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DIGITAL LITERACY ON SME BUSINESS PERFORMANCE AND THE MEDIATING ROLE OF ENTREPRENEURIAL SKILLS

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Abstract:

Background: In the digital era, SMEs must adapt to technological advancements to remain competitive. Digital literacy is increasingly recognized as a crucial factor in enhancing entrepreneurial skills and business performance.
Purpose: The aim is to uncover how improving digital literacy can lead to better business outcomes for SMEs.
Design/methodology/approach: The research targeted 101 SMEs from manufacturing and trade sectors in the Greater Solo area. Data were collected through online surveys and offline methods. Structural Equation Modeling with Partial Least Squares (SEM-PLS) was used to test the hypotheses.
Findings/Result: The study found that digital literacy positively affects the development of entrepreneurial skills, which in turn enhances business performance. Performance was measured through revenue growth, profitability, market share, and customer satisfaction. Digital literacy is a key driver of entrepreneurial skills development and improved business performance in SMEs. Investing in digital literacy can significantly enhance SMEs' competitive edge and overall success.
Conclusion: The research concludes that digital technology is vital for improving SMEs' performance and competitiveness by expanding market access, attracting customers, and increasing sales. Additionally, digital literacy is crucial for enhancing operational efficiency, product and service innovation, and customer communication.
Originality/value (State of the art): The research broadens the understanding of digital literacy, positioning it as more than just a technical skill. It shows that digital literacy equips SMEs with essential tools for market access, operational efficiency, innovation, and customer communication. By linking digital literacy to strategic business study highlights its critical importance in navigating the modern digital economy.

Keywords: digital literacy, entrepreneurial skills, business performance, SMEs, digital era

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INTRODUCTION

In recent decades, the rapid evolution of information technology and the Internet has ushered in transformative changes in how individuals communicate, shop, and engage in business activities (Shim et al. 2019). Technological tools such as computers, smartphones, and tablets have seamlessly integrated into the daily lives of many. The Internet has offered unparalleled access to global information and markets, compelling small and medium enterprises (SMEs) to embrace technological advancements as a means of sustaining competitiveness and thriving in the swiftly evolving digital landscape (Chege et al. 2020). SMEs serve as the linchpin of numerous economies, with the potential to significantly contribute to job creation, economic expansion, and the equitable distribution of income (Surya et al. 2021). Hence, the mastery of technology and its adept utilization stand as the linchpin of entrepreneurial success (Zahara et al. 2023). Digital literacy assumes a pivotal role in the development of entrepreneurial skills. Entrepreneurs who possess sound digital literacy hold a distinct advantage when it comes to confronting challenges and capitalizing on opportunities in the ever-expanding digital landscape. Proficiency in integrating technology into business practices, comprehending digital trends, and innovating in technological applications empowers entrepreneurs to evolve and thrive in an increasingly digital and fiercely competitive market. Digital literacy exerts a profound impact on business performance by enhancing operational efficiency, fostering innovation, optimizing marketing strategies, elevating customer service, refining decision-making processes, promoting collaboration, bolstering cybersecurity measures, and facilitating adaptability to change (Ismail et al. 2023; Althabatah et al. 2023). Enterprises equipped with robust digital literacy are better equipped to confront the multifaceted challenges and opportunities intrinsic to the perpetually evolving digital era. Hence, it remains imperative for businesses to continually enhance their digital comprehension and literacy, judiciously harnessing technology to secure enduring success.

