

DIGITAL-BASED LEADERSHIP: A SYSTEMATIC LITERATURE REVIEW ON DIGITAL LITERACY IN MSMEs

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Abstract

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Digital technology has changed organizations in irreversible ways. Just as the mobile printing press accelerated our historical evolution, digitalization also shapes organizations, work environments and processes, thereby creating new challenges that leaders must face, especially leadership in Micro, Small and Medium Enterprises (MSMEs). Social science scholars have tried to understand this multifaceted phenomenon, but existing findings have accumulated in a fragmented manner and are spread across various disciplines, and do not seem to coalesce into a clear picture. To address the dearth of literature and foster clarity and harmony in the academic debate, this paper provides a comprehensive analysis of the contribution of studies on leadership and digitalization to leadership in MSMEs, identifying patterns of thinking and findings across social science disciplines, such as management and psychology from key theories and findings between researchers. Research methods used is a qualitative method with a literature study approach. All supporting publications were searched in Google Scholars, Scopus, and Harzing's Publish or Perish software. The research results show that The role of digital leadership is very crucial in realizing digital transformation. By using Information technology will help work processes in the MSME sector. Apart from that, there is The use of big data will make the decision-making process by leaders easier. The main findings show that leaders are key actors in the development of digital culture: they need to create relationships with many distributed stakeholders, and focus on collaborative processes in complex environments, while paying attention to pressing ethical issues. Through this research, we contribute to advancing the debate on digital transformation and leadership theoretically.

Keywords: Digital Leadership, Digital Transformation, MSMEs, Literacy, Leadership



INTRODUCTION

In the last few decades, we have witnessed fundamental changes in the business landscape, driven by advances in digital technology, organizations around the world are faced with the need to adapt their leadership to the dynamics of technological change. Successful leadership is not just about having a strategic vision, but also about understanding the role of digital skills in creating effective leaders. The latest Eurobarometer survey of European society shows that the majority of respondents consider digitalization to have a positive impact on the economy (75%), quality of life (67%), and society (64%). Four out of five Europeans, 79%, think that digital technology will be important in their lives in 2030, the same proportion compared to 2021 of 81%. When asked how important digital technology will be in various areas of daily life in 2030, two out of three respondents or 66% answered that digital technology will play an important role in fighting climate change, (Eurobarometer, 2023). Additionally, two-thirds of Europeans (67%) want increased education and training to develop their digital skills. Likewise, two-thirds of citizens (66%) think that digital technology will play an important role in fighting climate change. Finally, more than 80% of Europeans believe that there will be increased collaboration between countries in the world to advance access to digital technology, as well as spur innovation and so that companies can compete globally, (Eurobarometer, 2023). In Indonesia, the increase in the digital literacy index in 2022 is reflected in the Indonesian Digital Literacy Status survey conducted by the Ministry of

Communication and Information in collaboration with the Katadata Insight Center (KIC). In 2020 Indonesia only scored 3.46 points, then in 2021 it rose to 3.49 points (up 0.03 points). In 2022, Indonesia managed to increase 0.05 points from 3.49 to 3.54 points, (Agustin, 2023). Other data states that the value of Indonesia's digital industry has grown significantly from 41 billion dollars in 2019 to 77 billion dollars in 2022 and is expected to increase to 130 billion dollars in 2025, mainly driven by e-commerce, food transportation and delivery, travel online and online media, (Astera Primanto Bhakti, 2023).

One of the opportunities that can be utilized from the digital economy is to help accelerate Indonesian business through empowering Micro, Small and Medium Enterprises (MSMEs) as well as the development of the sharia economy. Indonesia has almost 64 million MSMEs in the economy. It accounts for 97% of the country's workforce and contributes more than 60 percent of GDP. Although digitalization has many benefits for business and the economy, it also has challenges that need to be overcome. First, the lack of digital literacy is still a big homework for all of us. Second, countries need to ensure equality in digital literacy among their citizens. Apart from that, there are many other challenges to the digital economy such as cyber security, human resources, internet access and regulations that must be resolved together in stages (Astera Primanto Bhakti, 2023).

