MOS REVIEW

VOLUME 02, ISSUE 02

Department of Management and Organization Studies
Faculty of Management and Finance
University of Colombo

MOS REVIEW

Volume 2 Issue 2, May 2025

MOS REVIEW

Published by

Department of Management and Organization Studies

Faculty of Management and Finance

University of Colombo

Colombo 03, Sri Lanka

ISSN 3021-6362

MOS REVIEW

Volume 2 Issue 2

May 2025

CONTENTS

MOS REVIEW

Vol. 2, Issue. 2, May 2025

Green Human Resource Management Practices (GHRMPs) in Organizations

E.D.U.N. Jayalath[1]

Kumudinei Dissanayake [2]

Department of Management and Organization Studies,

Faculty of Management and Finance, University of Colombo

Abstract

Green Human Resource Management Practices (GHRMPs) help organizations become more environmentally friendly by encouraging sustainable employee behavior. This review article presents what GHRMPs are and discusses the various types of GHRMPs that are frequently implemented in organizations. In addition, it explores recent research on GHRMPs, including the theories employed in past studies, as well as the conceptualizations, methodologies, and different contexts of previous research. Finally, the article provides directions for future research in this area of study. Overall, it highlights the growing role of GHRMPs in promoting sustainability in modern workplaces.

Keywords: Green Human Resource Management (GHRM), Green Human Resource Management Practices (GHRMPs), Green Initiatives, Sustainability

[1] Corresponding author: 2021ms10119@stu.cmb.ac.lk

[2]Supervisor of the research project

1. Introduction

Sustainability has become a major concern in the business world, and it has led companies to adopt green practices, which emphasize reducing their ecological footprint through the practices like waste reduction, energy efficiency and other environmentally conscious activities (Daily & Huang, 2001). Green practices are basically ways businesses can help the environment while still running their operations. Businesses all around the world are incorporating these practices into their business models due to growing legal constraints, consumer demand for sustainable products and corporate social responsibility (CSR) activities (Zhang et al., 2022). Green leadership and commitment, green organizational culture, green work-life balance, green workplace practices, green innovation and creativity, green employee engagement, green office initiatives, green employee behavior, eco-friendly decision-making policies, carbon footprint reduction strategies, green knowledge sharing and learning are few of the many activities that fall under green practices.

These green practices have evolved to integrate with Human Resource Management (HRM) practices which traditionally focused on the effective management of employees. This integration has given rise to Green Human Resource Management (GHRM). GHRM collaborate with environmental management into HRM functions encouraging organizations to develop environmentally friendly behaviors among employees (Renwick et al., 2013). GHRM practices (GHRMPs) aim to create a culture of sustainability within the organization by aligning employee behaviors with the company's environmental goals. GHRMPs play a critical role in fostering environmental responsibility. GHRMPs simply refer to the alignment of human resource policies and practices with environmental sustainability goals to promote eco-friendly behaviors among employees and reducing the ecological footprint of organizations (Ren et al., 2018). Thus, GHRM is becoming an essential instrument for coordinating employee behavior with ecological goals of the organizations since the organizations are progressively incorporating sustainability principles into their fundamental business strategies in response to increasing global environmental concerns (Saad et al., 2024). This paper explores the various dimensions of GHRMPs including definitions, diverse types, recent research, theoretical underpinnings, methodologies, research contexts and future research directions.

2. Defining GHRMPs

A number of scholarly works has offered definitions for GHRMPs by emphasizing how environmental concerns are incorporated into HRM functions. Recent studies emphasize that GHRMPs are not limited to environmental compliance, but represent a strategic HR framework aimed at cultivating pro-environmental mindsets and behaviors across all levels of the organization through integrated HR functions (Khan et al., 2025). Jabbour and Santos (2008) define GHRMPs as HRM practices designed to support environmental sustainability initiatives. Similarly, Renwick et al. (2013) define GHRMPs as tactics that improve workers' pro-environmental actions via recruitment, training, performance reviews and incentives. Furthermore, a more thorough explanation of GHRMPs as a framework for incorporating sustainability into all HR operations in order to create an environmentally conscious corporate culture was also provided by Tang et al. (2018). Even though there are varying definitions, a broader perspective to define GHRMPs is the "role of HRM in promoting sustainable workplace behaviors and policies".

3. Diverse Types of GHRMPs Used in Organizations

According to Renwick et al. (2013) GHRMPs include green employee involvement, green performance management, green training and development, green rewards and green recruiting and selection. Green recruiting aims to attract candidates aligned with the organisation's values and sustainability goals (Jabbour, 2013). Alternatively, green training and development initiatives enable employees to develop the knowledge and skills to implement various eco-friendly workplace practices such as energy saving and waste reduction (Zibarras & Coan, 2015). In addition, green performance management can also include ecological criteria in employee evaluations in order to ensure that green initiatives are offered recognition and rewarded where appropriate (Jackson et al., 2011). The method of providing monetary and non-monetary rewards like bonuses or recognition activities is also applied through the green reward systems by organizations to stimulate proactive participation towards enhanced environmental sustainability efforts regarding GHRMPs (Ren, et al., 2018). In addition, Ahmad (2015) suggested that, through green employee involvement, a sense of sustainability culture is emerging by encouraging employee participation in the process of decisions regarding environmental-related initiatives like green teams and sustainability committees. Further, studies in emerging economies highlight that green employee involvement and

sustainable workforce planning are gaining prominence as effective GHRMPs that enhance both environmental performance and organizational reputation (Kharel et al., 2025). Other GHRMPs are, green participation programs such as getting employees' actively participate in sustainable projects and green employer branding to increase reputation as an environmentally responsible organization to attract and retain the green employees (Yusliza et al., 2020). As a whole, organizations can enhance corporate sustainability performance, improve environmental management outcomes and strengthen their reputation as socially responsible employers through the implementation of GHRMPs.

Recent studies have revealed diverse types of GHRMPs used in organizations. As there is a variety in these types. For the easy reference of the reader a summary of GHRMPs that have been identified in the past research is presented in the table 1 below.