Indonesia, in particular, has witnessed remarkable growth in its micro, small, and medium enterprises, with data from the Ministry of Cooperatives and Small and Medium Enterprises indicating an impressive increase, reaching 8.71 million units in 2022. As of the September 2022 ASEAN Investment Report, Indonesia stands as the leader in the number of small, medium, and micro businesses within the ASEAN region (ASEAN Secretariat, 2022). This situation presents a compelling opportunity to foster the development of SMEs as key drivers of Indonesia's economic progress. SMEs routinely encounter challenges when competing against larger, well-established entities. The integration of digital technology assumes a pivotal role in assisting SMEs in elevating their performance and competitiveness. Through digitalization, SMEs gain the capacity to access broader markets, engage potential customers, and bolster sales. In the Indonesian context, the acquisition of digital literacy remains a formidable obstacle for a significant number of small and medium enterprises (SMEs). As of 2022, Indonesia's digital literacy index registers at 3.54 on a scale of 1 to 5, positioning it in the mid-range. This signifies an increase of 0.08 points compared to the measurement taken in 2020, underscoring a gradual improvement in the country's digital literacy. Concurrently, the government persisted in its endeavors to facilitate the integration of Indonesian SMEs into the digital ecosystem. According to data from the Ministry of Cooperatives and Small and Medium Enterprises, the count of SMEs venturing into this digital landscape reached 20.76 million in the same year, reflecting a remarkable 26.6% surge from the 16.4 million SMEs recorded in 2021. Consequently, 32.44% of the overall 64 million SME units are now actively participating in the digital ecosystem. Nevertheless, in spite of these advancements, approximately 67.54% of SMEs remain detached from the adoption of digital technology in their business operations.

The aim of this research is to test and analyze the influence of digital literacy on entrepreneurial skills, the effect of digital literacy on business performance, the influence of entrepreneurial skills on business performance, and whether the influence of digital literacy on business performance is mediated by entrepreneurial skills. It is hoped that the results of this research will have theoretical benefits for understanding the factors that influence business success in the digital era and help identify correlations between digital literacy, entrepreneurial skills, and business performance. It is hoped that the results of this research will have practical implications for sustainable and competitive business development in the current digital era. By utilizing the findings from this research, SMEs can improve their ability to adapt to change through digital literacy and entrepreneurial skills and achieve success in an ever-evolving business environment.

METHODS

This research was conducted to identify, test, and analyze the direct and indirect influence of digital literacy on entrepreneurial skills and performance. Digital literacy is the ability of entrepreneurs to adapt to developments in the world of technology to be able to utilize media for communication, marketing, analyzing trends, and demand for goods and services. Technology can also increase corporate entrepreneurship, with indications of organizational innovation, self-renewal, new business discovery, and responsiveness (Alvarez and Barney, 2007). With technology, SMEs can increase the level of precision in innovation, which can ultimately increase the company's added value (Lankshear and Knobel, 2015).

Digital literacy, as defined by Ojobo et al. (2023), entails the process of discovering, assessing, and generating content through technology, as well as effectively communicating with others. It stands as a pivotal factor in navigating the digital era, particularly for SMEs. With a comprehensive grasp of technology and its proficient utilization, SMEs can enhance their performance, broaden their market reach, and sustain competitiveness in the ever-expanding digital economy. Initiatives aimed at elevating the digital literacy of SMEs must persistently receive encouragement through educational, training, and government-backed support and assistance. Despite its paramount importance, many SMEs continue to grapple with challenges when it comes to the adoption and use of digital technology. These challenges encompass a lack of technological understanding, encompassing knowledge of how technology can be leveraged for business purposes, perceived high costs and resource requirements, as well as concerns regarding security and privacy, all of which contribute to the hesitancy of some SMEs to venture into the online realm. However, it is important to acknowledge that, with a sound foundation in digital literacy, SMEs stand to gain numerous benefits, including expanded market access, operational efficiency, innovation in products and services, and enhanced communication with customers. Sariwulan et al. (2020) unearthed compelling evidence indicating a significant and positive influence of digital literacy on the performance of SME entrepreneurs. This implies that heightened digital literacy knowledge is associated with higher SME entrepreneurial performance. Susanto et al. (2022) and Lontchi et al. (2023) underscore the significant impact of technological literacy on SME performance. Moreover, Bharadwaj (2013) reveals how technological literacy can shape organizational practices and, in turn, influence the performance of SMEs. Kulathunga et al. (2020) further emphasize the direct and constructive influence of technological literacy on SME performance, accentuating the imperative need to transform SMEs into digital organizations to enhance their performance capabilities.