The industrial revolution 4.0 is bringing change at an unprecedented level, forcing organizations to adapt their business models rapidly and understand that traditional leadership needs to evolve.





Increasing digitalization in all economic sectors requires the birth of new concepts about leadership in the digital environment ,(Temelkova, 2018). Modern leaders cannot ignore the role of digital skills in carrying out their leadership responsibilities. A deep understanding of technology, data analysis, and digital transformation have become essential components for building a strong leadership foundation, (Wang et al., 2023). These skills not only improve operational efficiency but also support the innovation needed to remain competitive in a rapidly changing marketplace. Apart from that, digitalization is a process that affects almost all organizations , therefore all leaders need to understand the implications for their organizations, as well as their employees. Leadership needs to have new skills , competencies, new forms of leadership (Kohnke, 2017) .

Adoption of digital skills-based leadership does not necessarily replace proven leadership principles. Instead, it is about integrating digital skills into existing leadership frameworks, creating leaders who are able to align strategic vision with the power of technology, (Bass & Riggio, 2006) . Across sectors and organizational sizes, companies are transforming their workplaces into digital workplaces. Many jobs now involve extensive use of technology, and require the ability to utilize it quickly, (McAllen & Haddud, 2018) . In addition, digitalization is considered a global job creator, thus driving a major transformation in employment needs. Therefore, leaders need to invest in improving the skills of their employees, in an effort to support and motivate them in facing steep learning

curves and cognitively demanding challenges, (McAllen & Haddud, 2018) .

Literature studies also highlight the role of digital leadership in the digital era. Digital technology is driving exponential change in various industries, so digital leadership is crucial for organizations to survive and successfully drive digital business transformation. Digital leaders need to use and leverage the company's digital assets and have different skills and perspectives compared to traditional leaders. However, more academic studies are needed on the nature and styles of digital leadership in the future as well as the development of measurable digital leadership models. Leaders are responsible for verifying the suitability of the technological tools adopted or implemented in relation to the needs and goals of the organization, (Cortellazzo et al., 2019) . This concludes that digital skills are very important for MSMEs to be able to continue to develop and compete effectively in an increasingly competitive market. Apart from that, the role of digital leadership is also crucial in leading digital business transformation. Therefore, developing digital skills and leadership based on digital skills needs to be the main focus in supporting the growth and sustainability of MSMEs in the digital era. Apart from that, it is important for every organization to have leaders who carry out digital transformation strategically which can become a digital business strategy (Bharadwaj et al., 2013; Hess et al., 2016). At the moment the emergence of new leading positions and roles related to digital transformation in organizations, such as the emergence of the position of chief digital officer (CDO) , (Horlacher & Hess, 2016) ; and the need for new business models in the digital





economy , (Berman, 2012) . In recent decades, leadership scholars have tried to monitor the impact of digitalization processes. Part of the academic debate is focused on the role of leaders' ability to integrate digital transformation into their companies and, at the same time, inspire employees to accept such changes, which are often perceived as threats to the current status quo (Gardner et al., 2010; Kirkland , 2014). To clarify this debate, the concept of e-leader has been introduced to describe the new profile of leaders who constantly interact with technology, (Avolio et al., 2000) . e-leadership is defined as “the process of social influence mediated by Advanced Information Technology (AIT) to produce changes in attitudes, feelings, thoughts, behavior, and/or performance of individuals, groups, and/or organizations” (Avolio et al., 2000) . Based on the description above, the aim of this research is to try to explore the essence of digital skills-based leadership, explore the urgent need to integrate digital skills into the existing leadership framework in micro, small and medium enterprises (MSMEs), and provide a foundation for building leaders capable of guiding organizations through an era of dynamic transformation. Apart from that, as part of an academic debate focused on the role of leaders' abilities in integrating digital transformation into MSME organizations. Although interest in discussing the relationship between digital technology and leadership is increasing, contributions remain fragmented across disciplines. This fragmentation makes it difficult for researchers to “detect larger patterns of change resulting from digital transformation, (Schwarz Müller et al., 2018) . Additionally, due to the rapidly

changing development and application of digital technologies, there is a need to continually update and consider the latest contributions to this topic. Specifically, this article reviews the literature on how the emergence of digital technologies has changed leaders and leadership roles. In addition, the book organizes and summarizes the literature, taking into account the theoretical framework and empirical findings, and fosters an understanding of the content of the debate and its practical basis. Finally, reflecting on the findings of this review, we offer suggestions for future research directions.