Table 1: Types of GHRMPs identified in the past research

GHRMPs	Source
Green recruitment and selection	Ahmad (2015); Jabbour (2011); Renwick et al. (2013)
Green employer branding	Kharel et al. (2025); Tang et al. (2018); Yong et al. (2019)
Green training and development	Ahmad (2015); Jabbour & Santos (2008); Ren et al. (2018)
Green performance management	Jackson et al. (2011); Yong et al. (2019)
Green compensation and rewards	Dumont et al, (2017); Tang et al. (2018); Zibarras & Coan (2015)
Green employee involvement	Arulrajah et al. (2015); Daily et al. (2012); Kharel et al. (2025); Renwick, et al. (2013); Yong et al. (2019)
Green job design and work arrangements	Jabbour (2013); Tang et al. (2018); Arulrajah et al. (2015)
Sustainable workforce planning	Jabbour et al. (2019); Kharel et al. (2025); Pham et al. (2020)
Paperless HR systems	Renwick et al. (2013); Yong et al. (2019)

Green workplace design	Gholami et al. (2016)
Employee eco-initiatives	Norton et al. (2017); Ramus & Steger (2000)
Green health and safety management	Arulrajah et al. (2015)
Green employer-employee relations	Arulrajah et al. (2015)

4. Theories used in the GHRMP Research

The GHRMPs have been examined using several theories over the years. The Ability-Motivation-Opportunity (AMO) Theory is one of the most popular frameworks used in GHRMPs research. It describes how GHRMPs influence employee behavior by improving their abilities, motivation and access to green initiatives. According to that theory, employers can motivate staff to adopt GHRMPs by creating a positive work environment (Ababneh, 2021; Appelbaum et al., 2000). And also, Sustainable Development Theory further supported to emphasize the important role of GHRMPs in coordinating corporate strategy with organizational environmental goals (Bahuguna et al., 2022). Moreover, Person-Organization Fit Theory was used to examine how well an employee's own environmental values align with those of their company. Strong alignment increases the support and engagement of the staff members in GHRMPs (Ababneh, 2021). Further, Resource-Based View (RBV) Theory and Natural Resource-Based View (NRBV) highlight the competitive advantage gained by corporate entities when they use GHRMPs (Daily & Huang, 2001; Renwick et al., 2013; Hameed et al., 2021). Moreover, RBV and NRBV theories are also used in recent empirical research to show how firms can gain a competitive edge by implementing GHRM policies that foster environmental capabilities and staff eco-innovation (Khan et al., 2025). Furthermore, Social Exchange Theory (SET) can be used to describe how firms might promote GHRMPs through environmental responsibility (Cherian & Jacob 2012). Also, Social Identity Theory (SIT) has been used in this area of research. According to SIT, workers who work in more environmentally conscious organizations have a better dedication to involve in GHRMPs (Chaudhary, 2018).

5. Conceptualizations on GHRMPs in the Past Research

GHRMPs have been conceptualized in a variety of ways in past studies. While certain research consider GHRMPs a dependent variable impacted by leadership and organizational culture (Renwick et al., 2013), others consider GHRMPs as an independent variable influencing

employee attitudes and behaviors (Kim et al., 2019). In addition, GHRMPs have been studied as a moderating variable in the relationship between leadership and sustainability outcomes (Yusliza et al., 2020) and as a mediating factor in the relationship between corporate environmental strategies and employee engagement (Dumont et al., 2017). Moreover, according to a recent bibliometric analysis, GHRMPs are becoming more widely recognized as dynamic organizational skills that foster sustainable innovation and competitive advantage across a range of industries in addition to influencing employee environmental behavior (Austen et al., 2024).

6. Methodologies Used in the Past GHRMP Research

A wide range of research methodologies have been used in the past studies of GHRMPs. While case studies in this area offer a comprehensive understanding into organizational behaviors (Ahmad, 2015), empirical research that use surveys and interviews are frequent (Chaudhay, 2018; Ren et al., 2018). Extensive knowledge on the subject matter has been accumulated in conceptual papers and literature reviews (Daily & Huang, 2001; Dhar, 2020; Jabbour & Santos, 2008; Opatha & Arulrajah, 2014; Renwick et al., 2013). While qualitative studies have explored employee views and organizational experiences (Eriksson & Kovalainen, 2015; Robertson & Peticca, 2023), quantitative research has been used to examine the effect of GHRMPs on employee behavior and sustainability results (Ababneh, 2021; Bahuguna et al.,2020 ; Dumont et al., 2017; Guerci et al., 2016; Hameed et al., 2021; Nishii et al., 2008; Tainan et al, 2021). And also, recent studies have increasingly used longitudinal designs and multi-source data collection methods in order to capture the changing effects of GHRMPs on employee behaviors and organizational environmental performance (Alqahtani & Alshammari, 2024).

7. Contexts of the Past Research on GHRMPs

Previous studies on GHRMPs have been conducted across various countries and sectors including developed countries such as the United States, the United Kingdom and Germany exploring their use and outcomes (Ren et al., 2018). In contrast, research in emerging economies such as India and China have primarily focused on the challenges associated with adopting GHRMPs (Singh et al., 2020). Key industries, including apparel manufacturing and services have been prominent contexts for GHRMPs research (Arulrajah et al., 2015). Further, GHRM studies are increasingly concentrating on public sector organizations and service

industries in different developing nations according to recent research, . This emphasizes how regional institutional frameworks and cultural contexts affect the adoption and results of GHRMPs (Ndlovu & Sibanda, 2024). Notable studies include the impact of GHRM on employee engagement in Jordan (Ababneh, 2021), the relationship between GHRM and green organizational citizenship behavior in Taiwan (Tainan et al., 2021), the connection between GHRM and green creativity in Pakistan (Hameed et al., 2021) and the influence of GHRM on job pursuit intention through organizational prestige in India (Chaudhary, 2018).

8. Directions for Future Research on GHRMPs

Extant existing literature on GHRMPs have taken the perspective of organizations or the management where the perspective of employees is omitted. Therefore, employee perception towards GHRMP adaptation within organizations and their lived experiences will be an area of focus in future studies. Cross-cultural differences in the acceptance, adoption and usefulness of GHRMPs require further investigation (Kim et al., 2019). Furthermore, connecting GHRMPs to digitalization in organizations can be seen as a trending and needy area of investigation. Accordingly, integrating digital HRM and artificial intelligence (AI) into GHRMPs may be a productive research area. Many past studies have been conducted as cross-sectional studies, thus without focusing on the longevity of GHRMPs and their potential benefits. Therefore, longitudinal studies in this area may provide substantial knowledge on how organizations sustain GHRMPs over time.

References

Ababneh, O.M.A. (2021). How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes, *Journal of Environmental Planning and Management*, *64*(7), 1204-1226.

Ahmad, S. (2015). Green human resource management: Policies and practices. *Cogent Business & Management*, *2*(1), 1030817.

Alqahtani, F., & Alshammari, H. (2024). Exploring the impact of Green Human Resource Management on sustainable organizational performance: A longitudinal study in the manufacturing sector. *Sustainability*, *16*(5), 2950.

Arulrajah, A. A., Opatha, H. H. D. N. P., & Nawaratne, N. N. J. (2015). Green human resource management practices: A review. *Sri Lankan Journal of Human Resource Management*, *5*(1), 1-16.

Arulrajah, A. A. (2016). Green human resource management: Simplified general reflections.

International Business Research, 7(8), 101-112.

Austen, A., Smith, J., & Lee, M. (2024). Green Human Resource Management in the manufacturing sector: A bibliometric literature review. *Engineering Management in Production and Services, 16*(4), 34–47.

Bahuguna, P. C., Kumari, P., & Bhardwaj, P. (2020). Green HRM research: A bibliometric analysis of the last two decades. *An International Journal*, *27*(7), 2197–2224.

Bartolacci, F., Cagnazzo, L., & Gatti, M. (2020). Green initiatives and environmental sustainability: A review of organizational efforts to reduce environmental impact. *Journal of Environmental Management*, 123, 456-468.