In human resource economics, an entrepreneur's skills can be learned, educated, and developed (Sharma et al. 2021). These competencies are important because entrepreneurship is the ability to take advantage of opportunities and the courage to take risks. Entrepreneurial skills refer to a set of abilities and characteristics needed by an entrepreneur or entrepreneur to establish, manage, and develop a business successfully. Entrepreneurship primarily focuses on converting business concepts into economic prospects. People who own and operate companies and have entrepreneurial skills will contribute to the better performance of their businesses. Entrepreneurial skills equip entrepreneurs to analyze situations, opportunities and the environment and assist business managers in managing and assuming business risks and impacts. Skills in entrepreneurship or entrepreneurial skills show an ability to create something new and different. There are many opportunities that can be exploited with innovation and creativity. These skills need to be developed including technical and managerial abilities, and making risky business decisions. Therefore, someone who has good entrepreneurial skills will determine good company performance. Entrepreneurial skills encompass a range of competencies that wield a significant influence on business success. Entrepreneurs possessing these skills can effectively plan business strategies, both in the short- and long-term, to achieve their business goals. Furthermore, these skills enable entrepreneurs to identify emerging market opportunities and craft suitable marketing strategies. Building robust customer relationships is also pivotal in achieving business success, and entrepreneurial skills are instrumental in establishing and maintaining these relationships. Sariwulan et al. (2020); Shabbir et al. (2018); Lingappa and Shetty (2023) underscore the crucial role of entrepreneurial skills in driving business performance.

Digital literacy has a significant influence on entrepreneurial skills. The research results of Ranatunga et al. (2020) show that digital literacy has an impact on economic performance. The research results of Kulathunga et al. (2020); Daud et al. (2022) also show that digital literacy, economic literacy and entrepreneurial skills have a significant and positive effect on the performance of small and medium businesses. The main finding in the research is that digital literacy has the greatest influence on the performance of SME entrepreneurs, both directly and indirectly. In today's digital era, technology and the internet serve as integral components of virtually all businesses. Digital literacy empowers individuals to adeptly navigate online tools and platforms, which are vital for establishing and operating their own enterprises. Proficiency in social media, website management, e-commerce, and other online marketing strategies significantly enhances one's capacity to effectively manage a business. Beyond that, digital literacy fosters creativity and innovation in business. With access to the abundance of information available on the internet, entrepreneurs can generate fresh ideas for products or services and also glean valuable insights from others' experiences shared through blogs and video tutorials. Oggero et al. (2020); Ollerenshaw et al. (2021); Malodia et al. (2023) show the significant and positive influence of digital literacy on entrepreneurial skills, suggesting that heightened digital literacy knowledge corresponds to increased entrepreneurial skills. Drawing from the description, we formulate the following hypotheses:

H1: Digital literacy has a positive effect on entrepreneurial skill.

H2: Digital literacy has a positive effect on business performance.

H3: Entrepreneurial skill has a positive effect on business performance.

H4: Entrepreneurial skill mediates the positive influence of digital literacy on business performance.

This research adopts a quantitative approach (Figure 1). The research design uses a survey method with respondents from SMEs operating in the manufacturing and trade sectors in Greater Solo. The instrument used to collect data is a questionnaire that has been tested for validity and reliability. The sample consists of SMEs that have been operating for more than one year. The data collected and suitable for analysis includes 101 SME respondents in Greater Solo (Klaten, Karanganyar, Sragen, Boyolali, Sukaharjo, Wonogiri, and Solo) in January to March 2023. Data is obtained through online and offline applications. In this study, digital literacy is operationally defined as the user's capacity to effectively utilize digital technologies, encompassing skills related to information retrieval, communication tools, online navigation, and proficiency in utilizing software and hardware. Digital literacy is measured with a 4-item questionnaire from Santoso et al. (2021). Moreover, entrepreneurial skills are operationally defined as the combination of cognitive, social, and practical competencies that empower entrepreneurs to identify, evaluate, and pursue business opportunities. These skills encompass creativity, risk-taking propensity, problem-solving abilities, adaptability, and leadership qualities, entrepreneurial skills are measured using a 4-item questionnaire from Harrison (2017). Lastly, business performance is operationally defined as the quantitative and qualitative assessment of a company's overall achievements and effectiveness in attaining its strategic objectives. This encompasses key metrics such as revenue growth, profitability, market share, customer satisfaction, and other relevant indicators. Business performance in this study is measured by 4-items.

Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis was used to test the hypothesis using SmartPLS 3.3.2 software. PLS-SEM is used to test hypotheses because this technique can handle several dependent and independent variables simultaneously (Sholihin et al. 2011). There are two stages in carrying out PLS-SEM analysis. First, evaluate the construct measurement model by conducting validity, and reliability tests. Second, evaluate the structural model to test the direct and indirect effects of the model built. The measurement model testing carried out includes validity and reliability tests. Testing of construct validity, convergent validity and discriminant validity was carried out. The criterion for a construct used as a basis for convergent validity testing is a factor loading value above 0.5 (Hair et al. 2010). In addition, the average variance extracted (AVE) value is recommended to exceed 0.5 so that the construct is declared to have passed the convergent validity test (Fornell and Larcker, 1981). Cronbach's Alpha and composite reliability are values to see the reliability of an instrument which is said to be reliable if both of them each have a value above 0.70. Hair et al. (2006) added that Cronbach's Alpha values above 0.60 are still acceptable.

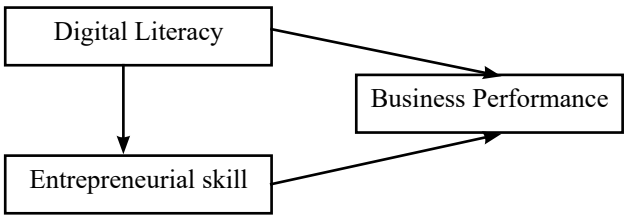

Figure 1. Research framework

RESULTS

The initial step in data analysis using SmartPLS 3.0 software involves evaluating the measurement model (outer model). This evaluation entails several steps, including measuring convergent validity and discriminant validity for each indicator. Subsequently, composite reliability is assessed for each indicator block. To determine the convergent validity of the measurement model, reflective construct indicators are examined based on the correlation between item scores/ component scores and construct scores, calculated using SmartPLS. An individual reflexive measure is considered satisfactory if the factor loading exhibits a value greater than 0.70 concerning the construct under examination. The results of the convergent validity assessment revealed that two indicators, ES2 and ES7, displayed factor loading values less than 0.70. However, 13 indicators exhibited loading factor values exceeding 0.70 and were deemed valid, as shown in Table 1.

The subsequent step in assessing convergent validity is to examine the Average Variance Extracted (AVE) value. An AVE value is considered valid if it exceeds 0.50. The AVE values obtained from the test results in this research are presented below in Table 2. It is evident that the AVE value for each variable surpasses the threshold of 0.50. Consequently, it can be inferred that each variable in this research possesses a valid value. Discriminant validity testing, on the other hand, hinges on the evaluation of cross-loading values. During this stage, the correlation between an indicator and its corresponding construct should exceed the correlation between the indicator and other constructs.

Furthermore, the cross-loading values of these indicators are provided in Table 3. The results indicate that the cross-loading value of each construct on the latent variable exceeds the value of the construct on the other variables. This confirms the validity of all variables in this research. To assess the reliability of an instrument, it is essential to examine the results of composite reliability and Cronbach's alpha values. A variable is considered reliable when it demonstrates a composite reliability value greater than 0.60 and a Cronbach's alpha value exceeding 0.70. According to Hair (2017), it is advisable to use a combination of these two techniques, as the actual reliability typically falls between Cronbach's alpha as the lower limit and composite reliability as the upper limit. The results at this stage are presented in Table 4. They indicate that all variables exhibit a composite reliability value greater than 0.60, and all variables in this study possess a Cronbach's alpha value exceeding 0.70. These results affirm the reliability of all variables utilized in the research.

Table 1. Factor loading values

Dimension	Entrepreneurial Skills (ES)	Business Performance (BF)	Digital Literacy (DL)
ES1	0.728		
ES3	0.775		
ES4	0.828		
ES5	0.761		
ES6	0.745		
BF1		0.856	
BF2		0.899	
BF3		0.881	
BF4		0.906	
DL1			0.714
DL2			0.833
DL3			0.836
DL4			0.817

Table 2. Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)	Information
Digital Literacy	0.642	Valid
Entrepreneurial Skills	0.590	Valid
Business Performance	0.784	Valid

Table 3. Cross loading values

Dimension	Entrepreneurial Skills (ES)	Business Performance (BF)	Digital Literacy (DL)
ES1	0.728	0.420	0.332
ES3	0.775	0.380	0.471
ES4	0.828	0.452	0.313
ES5	0.761	0.505	0.261
ES6	0.745	0.539	0.435
BF1	0.467	0.856	0.436
BF2	0.558	0.899	0.426
BF3	0.552	0.881	0.359
BF4	0.556	0.906	0.546
DL1	0.368	0.406	0.714
DL2	0.393	0.430	0.833
DL3	0.396	0.391	0.836
DL4	0.377	0.377	0.817