RESEARCH METHODS

Literature reviews offer a comprehensive synthesis and interpretation of the body of knowledge in a specific domain , (Schryen et al., 2015) . This research used a literature review, which was conducted using systematic, reproducible, and explicit methods , (Fink et al., 2005; Garza-Reyes, 2015) . Besides that, This research uses a bibliometric review, a methodology commonly applied in scientific disciplines for the quantitative analysis of journal papers, books, or other written media , (Smart et al., 2017) . Search for the keywords " leadership, digital leadership" and " digital literature " , using Google Scholar and Scopus software, with the help of Harzing's Publish or Perish (POP) with time intervals from 2015 to 2023. During research, there were many journals and books that were not relevant to our search. The first results of the PoP software were more than 6 00 journals because the keywords were mostly general (digital, leadership, and digital literacy) . Then, relevant articles were selected for each of





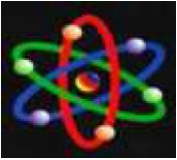
the keywords leadership, digital leadership and digital literacy. Next, the analysis was carried out using a literature review with bibliometric analysis to find out how digital literacy leadership in MSMEs is . The bibliometric review in this paper was conducted using Harzing's Publish or Perish software, and supporting papers were also searched from Google Scholar and Scopus.

RESULT

The first stage of the analysis was to search for previous research articles that examined micro, small and medium enterprises (MSMEs) from 2015 to 2023 using Harzing's Publish or Perish software . The following are search results related to research on micro, small and medium enterprises (MSMEs), as researched by (Achi, 2022; Adeniyi, 2019; Adhikary, 2021; Affandi, 2020; JLE Aguilar, 2019; JL Esparza Aguilar, 2019; Akinwale, 2020; Astadi, 2022; Behl, 2022; Bongomin, 2020; Burchi, 2021; Caraka, 2021; Chaturvedi, 2015; Cockshut, 2020; Cueto, 2022; Cunha, 2020; Daou, 2019; Deshmukh, 2022; Elf, 2022; Endris, 2022; Escoto, 2019; Fauzi, 2022; Ferrata, 2019; Goyal, 2018; Gupta, 2016; Hanggraeni, 2019; Hernández, 2020; Hervé, 2020; Iramani, 2018; Jamwal, 2021; Jennings, 2015; Jewalikar, 2017; Jones, 2016; Khanzode, 2021; Khurana, 2019, 2021; Kilay, 2022; M. Kumar, 2022; V. Kumar, 2022; Lakuma, 2019; Latifah, 2021; L. Liu, 2022; M. Maheshwari, 2020; P. Maheshwari, 2021; Muñoz, 2021; Panigrahi, 2018; Pradoto, 2022; Prasetyo, 2020; Purba, 2021; Purnamasari, 2020; Ramesh, 2017; Ratnawati, 2020; Raut, 2019; Rosca, 2019; Rüländ, 2016;