Boiral, O. (2009). Greening the corporation through organizational citizenship behaviors. *Journal of Business Ethics, 87*(2), 221-236.

Chaudhary, R. (2018). Green human resource management in attracting young talent: A study of green employer branding. *Asia-Pacific Journal of Management Research and Innovation, 14*(1-2), 74-83.

Daily, B. F. & Huang, S. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, *21*(12), 1539–1552.

Darvishmotevali, M., & Altinay, L. (2022). Green HRM and environmental performance: The mediating role of environmental passion. *Journal of Hospitality and Tourism Management*, 50, 85-95.

Dhar, R. L. (2020). Green competencies and GHRM: A systematic review and future directions. *Journal of Business Research*, 118, 305–320.

Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior. *Asia Pacific Journal of Human Resources, 55*(2), 129-152.

Elkington, J. (1997). Cannibals with Forks: The Triple Bottom Line of 21st Century Business. *Capstone Publishing*.

Eriksson, P., & Kovalainen, A. (2015). *Qualitative Methods in Business Research* (2nd ed.), Sage Publications.

Fawehinmi, O., Ogbonna, B. O., Akinlabi, B. H., & Odusanya, O. I. (2020). Linking green HRM practices to employee green behavior through environmental commitment. *Journal of Cleaner Production*, 123456.

Gholami, R., Rezaei, S., Saman, M. Z. M., & Sharif, S. (2016). Green human resource management and environmental cooperation. *European Journal of International Management, 10*(3), 239-260.

Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. *Industrial Management & Data Systems, 104*(4), 364-372.

Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance. *Business Strategy and the Environment, 25*(2), 123-140.

Jabbour, C. J. C. (2013). Environmental training and environmental management maturity of Brazilian companies. *Journal of Cleaner Production, 96*, 331-338.

Jabbour, C. J. C., & de Sousa Jabbour, A. B. L. (2016). Green human resource management and green supply chain management: Linking two emerging agendas. *Journal of Cleaner Production, 112*, 1824-1833.

Jabbour, C. J. C., Seuring, S., de Sousa Jabbour, A. B. L., & Filho, M. G. (2019). Environmental management and HRM: Proposals for new research agendas. *Business Strategy and the Environment, 28*(3), 460-473.

Khan, K., Gogia, E. H., Shao, Z., Khan, N., & Nawaz, A. (2025). The impact of Green HRM practices on green innovative work behaviour: Empirical evidence from the hospitality sector of China and Pakistan. *BMC Psychology*, 13, 96.

Kharel, S., Chhetri, A. D., & Sharma, S. (2025). Advancing organizational sustainability through Green HRM: The mediating roles of green innovation and employee environmental performance. *Journal of Balkumari College*, *14*(1), 1–9.

Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2019). Multilevel influences on voluntary workplace green behavior. *Academy of Management Journal, 62*(5), 1525-1550.

Ndlovu, T., & Sibanda, S. (2024). The role of Green Human Resource Management in promoting environmental sustainability in the public sector: *Evidence from Zimbabwe. Journal of Cleaner Production,* 400, 136622.

Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2017). Employee green behavior: A meta-analysis. *Journal of Organizational Behavior, 38*(5), 628-655.

Opatha, H., & Arulrajah, A. (2014). Green Human Resource Management: Simplified General Reflections. *International Business Research, 7*(8), 101-112.

Paille, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental performance. *Journal of Business Ethics, 121*(3), 385-400.

Pham, N. T., Thanh, T. V., Tuckova, Z., & Thuy, V. T. N. (2020). The role of green human resource management in driving hotel's environmental performance. *Journal of Hospitality and Tourism Management, 44*, 85-93.

Ramus, C. A., & Steger, U. (2000). The roles of supervisory support behaviors and environmental policy in employee eco-initiatives. *Academy of Management Journal, 43*(4), 605-626.

Ren, S., Tang, G., & Jackson, S. E. (2018). Green human resource management research. *Human Resource Management Review, 28*(1), 1-11.

Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green HRM: A review and research agenda. *International Journal of Management Reviews, 15*(1), 1-14.

Saad, Z. A., Fauzi, M. A., Zulkepeli, L., Moshood, T. D., & Hussain, S. (2024). Green human resources in higher education institutions: A systematic literature review. *Journal of Applied Research in Higher Education, 17*(3), 22-38.

Shen, J., & Benson, J. (2016). When CSR is a social norm: How socially responsible human resource management affects employee work behavior. *Journal of Management, 42*(6), 1723-1746.

Singh, S. K., Chen, J., & Del Giudice, M. (2020). Green HRM and environmental sustainability. *Business Strategy and the Environment, 29*(2), 638-650.

Tainan, X., Zhang, Y., & Wang, J. (2021). Green human resource management and green organizational citizenship behavior: The role of green values as a moderating factor. *Journal of Environmental Management, 296*, 113158.

Tang, G., Chen, Y., Jiang, Y., Paille, P., & Jia, J. (2018). Green human resource management practices: Scale development and validity. *Asia Pacific Journal of Human Resources, 56*(1), 31–55.

Yusliza, M. Y., et al. (2020). A systematic review of green HRM. *Sustainability, 12*(15), 5975.

Zhang, Y., & Zhu, Y. (2019). Green HRM, ethical leadership, and green creativity. *Sustainability, 11*(16), 4644.

Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: a UK survey. *The International Journal of Human Resource Management, 26*(16), 2121–2142.

MOS REVIEW

Vol. 2, Issue 2, May 2025

Sustainable Innovation

Methma Athauda[1]

Prof. R. Senathiraja[2]

Department of Management and Organization Studies,

Faculty of Management and Finance, University of Colombo

Abstract

Leaders today must strike a balance between fostering innovation and addressing sustainability challenges. This is no small task, but it is essential for staying relevant in a world that values both progress and responsibility. Through fostering innovation, engaging stakeholders, and making data-informed, responsible decisions, leaders act as key drivers of sustainable transformation. Their commitment not only strengthens brand credibility but also enhances organizational resilience and long-term relevance in an increasingly sustainability-conscious marketplace. Sustainable innovation integrates sustainability principles throughout the innovation process. This concept review explores the understanding of sustainable innovation concepts that organizations frequently practice. This article critically examines recent practices in sustainable innovations. It reviews the theoretical frameworks utilized in prior studies, explores diverse conceptualizations and methodological approaches, and considers various organizational and cultural contexts. Concluding with proposed avenues for future inquiry, the article underscores the increasing significance of sustainable innovation in contemporary work environments.

Keywords: Sustainable Innovation, Innovations, Sustainability principles, Organizational resilience

[1] Corresponding author: kavindiathauda@gmail.com

[2]Supervisor of the research: laxumy@mos.cmb.ac.lk

1. Introduction

The demand for sustainable innovation has grown due to rapid industrialization, population expansion, and resource depletion. It is not just about creating and implementing goods, services, and procedures that minimize their adverse environmental effects, promote social justice, and ensure long-term financial sustainability. It is about addressing global challenges, such as climate change, resource scarcity, and social inequality, through innovative solutions (Schiederig et., al, 2012). Furthermore, Ch'ng et al. (2020) also stated that sustainable innovation implies the development of novel products, services, technologies, or practices that simultaneously uphold economic viability, minimize environmental impact, and promote social equity.