Table 4. Composite reliability and cronbach's alpha values

Variable	Cronbach's Alpha	Composite Reliability	Information
Digital Literacy	0.813	0.877	Reliable
Entrepreneurial Skills	0.826	0.878	Reliable
Business Performance	0.908	0.936	Reliable

The subsequent step in PLS-SEM, following the evaluation of the measurement model, involves the analysis of the structural model to examine the previously proposed hypotheses. This analysis includes testing the direct and indirect effects between the hypothesized variables. The results of the data processing, conducted using SmartPLS 3.3.3 software, present the outcomes of the hypothesis testing. A hypothesis is considered influential or significant if it possesses T-statistics > 1.96. Furthermore, the next criterion applied in hypothesis testing is at a significance level of 5%, where a P-value of ≤ 0.05 is deemed acceptable. If the P-value is less than or equal to (α), the proposed research hypothesis is affirmed. Conversely, if the P-value is greater than (α), the proposed research hypothesis is rejected.

Table 5 shows that hypothesis 1, hypothesis 2, hypothesis 3, and hypothesis 4 are accepted because the four hypotheses have T-statistics > 1.96 and P-value < 0.05. Table 5 shows the results that hypothesis 1 is accepted because Digital Literacy has a positive effect on entrepreneurial skills (DLàES) because it has a t-statistic value of 5.234, a p-value of 0.000 and the original sample is 0.479. Based on this, it can be concluded that digital literacy positively influences entrepreneurial skills, has a positive and significant relationship because the t-statistic value is >1.96 and the p-value is <0.05. Table 5 shows the results that hypothesis 2 is accepted because Digital Literacy has a positive effect on Business Performance (DLàBF) because it has a t-statistic value of 2.779, a p-value of 0.006 and the original sample is 0.276. Based on this, it can be concluded that digital literacy positively influences business performance, has a positive and significant relationship because the t-statistic value is >1.96 and the p-value is <0.05.

Table 5 shows the results that hypothesis 3 is accepted because Entrepreneurial Skill has a positive effect on Business Performance (ES→BF) because it has a t-statistic value of 5.296, a p-value of 0.000 and the original sample is 0.471. Based on this, it can be concluded that Entrepreneurial Skill positively influences business performance, has a positive and significant relationship because the t-statistic value is >1.96 and the p-value is <0.05. Table 5 shows the results that hypothesis 4 is accepted because Entrepreneurial Skill mediates the positive influence of Digital Literacy on Business Performance (DL→ES→BF) because it has a t-statistic value of 3.616, a p-value of 0.000 and the original sample is 0.226. Based on this, it can be concluded that Entrepreneurial Skill positively influences business performance, has a positive and significant relationship because the t-statistic value is >1.96 and the p-value is <0.05.

Hypothesis 1, which states that digital literacy has an effect on business performance, is supported (Figure 2). The positive influence of technological literacy on the performance of SMEs is in line with research results. The results of this research are in line with research from Sariwulan et al. (2020), which found that there is a significant and positive influence of digital literacy on the performance of SME entrepreneurs, meaning that the higher the digital literacy knowledge, the higher the high performance of SME entrepreneurs. Research from Kulathunga et al. (2020), Omiunu (2019), and Thathsarani and Jianguo (2022) which revealed the positive impact of technological literacy on SME performance. The results of this research are in accordance with research by Bharadwaj (2013), which revealed that technological literacy can influence organizational practices and, therefore, influence the performance of SMEs. Furthermore, the findings of this research are congruent with research by Kulathunga et al. (2020) which underlines that technological literacy has a direct and positive impact on SME performance. This shows the need to transform SMEs into digital organizations to improve their performance capabilities. Hypothesis 2, which states that digital literacy influences entrepreneurial skills, is supported. This means that digital literacy does have a big influence on a person's entrepreneurial ability or entrepreneurial skills. Entrepreneurship skills also include things such as leadership, good time management, and the ability to adapt quickly to market changes. In this digital era, almost all businesses depend on technology and the internet. Digital literacy helps people to master online tools and platforms that can be used to build their own businesses. By mastering social media, websites, e-commerce and other online marketing strategies, someone will be better able to run a business effectively. Apart from that, digital literacy also increases creativity and innovation in business. With access to the abundance of information on the internet, an entrepreneur can get new ideas for their products or services. They can also learn from other people's experiences through blogs or video tutorials. The results of this research are in line with research from Oggero et al. (2020); Ollerenshaw et al. (2021); Malodia et al. (2023) which found that there is a significant and positive influence of digital literacy on entrepreneurial skills, meaning that the higher the digital literacy knowledge, the more and increased the entrepreneurial skills of SME players.