Sadeghi, 2018; Sahu, 2022; Samantha, 2018; Shafi, 2020; Simba, 2019; D. Singh, 2017, 2018; M. Singh, 2021; MP Singh, 2016; SA Singh, 2023; Susan, 2020; Syaifullah, 2021; Tambunan, 2019, 2020; Tarapuez, 2016; Thampi, 2015; Tjahjadi, 2020; Tripathi, 2018; Vasquez, 2021; Yáñez-Araque, 2021; Yu, 2022). The results of the analysis of 200 existing papers after the selection were carried out resulted in a total of 80 papers that were relevant to MSMEs. And overall the existing research discusses more general problems faced by MSMEs both during COVID 19 and post COVID 19 and other things, but very little of it discusses digital literacy. Next, search for articles in the same way related to leadership and leadership models from 2015 to 2023, using Harzing's Publish or Perish software as done by (Afsar, 2016; Aga, 2016; Anseel, 2015; Banks, 2016; Barrick , 2015; Bavel, 2020; Bedi, 2016; Blok, 2015; Blumenthal, 2020; Boamah, 2018; Buil, 2019; Caligiuri, 2020; Carr, 2018; Casaló, 2020; Chaput, 2020; Chen, 2016; Chiniara, 2016 ; Chuang, 2016; D'Innocenzo, 2016; Day, 2016; Desimone, 2015; Dirani, 2020; Donate & Sánchez de Pablo, 2015; Dong, 2017a, 2017b; Dubey, 2015; Engelen, 2015; Eva, 2019; Finkel , 2020; Fritz, 2019; Fung, 2015; Gelfand, 2021; Grijalva, 2015; Grossman, 2020; Gu, 2015; Hoch, 2018; Hughes, 2018; Inceoglu, 2018; Jaiswal, 2015; Keesstra, 2016; Khalifa, 2016 ; Kim, 2017; Lin, 2016; C. Liu, 2018; Marchiò, 2019; McGuinness, 2017; Meyers, 2017; Mittal, 2015; Montano, 2017; Newman, 2017; Nielsen, 2017; Powers, 2018; Randel, 2018 ; Richter, 2017; Roscoe, 2019; Ryan, 2020; Schoemaker, 2018; T. Shanafelt, 2017, 2020; T.D. Shanafelt, 2015; SK





Singh, 2020; Torfing, 2019; Ueda, 2020; Vangrieken, 2017; Wenner, 2017). The results of the analysis of 200 existing papers after the selection were carried out resulted in 66 papers being relevant to leadership. All of this research discusses various leadership models, such as transformational, democratic, transactional, situational, charismatic, servant leadership and other leadership development models which are factors in influencing certain dependent factors either directly or indirectly. Then search for articles in the same way related to digital-based leadership using Harzing's Publish or Perish software as done (Antoni, 2017; Ardi, 2020; Barnett, 2019; Bass & Riggio, 2006; Beckmann, 2016; Borah, 2022 ; Bregenzer, 2021; Carcary, 2016; Cortellazzo et al., 2019; Dubey, 2023; Eberl, 2021; Hai, 2021; Hesse, 2018; Karakose, 2021; Kettinger, 2011; Larjovuori et al., 2018; Magno, 2020 ; Mihardjo, 2019b, 2019a; Mitra, 2013; Ottestad, 2013; Peter, 2020; Pettersson, 2018; Raman, 2019; Rikkerink, 2016; Sasmoko, 2019; Sawy, 2016; Schiuma, 2022; SK Singh, 2022; Temelkova, 2018; Thannimalai, 2018; Wart, 2019; Wong, 2019; Zeike, 2019). The results of the analysis of 200 existing papers after the selection were carried out resulted in 30 papers being relevant to digital leadership. All of this research is research conducted on general organizations such as industrial companies with large scale operations, schools and public or government sector organizations and is not directly related to micro, small and medium enterprises (MSMEs).

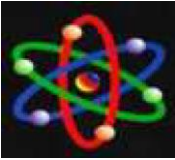
CONCLUSION

This research was conducted on 176 papers selected from 600 papers selected by screening that are appropriate or relevant to digital leadership in MSMEs . The keywords searched for in this research are " leadership, digital leadership" and " MSMEs " to see how digital leadership can increase digital literacy on MSMEs . After filtering and analyzing , it can be concluded that the digital leadership variable is an important variable and has a more significant impact in increasing digital literacy in micro, small and medium enterprises (MSMEs) in Indonesia . Apart from that, digital leadership can be used as a strategy in increasing product and service innovation which can increase the competitiveness of MSMEs to become hosts in their country and be able to compete at the global level.

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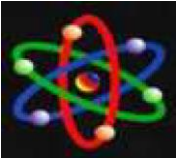
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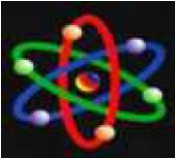
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