According to Elkington(1997), the triple bottom line concept considers social, environmental, and economic aspects and is one of the core ideas guiding sustainable innovation. By integrating these three elements, sustainable innovation seeks to provide value that extends beyond financial gain, encompassing the preservation of the environment and the well-being of society. Furthermore, sustainable innovation emphasizes the importance of cooperation and joint creation among various stakeholders, including corporations, governments, communities, and civil society organizations (Jansen & van den Bosch, 2006). Such collaboration is essential for fostering a comprehensive and holistic approach to innovation that effectively addresses complex sustainability challenges. Meanwhile, Sustainable innovation integrates sustainability principles throughout the innovation process, utilizing strategies like renewable energy, waste reduction, and inclusivity to ensure that the benefits of innovations are accessible to all, including marginalized groups (Martins & Mata, 2010).

Some scholars, such as Geissdoerfer et al. (2017), argue that sustainable innovation also necessitates a change in organizational culture and mindset from the conventional linear production and consumption paradigm to a circular economy framework. Resources are used more effectively, waste is reduced, and products are designed to be durable, repairable, and recyclable in a circular economy. This strategy lessens the environmental impact and opens up new possibilities for value development and innovative business models. Sustainable innovation can facilitate the transition to a more equitable and regenerative economy, where wealth is decoupled from resource use and environmental damage, by embracing the principles of the circular economy. Therefore, the goal of sustainable innovation is not only to develop environmentally and

socially beneficial products and services but also to foster economic growth and competitiveness by creating new markets and jobs in emerging sectors, making it a key driver of long-term business success and societal well-being (Maxwell & Van Der Vorst, 2003).

2. What is Sustainable Innovation?

Sustainable innovation is recognized as a critical concept, defined from multiple perspectives by various scholars. According to Charter & Clark (2007), sustainable innovation is a process in which sustainability considerations (environmental, social, and financial) are integrated into company systems, from idea generation to R&D and commercialization. Furthermore, Boons & Lüdeke-Freund (2013) noted that sustainable innovation involves the creation of new market offerings that deliver environmental and social benefits in addition to economic value. In 2010, the Organisation for Economic Co-operation and Development (OECD) described sustainable innovation as involving significant changes to products, processes, or business models that reduce environmental impacts and generate social value, while also delivering long-term economic returns.

3. Evolution of Sustainable Innovation

The urgent need to solve resource depletion and environmental deterioration while addressing social requirements has led to remarkable progress in sustainable innovation. Initially, the primary focus of sustainable innovation was on making small, incremental changes to existing technologies and systems to mitigate their adverse environmental impacts. Efficiency increases, waste reduction, and the adoption of greener production techniques were the defining features of this era. However, a trend toward more transformative types of innovation emerged as the shortcomings of the incremental approaches became prevalent. This shift entailed completely rethinking value chains and systems, which sparked the development of innovative technology and corporate strategies that make sustainability a primary goal rather than an afterthought (Zhu, Sarkis, & Lai, 2018).

A more comprehensive strategy that combined environmental sustainability with the concepts of social justice and economic viability arose as sustainable innovation developed further. This change reflects the realization that social responsibility, economic prosperity, and environmental care must all be balanced to achieve true sustainability. As a result, attempts to promote sustainable

innovation started to consider more general factors, including inclusive economic development, human rights, and community empowerment. This comprehensive perspective highlights the interdependence of global issues and the potential for innovation to drive constructive change in various sustainability-related areas (Morioka & Carvalho, 2019).

The development of sustainable innovation has been accelerated recently by technological advancements, effective teamwork, and legislative support. Innovations in digitization, circular economy strategies, and renewable energy have expanded the range of tools available to entrepreneurs seeking environmentally friendly solutions (Geissdoerfer et al., 2017, Lüdeke-Freund et al., 2019). Furthermore, enhanced cooperation among governmental bodies, corporations, academic institutions, and civil society organizations has promoted information exchange, resource pooling, and group efforts to achieve shared sustainability objectives. Encouraging settings for sustainable innovation have also been greatly aided by policy interventions at various levels, which offer incentives, rules, and funding sources to promote the creation and use of sustainable activities and technology (Schiederig, et.,al 2012). This ongoing evolution highlights the dynamic nature of sustainable innovation, as it continually adapts and responds to emerging challenges and opportunities in pursuit of a more sustainable future.

4. Importance of Sustainable Innovation

Sustainable innovation is crucial for effectively addressing society's numerous interrelated challenges, including resource depletion, climate change, social inequality, and economic instability. Incorporating sustainability as a top priority into the innovation process allows firms to reduce their environmental impact and provide new avenues for sustained growth and competitive advantage. According to Loorbach et al. (2017), sustainable innovation involves creating goods, services, and business models that minimize adverse environmental and societal effects while providing value to stakeholders and customers. Additionally, it enables businesses to anticipate and adapt to shifting market conditions, regulatory requirements, and social norms, thereby strengthening their resilience in a world that is becoming increasingly unpredictable and dynamic.

Furthermore, sustainable innovation promotes systemic transformation by accelerating the shift to more sustainable behaviors and lifestyles across industries and societies. Sustainable innovation

can help disrupt current patterns of unsustainable production and consumption by questioning preconceived notions and promoting alternative strategies. This revolutionary potential creates ripple effects that impact the economy and society, extending beyond specific businesses to entire industries and value chains (Geels, 2010).

Further, sustainable innovation could support co-creation and collaboration among various stakeholders, including corporations, governments, academic institutions, civil society organizations, and communities. Therefore, collaborative approaches to sustainable innovation pool resources, knowledge, and perspectives, and can produce more comprehensive and successful solutions to challenging sustainability issues (Westley, 2011).

5. Factors Influencing Sustainable Innovation

Technological, economic, social, and institutional issues are among the many interrelated aspects that impact sustainable innovation. Technological advancements significantly facilitate innovation in sustainable practices by enabling the development of cleaner, more resource-efficient technologies and processes (Carayannis & Campbell, 2009). Emerging technologies, including renewable energy, advanced materials, and digitalization, offer significant opportunities for reducing environmental impact and promoting sustainability across various sectors. Additionally, breakthroughs in biotechnology and nanotechnology are promising for addressing complex sustainability challenges, such as pollution remediation and sustainable agriculture.

Economic factors also significantly impact sustainable innovation. Market demand, legal frameworks, and financial incentives can aid or hinder the adoption of sustainable practices and technology (Fichter & Geissler, 2019). For instance, government policies such as carbon pricing, subsidies for renewable energy, and tax incentives for eco-friendly products can stimulate investment in sustainable innovation. Likewise, consumer preferences and willingness to pay for environmentally friendly products and services are crucial in shaping market dynamics and driving companies to innovate sustainably (Fichter & Geissler, 2019).

Social variables, including stakeholder engagement, cultural norms, and values, influence sustainable innovation. The general public's growing awareness and concern about social justice, the environment, and ethics are influencing business strategies and customer behavior (Bocken, Short, Rana, & Evans, 2014). Businesses are facing increasing pressure to demonstrate their

commitment to sustainability and meet the diverse needs of various stakeholders, including stakeholders from academia, government, business, and civil society must collaborate and share expertise (Wiek, Withycombe, & Redman, 2011).

Many scholars (Levy et al., 2016) have noted that institutional factors, such as policies, regulations, standards, and governance structures, play a crucial role in shaping the innovation landscape and influencing the direction of sustainable innovation. By offering clarity, stability, and incentives for investment and experimentation, effective policy interventions can foster an atmosphere that is conducive to sustainable innovation. On the other hand, innovation can be hindered by legislative obstacles, bureaucratic inertia, and a lack of political will, impeding the shift to a more sustainable future. Unlocking the full potential of sustainable innovation thus requires establishing policy consistency at the local, national, and international levels, as well as fostering institutional structures.

6. Theories related to sustainable Innovation.

Important insights into the motivations, obstacles, and outcomes of sustainable innovation projects have been gained from empirical studies on the concept of sustainable innovation. One such theoretical framework often investigated in empirical research is Elkington's Triple Bottom Line (TBL) as conceptualized in 1997. According to the TBL theory, when making choices and evaluating performance, businesses should consider social, environmental, and economic aspects in addition to economic ones. The usefulness of the TBL framework in promoting sustainable innovation methods across various industries has been confirmed by empirical studies (Schiederig et al., 2012). For instance, studies have shown that companies adopting a TBL approach tend to invest more in environmentally friendly technologies, engage with stakeholders on social issues, and integrate sustainability into their business strategies.

In addition, the Innovation Diffusion Theory (IDT), a well-established theoretical framework in empirical research on sustainable innovation, examines how innovations spread and are adopted within a society or organization (Rogers, 2003). Empirical studies drawing on IDT have investigated the factors influencing the adoption of sustainable innovations, such as renewable energy technologies, eco-friendly products, and sustainable business practices (Gupta & Barua, 2019). Critical elements that promote the spread of sustainable innovations have been found in these studies, including perceived benefits, compatibility with current practices, and social

influence. Furthermore, the role of social networks, communication channels, and policy assistance in promoting the diffusion process and accelerating the adoption of sustainable technologies has been empirically investigated (Gupta & Barua, 2019)

Similarly, the firm's Resource-Based View (RBV) has been employed in empirical studies to understand how organizations leverage their internal resources and capabilities to drive sustainable innovation (Barney, 1991). RBV states that companies can obtain a competitive edge by utilizing rare, valuable, and unique resources to produce goods and services that are not readily available elsewhere. Through investments in R&D, strategic alliances, and organizational learning, organizations can establish sustainable innovation capabilities, according to an empirical study conducted within the resource-based view (RBV) framework (Kapoor & Srikanth, 2008). To enhance organizational resilience and competitiveness in the face of sustainability challenges, these studies have emphasized the importance of fostering an innovative culture, establishing collaborative networks, and investing in human capital.

Moreover, various empirical studies have employed institutional theory to investigate how normative, regulatory, and cognitive institutions influence the adoption and implementation of sustainable innovation practices (Dimaggio & Powell, 1983). Empirical studies grounded in institutional theory have examined how regulatory frameworks, industry standards, and cultural norms influence firms' sustainability strategies and innovation decisions (Levy et al., 2016). These studies have underscored the importance of aligning organizational practices with institutional pressures, building legitimacy through stakeholder engagement, and navigating institutional contradictions to drive sustainable innovation effectively.

Other theories within the broader domains of innovation and sustainability have not yet been fully explored in this context. However, theories such as the Triple Bottom Line, Innovation Diffusion Theory (IDT), Resource-Based View (RBV), and Institutional Theory have been heavily utilized in empirical research on sustainable innovation. Systems theory is one such theory that highlights the interdependence and connectivity of different parts within a system (Bertalanffy, 1968). Although systems thinking has been used in organisational transformation and environmental management, its use in sustainable innovation is still relatively new. Systems theory may offer

critical new insights into how social, technological, and environmental elements interact to shape innovation outcomes and processes in sustainable environments.

For instance, design thinking is a human-centered approach to problem-solving that stresses empathy, creativity, and iterative prototyping. It is another idea that may be relevant to sustainable innovation (Brown, 2008). The application of design thinking to sustainable innovation has received less attention than in product design, service innovation, and organisational transformation projects. Design thinking can help create innovative solutions that address social and environmental issues while meeting consumer preferences by incorporating sustainability principles. Future study opportunities are presented by the fact that empirical research on the use of design thinking in sustainable innovation contexts is still in its early stages of development.

In 1995, Holland argued that Complexity Theory provides a theoretical framework for understanding the dynamics of innovation ecosystems and the emergence of innovative solutions in complex and uncertain contexts. Complexity theory emphasizes the significance of self-organization, emergence, and adaptation in shaping the trajectory and outcomes of innovation. While complexity theory has been used in organisational studies, economics, and ecology, its application to sustainable innovation is still in its infancy. Complexity theory can help develop resilience, variety, and innovation-promoting tactics in sustainability transitions by recognizing the intrinsic uncertainty and non-linearity of sustainability difficulties. The application of complexity theory to sustainable innovation may lead to empirical studies that provide critical new insights into the dynamics of innovation ecosystems and the conditions that support transformative change.

7. Empirical studies on sustainable Innovation

Empirical research on sustainable innovation covers various subjects and approaches and offers insightful information about sustainable innovation projects' drivers, inhibitors, and results. For instance, to investigate green innovation in technology and innovation management, Schiederig et al. (2012) conducted an exploratory literature study. Their analysis compiled results from numerous empirical investigations, emphasising important patterns, obstacles, and industry-wide best practices in sustainable innovation. The authors identified key factors influencing the adoption and implementation of green innovation strategies, including regulatory frameworks,

technological capabilities, market dynamics, and organizational culture, by analyzing empirical evidence from various sources, such as case studies, surveys, and interviews.

Additionally, identifying the critical elements that influence the uptake and implementation of sustainable innovation projects has been a significant area of focus for empirical research in this field. Research has investigated the influence of several factors, such as organizational culture, regulatory contexts, stakeholder engagement, leadership commitment, and organizational culture, on the development of sustainable innovation in businesses (Bansal & Roth, 2000).

Furthermore, some studies (Gupta & Barua, 2019) employed the Innovation Diffusion Theory (IDT) paradigm in an empirical study to examine the adoption of renewable energy technology. The researchers examined the variables influencing the adoption of renewable energy technology within the industry, using survey data from a sample of businesses in the renewable energy sector. Their research revealed that several factors, including government policies, perceived benefits, and the suitability of current practices, significantly influenced businesses' decisions to adopt renewable energy technologies. Through the empirical testing of theoretical frameworks such as IDT, this study advanced our understanding of how businesses navigate sustainability challenges in rapidly changing industries and provided insightful information about the mechanisms guiding the adoption and diffusion of sustainable innovations in the renewable energy sector. Moreover, innovations can drive sustainable development by transforming individuals, organizations, supply chains, and communities, offering hope for a more sustainable future (Silvestre & Tirca, 2019). The developed measurement scale for innovation management in the food industry has been validated, with social aspects having the most influence, followed by economic and environmental aspects.

8. Implications, Suggestions, and Conclusion.

Organizations looking to promote sustainable innovation should consider several important implications, which are supported by the empirical research and theories now available on the subject. First and foremost, businesses must adopt a comprehensive strategy that incorporates social, environmental, and economic factors into their innovation plans in a manner consistent with the Triple Bottom Line. This means that making decisions about innovation, social responsibility, and environmental stewardship must be given equal weight to financial performance. Organizations can also enhance their ability to navigate market dynamics and regulatory contexts

by utilizing theories like the Innovation Diffusion Theory (IDT) to understand better the factors driving the adoption and spread of sustainable innovations.

Furthermore, the advancement of sustainable innovation projects depends on cultivating an innovative and collaborative culture within firms. Organizations can increase their potential for sustainable innovation by investing in the development of internal competencies, knowledge-sharing channels, and collaborative networks, according to the Resource-Based View (RBV) theory. Furthermore, adopting complex theory and design thinking concepts can help firms experiment, iterate, and learn by devising innovative and flexible solutions to challenging sustainability problems. Organizations can seize new opportunities to deliver value while addressing pressing environmental and social challenges by adopting a holistic approach and fostering an innovative culture.

Conclusively, sustainable innovation is an essential requirement for enterprises seeking to prosper in a planet that is growing increasingly complex and interconnected by the day. Organisations can gain valuable insights into the drivers, impediments, and consequences of sustainable innovation projects by utilising empirical studies and concepts such as the Triple Bottom Line (TBL), Innovation Diffusion Theory (IDT), and the Resource-Based View (RBV), among others. Organizations can enhance their ability to innovate sustainably and create positive social, economic, and environmental impacts by adopting a holistic approach, fostering collaboration, and incorporating principles of design thinking and complexity theory. To stimulate sustainable innovation and contribute to a more resilient and equitable future, businesses can benefit from combining insights from theoretical frameworks and empirical research as they continue to grapple with sustainable issues.

References:

Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. Academy of Management Journal, 43(4), 717–736. https://doi.org/10.2307/1556363

Barney, J. B. (1991). Firm resources and sustained competitive advantage, Journal of Management, 17(1), 99–120.

Bertalanffy, L. von. (1968). General system theory: Foundations, development, applications. George Braziller.

Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. Journal of Cleaner Production, 65, 42-56.

Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45, 9–19. https://doi.org/10.1016/j.jclepro.2012.07.007

Brown, T. (2008). Design thinking. Harvard Business Review, 86(6), 84–92.

Carayannis, E. G., & Campbell, D. F. (2009). "Mode 3" and "Quadruple Helix": Toward a 21st-Century Fractal Innovation Ecosystem. International Journal of Technology Management, 46(3/4), 201–234.

Charter, M., & Clark, T. (2007). *Sustainable Innovation: Key conclusions from sustainable innovation conferences 2003–2006 organised by The Centre for Sustainable Design.* University for the Creative Arts.

Ch'ng, P., Cheah, J., & Amran, A. (2020). Eco-innovation practices and sustainable business performance: The moderating effect of market turbulence in the Malaysian technology industry. Journal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2020.124556

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48(2), 147-160.

Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business. New Society Publishers.

Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st century business. New Society Publishers.

Fichter, K., & Geissler, M. (2019). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. Journal of Cleaner Production, 208, 993-1004.

Geels, F. W. (2010). Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. Research Policy, 39(4), 495–510. https://doi.org/10.1016/j.respol.2010.01.022

Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The Circular Economy – A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757–768. https://doi.org/10.1016/j.jclepro.2016.12.048

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The circular economy–A new sustainability paradigm? Journal of Cleaner Production, 143, 757-768.

Gupta, S., & Barua, M. K. (2019). Adoption of renewable energy technology: The role of innovation diffusion models. Journal of Environmental Management, 232, 457-470.

Gupta, S., & Barua, M. K. (2019). Adoption of renewable energy technology: The role of innovation diffusion models. Journal of Environmental Management, 232, 457-470.

Holland, J. H. (1995). Hidden order: How adaptation builds complexity. Basic Books.

Horbach, J., & Rammer, C. (2020). The role of innovation and innovation policy in fostering green growth. Environmental Innovation and Societal Transitions, 34, 202–211. https://doi.org/10.1016/j.eist.2020.04.001

Jansen, J. J., & van den Bosch, F. A. (2006). Factors enabling and inhibiting the integration of environmental management systems and quality management systems. Management Decision.

Kapoor, R., & Srikanth, K. (2008). Impact of learning and R&D investment on firm's value: Evidence from high-tech manufacturing industry. International Journal of Production Economics, 113(2), 521-535.

Leesatapornwongsa et al. (2023). Developed a Sustainability Measurement for Innovation Performance for the Food Industry.

Lepak, D. P., & Smith, K. G. (2007). Value creation and value capture: A multilevel perspective. Academy of Management Review, 32(1), 180–194. https://doi.org/10.5465/amr.2007.23466005

Levy, D. L., Egan, D., & Erhardt, G. D. (2016). The institutional dynamics of green political economy: Local business strategies and climate change policy. Organization & Environment, 29(3), 259-281. Leesatapornwongsa, F., Thawesaengskulthai, N., & Vaiyavuth, R. (2023).

Developing a Sustainability Measurement for Innovation Performance for the Food Industry. Sustainability. https://doi.org/10.3390/su152416714.

Levy, D. L., Egan, D., & Erhardt, G. D. (2016). The institutional dynamics of green political economy: Local business strategies and climate change policy. Organization & Environment, 29(3), 259-281.

Loorbach, D., Frantzeskaki, N., & Avelino, F. (2017). Sustainability transitions research: Transforming science and practice for societal change. Annual Review of Environment and Resources, 42(1), 599–626. https://doi.org/10.1146/annurev-environ-102014-021340

Lüdeke-Freund, F., Carroux, S., Joyce, A., Massa, L., & Breuer, H. (2019). The sustainable business model pattern taxonomy—45 patterns to support sustainability-oriented business model innovation. *Sustainable Production and Consumption*, 24, 132–146. https://doi.org/10.1016/j.spc.2020.02.003

Martins, A., & Mata, T. M. (2010). Technology transfer and sustainability. Clean Technologies and Environmental Policy, 12(1-2), 1-2. https://doi.org/10.1007/S10098-009-0273-9

Maxwell, D., & Van Der Vorst, R. V. D. (2003). Developing sustainable products and services. Journal of Cleaner Production, 11(8-11), 883-895. https://doi.org/10.1016/S0959-6526(02)00164-6

Morioka, S. N., & Carvalho, M. M. (2019). Sustainable innovation: What is it? A systematic review. Sustainability, 11(8), 2381. https://doi.org/10.3390/su11082381

Organisation for Economic Co-operation and Development (OECD). (2010). *Eco-Innovation in Industry: Enabling Green Growth.* OECD Publishing. https://doi.org/10.1787/9789264077225-en

Rogers, E. M. (2003). Diffusion of innovations (5th ed.). Free Press.

Schiederig, T., Tietze, F., & Herstatt, C. (2012). Green innovation in technology and innovation management – an exploratory literature review. R&D Management, 42(2), 180-192.

Silvestre, B., & Ţîrcă, D. (2019). Innovations for sustainable development: Moving toward a sustainable future. Journal of Cleaner Production. https://doi.org/10.1016/J.JCLEPRO.2018.09.244.

Westley, F., Olsson, P., Folke, C., Homer-Dixon, T., & Vredenburg, H. (2011). Tipping toward sustainability: Emerging pathways of transformation. Ambio, 40(7), 762–780. https://doi.org/10.1007/s13280-011-0186-9

Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: a reference framework for academic program development. Sustainability Science, 6(2), 203-218.

Zhu, Q., Sarkis, J., & Lai, K. H. (2018). Environmental innovation in sustainable supply chain management: An emerging country perspective. International Journal of Operations & Production Management, 38(4), 1026–1049. https://doi.org/10.1108/IJOPM-02-2016-0075

MOS REVIEW

Vol. 2, Issue 2, May 2025

Transforming Management Education Through Team-Based Learning

Paboda Wickramage[1]

Prof. Sashika Abeydeera[2]

Department of Management and Organization Studies,

Faculty of Management and Finance, University of Colombo

Abstract

Team-based learning (TBL) has become a pivotal teaching and learning methodology in management education, promoting not only students' academic achievements but also the development of their essential soft skills, including communication, leadership, and collaboration. Despite its potential benefits, the effectiveness of TBL varies significantly among the management undergraduates, who are budding decision makers and leaders of tomorrow's workplace. Research highlights that factors, including role ambiguity, interpersonal conflicts, and poor coordination, hinder team performance in academic contexts. Building on this foundation, this literature survey explores the dynamics of team-based learning, especially in management higher education, including some related frameworks. These frameworks help contextualize how teams evolve and how alignment in understanding can enhance team outcomes. In conclusion, the review also examines strategies that enhance TBL in academic settings, laying the groundwork to create greater possibilities in management education.

Keywords: Team-based learning, management education, teamwork, collaboration, pedagogy

[1]Corresponding author: pabodhawicramage@gmail.com
[2]Supervisor of the research: sashika@mos.cmb.ac.lk

1. Introduction

As a pedagogical methodology that has garnered considerable attention among Higher Educational Institutions (HEIs), particularly in management education (Moyo, 2024), team-based learning (TBL) creates a positive influence on student learning outcomes, engagement levels and skill enhancement (Vlachopoulos et al., 2021; Yang, 2022). TBL calls for the strategic incorporation of teamwork into the curriculum to nurture collaborative learning, enhance critical thinking capabilities, and foster interpersonal skills among students (Yang, 2022). Empirical evidence suggests that students who engage in team-based activities exhibit improved problem-solving competencies and heightened social development in management education (Moyo, 2024; Vlachopoulos et al., 2021).

Teamwork involves collaborative actions where individuals work together to attain a common goal, creating a shared commitment (Cohen & Levesque, 1991). It is widely acknowledged as a crucial ability in a variety of settings, especially in academic and professional spheres where it is associated with effectiveness, creativity, and superior performance (Hackman, 2002; Salas et al., 2020; West & Lyubovnikova, 2013). According to research, teamwork is an organized, cooperative effort in which participants use their special talents, expertise, and knowledge to accomplish common goals (Kozlowski & Ilgen, 2006; Hackman, 2002). Trust, open communication, and empowered leadership are the cornerstones of effective teamwork essential for encouraging collaboration, cooperation and improving team output (Hughes & Jones, 2011). Collaboration not only enhances creativity, problem-solving skills, and decision-making but also increases productivity, job satisfaction, and lowers stress levels in businesses (Mathieu et al., 2017). Since collaboration enables students with vital skills required for both academic and professional success, integrating TBL into educational environments, especially in management, is crucial (Salas et al., 2012).

2. Team-based learning (TBL)

TBL has been used as a collaborative teaching methodology since its inception in the late 1970s and has seen its applications especially in the health sciences but also in the fields of education and information technology (Tucker & Brewster, 2015). Team-based assignments are collaborative tasks that help students pool their varied knowledge, abilities, and resources toward a shared goal by having them work in groups to finish a project or solve an issue. Michaelsen and Sweet (2008), pioneers in enacting TBL, underscore the reliance on small group interactions that it has than any other pedagogical methodology. By supporting and learning from one another, students use this collaborative method to enhance both individual and collective learning outcomes, leading to a deeper comprehension of the content (Moyo, 2024). To adequately prepare students for the collaborative nature of professional practice, team-based tasks are especially beneficial. According to research, these kinds of tasks assist students in strengthening their interpersonal skills as well as their collaborative abilities, all of which are critical for their future roles in professional settings (Vlachopoulos et al., 2021).

Going beyond simply covering the content, TBL empowers students to apply taught concepts to real-world scenarios, enabling them with both conceptual and procedural knowledge (Michaelsen & Sweet, 2008). Providing a comprehensive overview, Michaelsen and Sweet (2008) explain four essential elements of team-based learning including (i) properly formed and managed teams, (ii) hold students accountable and responsible for the quality of individual and team work performed, (iii) provide timely and constant feedback for improvement, (iv) design assignments that promotes both learning and team development.

Instructors have a crucial role to play in team formation and transformation. Well-formed teams ensure diversity and resource richness of the participants, enabling them to grow into

learning groups. Appointed teams will stick together for the entire course duration without being shuffled to ensure group cohesiveness. Students are held accountable for themselves, their teammates, and the instructor. As a lack of preparedness hinders both individual and team development, instructors are supposed to make sure that the students are made aware of their responsibility to be accountable for themselves and their respective teams. Moreover, immediate feedback on TBL activities performed is of paramount importance for team development. Finally, designing the right tasks and assignments to sharpen the skills and attitudes is one of the most crucial elements in the successful implementation of TBL (Vlachopoulos et al., 2021).

TBL is embraced in higher education as a carefully structured collaborative learning methodology. Research highlights how crucial it is to plan carefully for team-based projects to ensure fair participation and optimise the educational advantages for students (Michaelsen & Sweet, 2008; Vlachopoulos et al., 2021). The enactment of TBL unfolds as a process providing instructional guidance commencing from (i) pre-class, (ii) first day of class, (iii) each major unit and (iv) end of the course design (Michaelsen & Sweet, 2008). These points, when done well, can greatly aid in the development of vital soft skills that are necessary for success in the modern workforce, such as problem-solving, communication, and teamwork (Salas et al., 2012). Furthermore, Haidet et al. (2012) identify and articulate seven core design elements that underlie the TBL method and relate them to educational principles that maximize student engagement and learning within teams. They are: (i) descriptions of discipline-specific actions to be developed in the coursework; (ii) constructing comprehensive assignments enabling students to practice application; (iii) identifying content sources to use for the course; (iv) developing team readiness assurance processes; (v) developing team tasks or application activities; (vi) consideration how students continue working alone or groups inside or outside of class;

(vii) consideration on module structuration, processes and components of learning sequences. These guidelines will allow authors and reviewers to successfully replicate TBL implementations and draw meaningful conclusions about observed outcomes.

Sharing valuable practical insights and implications for educators in management education through their study, Vlachopoulos et al. (2021) delineate how TBL effectively enhance student engagement, experience and learning, along with fostering teamwork and communication skills. Focusing on students' learning experience, they revealed that TBL significantly increased the number of hours spent studying, requiring more student involvement. Moreover, the study found a positive relationship between in-built TBL assessments and final grades, pointing to the capacity of student performance. A closer look at TBL in management education is presented next.

3. Useful theories in promoting team-based learning

3.1 Kolb's Theory of Experiential Learning

Findings in neuroscience, cognitive science and psychology elucidate the importance of action or hands-on experience involving tasks during the learning process (Bransford, 2000; Zull, 2011). Willingham (2009), a cognitive psychologist, states that active engagement in tasks enables students to transfer their knowledge from working memory to long-term memory. In 1984, David Kolb, a psychologist and educational theorist, published his Experiential Learning Theory, which suggests learning is cyclical (meaning a process). Experience sets the foundation of the learning process through active participation and reflection (Kolb, 1984).

As Kolb puts it, the experience of an action/task helps students to observe and reflect on the consequences. Reflection enables learners to develop a conceptual understanding of what happened. Such conceptualization, in turn, creates opportunities for experimentation where they get to practice the knowledge obtained. Thus, the ongoing interplay between active

experiences, reflective observation and conceptualization would promote active experimentation of knowledge into new areas. This process is depicted through Kolb's Experiential Learning Theory/Cycle presented in Figure1below.

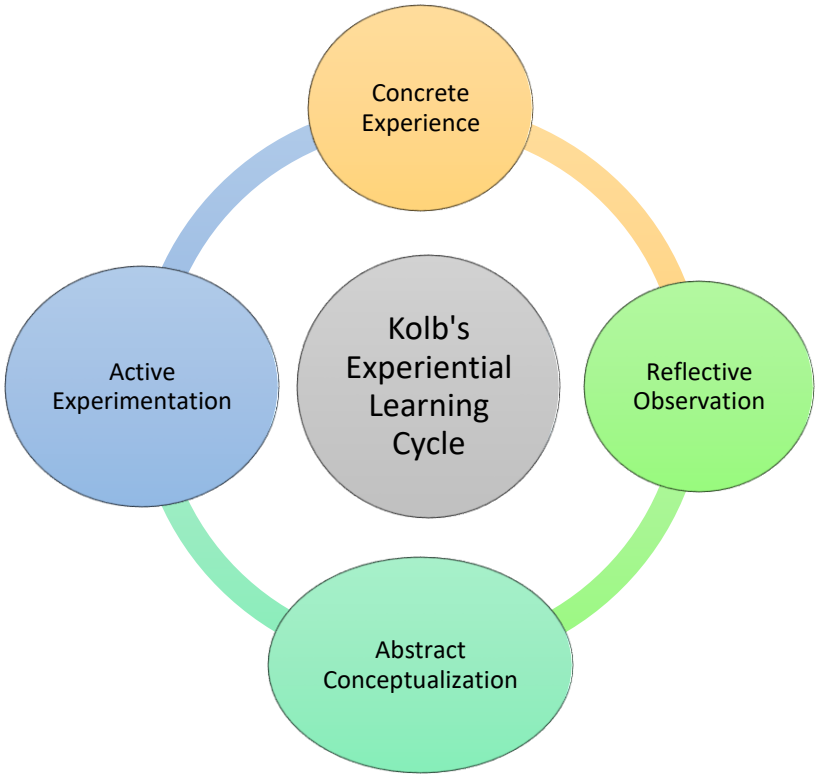

Figure 1: The Kolb Experiential Learning Theory/Cycle
Source: McLeod, 2010

Conventional teaching methods like lectures, audio and visual aids, including watching a video, hardly deliver a full understanding. One of the most important jobs of an instructor is to design and stage opportunities for students to perform. Cyclical action, reflection, conceptualization, and active experimenting lead to active student learning, allowing them to be more intentional and more competent in their thinking and actions. Team-based activities and tasks induce active learning, leading to reflection and greater awareness, which then leads to receptiveness to new information, integration of that information and planning for more informed actions.

3.2 Tuckman’s Team Development Model

Bruce W. Tuckman's foundational team development model, introduced in 1965, is an essential aspect of group dynamics that has been used in teaching and practice to enhance team performance and, ultimately, project outcomes. This model identifies five stages teams generally undergo: forming, storming, norming, performing, and adjourning (Tuckman, 1965). Each stage comprises diverse behaviours and matters that affect the development and effectiveness of the team.

During the forming stage, the members of the team are involved in building relationships and a sense of belonging. Afterwards comes the storming stage, where conflicts and disagreements are likely to arise as members get used to each other's personalities and working styles. The norming stage indicates the setting up of ground rules and efficient teamwork, as duties and responsibilities are now more defined and team unity becomes stronger. The performance stage is the time when teams reach the point of being highly efficient and effective, thus working more easily toward the same goals. Finally, the adjourning stage signifies the termination of the team's work, where members take part in the acknowledgement of the completion of their project and the reflection of their experiences (Hurt & Trombley, 2007).

The theoretical model's main strength is that it makes team leaders and managers aware that team development is a natural process and helps them to manage it more effectively. By being able to spot and anticipate the difficulties that come with each stage, leaders can apply tailored approaches to ensure more seamless transitions and thus, a more cooperative atmosphere. For instance, during the storming phase, the efficient conflict resolution techniques are being used to solve the disagreements constructively, which is why the team morale is maintained and the escalation is prevented. Similarly, the norming phase provides

a chance to restate team goals and set up clear communication channels, which are the main factors of long-term success (Benoliel & Schechter, 2018).

The work of Tuckman and Jensen (1977), titled ‘Stages of Small Group Development Revisited’, has been a key study that widened the scope of the original four stages by including the adjourning phase, which showed the need for team lifecycle acknowledgement, especially in project-based settings. This enhancement inherently illustrates the model's applicability in different domains, ranging from business projects to student teamwork (Benoliel & Schechter, 2018).

Stewart and Barrick (2000) build on this and suggest that team development is a smooth process where groups manoeuvre from uncertainty to effectiveness through the recognised stages. The model can also be evidenced in virtual team settings where remote communication and problem-solving become unique issues. Saavedra and Kwun (1993) used Tuckman’s model to examine virtual team performance, and they found it a good tool for observing how high-performance teams can still perform even if placed in different locations.

The practical implications of Tuckman's model are endless. Nguyen and Mohamed (2011) proved that by using the model as a framework, project managers were able to understand the team’s performance in project environments and help it to grow. Furthermore, technology has been accepted as a key element in the process of going through Tuckman's stages, especially in the remote work setting (McMahon & