) The support for MSMEs has not been fully optimized due to business competition among mentors. (4) The distributor mentality of selling directly to consumers and the influx of imported products from China, which are much cheaper, have severely impacted the local market. (5) Micro businesses in Bandung City do not have Standard Operating Procedures (SOP). Micro businesses do not know how to manage buffer stock, so when there is a surge in orders, they don't know how to handle it.

As a solution to the opportunity, I propose establishing an academy that offers training with a transportation allowance of IDR 150,000 per MSME representative, along with snacks, meals, a t-shirt, and a certificate. The amount of IDR 150,000 is the standard rate for training (BINTEK) in the West Java region. To ensure the academy is accessible to all participants, the location can be prioritized based on districts. Districts that are geographically close to each other can share a single academy location.

REFERENCES

1. APJIII. 2022. Hasil Survey Internet APJIII. Access mode: <https://survei.apjii.or.id/survei/>. Retrieved by: 7 December 2023. Cited for defining financial literacy and its importance as per the Financial Services Authority. Cited in discussing the role of innovation in enhancing MSME resilience. Discussed in relation to the importance of financial literacy for MSMEs.
2. Husna, Triari Hanifah. (March 25 2022). Indeks Literasi Digital Indonesia 3.49, Ini yang Bisa Dilakukan Pemerintah. Access Mode: <https://aptika.kominfo.go.id/2022/03/indeks-literasi-digital-indonesia-3-49-ini-yang-bisa-dilakukan-pemerintah/#:~:text=Berdasarkan%20Indeks%20Literasi%20Digital%20Indonesia,berada%20di%20angka%203%2C49>. Retrieved by 7 December 2023.
3. Lestari et al. 2022. The Effect of Financial Literacy, Cost of Technology Adoption, Technology Perceived Usefulness and Government Support on MSMEs Business Resilience. GATR-Global Journal of Business and Social Science Review. GATR-Global J. Bus. Soc. Sci. Review 10(3) 132-147 (2022). Access Mode: https://www.researchgate.net/profile/Elissa-Lestari/publication/365005185_The_Effect_of_Financial_Literacy_Cost_of_Technology_Adoption_Technology_Perceived_Usefulness_and_Government_Support_on_MSMEs'_Business_Resilience_GATR-Global/links/6362b4df431b1f5300648632/The-Effect-of-Financial-Literacy-Cost-of-Technology-Adoption-Technology-Perceived-Usefulness-and-Government-Support-on-MSMEs-Business-Resilience-GATR-Global.pdf. Retrieved by 2 Januari 2024.
4. Lusardi, A., & Mitchell, O.S. 2014. The Economic Importance of Financial Literacy: Theory and Evidence. Journal of Economic Literature, 52 (1), 5-44. Access Mode: <https://www.aeaweb.org/articles?id=10.1257/jel.52.1.5>. Retrieved by 18 January 2024.
5. Manurung, E.M., & Balian, I. 2012. From Small to Significant: Innovation Process in Small Medium Creative Business. International Journal of Innovation, Management and Technology, Vol. 3. No 6, December 2012. Access Mode: <https://www.ijimt.org/papers/339-CM332.pdf>. Retrieved by 18 January 2024.
6. Nasution, Anwar. 2022. The Indonesian Economic Recovery from The Crisis in 1997-1998. Journal of Asian Economics Volume 13, Issue 2, March-April 2002, Pages 157-180. Access Mode: [https://doi.org/10.1016/S1049-0078\(02\)00114-8](https://doi.org/10.1016/S1049-0078(02)00114-8). Retrieved by 13 Februari 2024.