Table 5. Hypothesis test results

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Entrepreneurial Skills (ES) → Business Performance (BF)	0.471	0.476	0.089	5.296	0.000
Digital Literacy (DL) → Entrepreneurial Skills (ES)	0.479	0.487	0.092	5.234	0.000
Digital Literacy (DL) → Business Performance (BF)	0.276	0.277	0.099	2.779	0.006
Digital Literacy (DL) → Entrepreneurial Skills (ES) → Business Performance (BF)	0.226	0.232	0.062	3.616	0.000

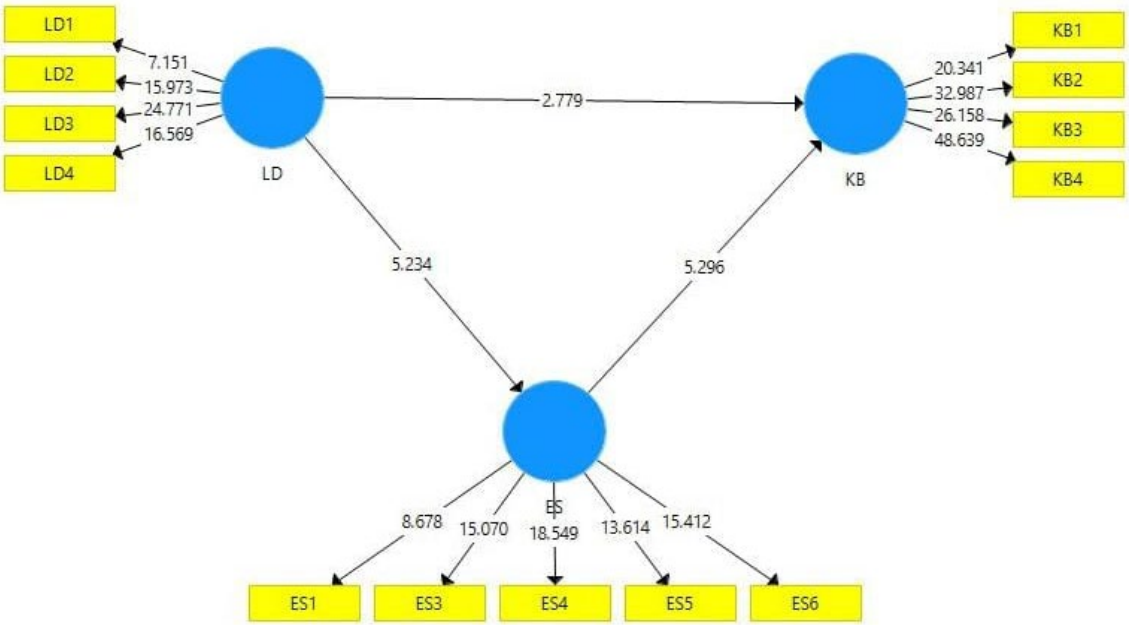

Figure 2. The Result of SEM Analysis

Hypothesis 3 states that entrepreneurial skills influence business performance. Entrepreneurial skills will help SMEs manage their businesses more effectively and efficiently. One of the important things that is influenced by entrepreneurial skills is the ability to plan business strategies. An entrepreneur who has this skill can make short- and long-term plans to achieve business goals. They are also able to identify new market opportunities and develop appropriate marketing strategies. Apart from that, skills in establishing relationships with customers also play an important role in business success. Entrepreneurial skills can help someone to build good relationships with customers, offer products or services that suit their needs, and provide the best service to increase customer loyalty. The results of this research are in line with research from Sariwulan et al. (2020); Shabbir et al. (2016); Dewa et al. (2023); and Jardim (2021).

Hypothesis 4, which states that entrepreneurial skill mediates the influence of digital literacy on business performance, is supported. The results of this research support the research of Zahara et al. (2023); Mugiono et al. (2021), and Seraj et al. (2022). This research proves that digital literacy will affect performance if the entrepreneurial skills of SMEs also increase. Overall, the research results show that digital literacy plays an important role in supporting entrepreneurial skills and behavior. It enables individuals to effectively leverage digital technologies, identify opportunities, and adapt to the changing business landscape. By combining entrepreneurial skills with digital literacy, entrepreneurs can improve their innovative capabilities and contribute to successful business performance in the digital era.

Managerial Implication

The research findings offer valuable insights for managers and leaders of small and medium enterprises (SMEs) as they navigate the digital age. The research underscores the significance of digital literacy in SMEs. Managers should invest in digital literacy training for their teams, equipping them with the skills to effectively navigate online tools and platforms. This investment empowers employees to leverage technology's full potential for business operations. Moreover, SMEs must harness digital tools like social media, websites, e-commerce, and online marketing. These tools enhance business efficiency and effectiveness. Encouraging their adoption and mastery within the organization is crucial.

The results demonstrate that digital literacy fosters creativity and innovation. Managers should cultivate a culture of exploration and innovation among employees, utilizing the wealth of information available on the internet. This can lead to the development of new products, services, and business strategies, fostering a competitive edge. Entrepreneurial skills, including

leadership, time management, and adaptability, are vital for success. Prioritizing the development of these skills empowers employees to plan strategies, identify market opportunities, and build strong customer relationships.

SME managers are also encouraged to recognize the role of entrepreneurial skills. The results imply that understanding that entrepreneurial skills mediate the relationship between digital literacy and business performance is crucial. Managers should create an environment that fosters the development of these skills, recognizing their pivotal role in translating digital literacy into improved business outcomes. Lastly, the research highlights the need for SMEs to transform into digital organizations to enhance their performance. Managers should consider digital transformation initiatives tailored to their specific needs and goals. Overall, these managerial implications emphasize the critical role of digital literacy and entrepreneurial skills in SME success in the digital era. By investing in these areas and leveraging digital tools, SMEs can enhance their performance and competitiveness in an ever-evolving business landscape.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The research findings and discussions lead to several noteworthy conclusions. Firstly, digital technology plays a pivotal role in enhancing the performance and competitiveness of SMEs. Establishing a digital presence enables SMEs to access broader markets, attract potential customers, and drive increased sales. Secondly, the significance of digital literacy cannot be understated. It bestows SMEs with the capabilities to access wider markets, boost operational efficiency, foster product and service innovation, and improve customer communication. Digital literacy is an essential component for thriving in the digital era. Furthermore, the study reveals that digital literacy has a significant impact on the entrepreneurial skills of SME entrepreneurs. It equips SMEs with the knowledge and tools to effectively utilize online platforms, nurturing creativity and innovation an integral facet of entrepreneurial skills. Additionally, well-developed entrepreneurial skills are indispensable for SMEs.

Recommendations

The results highlight that entrepreneurs equipped with these skills can devise effective business plans, identify market opportunities, formulate appropriate marketing strategies, and cultivate robust customer relationships, ultimately leading to improved business performance. Lastly, the research indicates that entrepreneurial skills act as a mediator between digital literacy and business performance. While digital literacy is a crucial factor, it must be complemented by robust entrepreneurial skills to drive enhanced business performance. This research has certain limitations. Firstly, the sample size was restricted to 101 SME respondents, potentially limiting the representation of the diverse SME landscape in the Greater Solo region. Secondly, the utilization of a cross-sectional research design constrains the exploration of causal relationships between variables. An approach that adopts a longitudinal perspective could offer insights into how variables evolve over time in response to shifting consumer preferences. Addressing these limitations, future research should aim to expand the sample size to ensure a more comprehensive representation of the SME population. Longitudinal studies can provide a deeper understanding of the dynamic relationships between digital literacy, entrepreneurial skills, and business performance, tracking changes over time and adapting to evolving consumer preferences and market dynamics.

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