7. Nugroho, F. A., & Hwihanus, H. 2023. Determination of financial literacy and financial inclusion on the performance of MSMEs and financial resilience of MSMEs owners. *Enrichment: Journal of Management*, 13(3), 2182-2189. Access Mode: <http://enrichment.iocspublisher.org/index.php/enrichment/article/view/1472>. Retrieved by 2 January 2024.
8. OJK.GO.ID. Hasil Survey Nasional Literasi dan Inklusi Keuangan Tahun 2022. Indeks Literasi dan Inklusi Keuangan Masyarakat Meningkatkan. Access Mode: <https://ojk.go.id/id/berita-dan-kegiatan/info-terkini/Documents/Pages/Infografis-Survei-Nasional-Literasi-dan-Inklusi-Kuangan-Tahun-2022/Infografis%20Hasil%20Survei%20Nasional%20Literasi%20dan%20Inklusi%20Keuangan%20Tahun%202022.pdf>. Retrieved by 20 November 2023.
9. OJK.GO.ID. Literasi Keuangan. Access Mode: <https://ojk.go.id/id/kanal/edukasi-dan-perlindungan-konsumen/Pages/literasi-keuangan.aspx>. Retrieved By 17 Januari 2024.
10. Pratama, D., Nurwani, N., & Samri Juliati Nasution, Y. 2023. The Effect of Understanding of Financial Literacy and Ease of Digital Payment on the Continuity of MSMEs in the Digitalization Era. *Indonesian Interdisciplinary Journal of Sharia Economics (IJSE)*, 6(2), 618-638. Access Mode: <https://e-journal.uac.ac.id/index.php/ijse/article/view/3468>. Retrieved by 2 January 2024.
11. Rusliati, E., & Mulyaningrum. 2020. An Innovation for the Resilience and Development of MSMEs in Majalengka Regency. *Indonesia Advances in Social Science, Education and Humanities Research*, Volume 510 6th International Conference on Social and Political Sciences (ICOSAPS 2020), 632-643. <http://dx.doi.org/10.2991/assehr.k.201219.096>. Retrieved by 22 February 2024.
12. Saiffurahmand & Kassim. 2021. Islamic Financial Literacy for Indonesian MSMEs during COVID-19 Pandemic: Issues and Importance. *Journal of Islamic Finance, Special Issue Vol 10 No. 1 (2021)* 045-060 IUM Institute of Islamic Banking and Finance ISSN 2289-2117 (O) / 2289-2109 (P). Access Mode: <https://journals.iium.edu.my/iiibf-journal/index.php/jif/article/view/526/227>. Retrieved by 17 January 2024.
13. Sidik, Syahrizal. 2023. OJK Ungkap Risiko Tingginya Gap Inklusi dan Literasi Keuangan RI. Access Mode: <https://katadata.co.id/finansial/keuangan/649432fdc3a70/ojk-ungkap-risiko-tingginya-gap-inklusi-dan-literasi-keuangan-ri>. Retrieved by 25 July 2024.
14. Soedarmono, W. & Prasetyantoko, A. (2017). Financial Literacy and the Demand for Financial Services in Remote Areas: Evidence from Indonesia. Access Mode: https://www.researchgate.net/profile/Wahyoe-Soedarmono/publication/318873909_Financial_Literacy_and_Demand_for_Financial_Services_in_Indonesia/links/5a5b0c3ba6fdcc3bfb5fc27c/Financial-Literacy-and-Demand-for-Financial-Services-in-Indonesia.pdf. Retrieved by 17 January 2024.
15. Tirtayasa et al. 2021. Analysis of Resilience Priorities for MSMEs in Deli Serdang District. *Jurnal Manajemen dan Agribisnis*, Vol. 18 No.2, Jul 2021. DOI: <http://dx.doi.org/10.17358/jma.18.2.215>. Retrieved by 28 December 2023.
16. UNESCO Institute for Statistics. 2018. Information Paper No 51. June 2018 UIS/2018/ICT/IP/51. A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2. Access Mode: <https://uis.unesco.org/sites/default/files/documents/ip51-global-framework-reference-digital-literacy-skills-2018-en.pdf>. Retrieved by 20 January 2024.

Cite this Article: Ana Rizki, Achmad Fajar Hendarman (2024). Empowering Financial and Digital Literacy to Build Resilience of MSMEs: Proposed Implementation in Bandung City. International Journal of Current Science Research and Review, 7(10), 7581-7596, DOI: <https://doi.org/10.47191/ijcsrr/V7-i10-14>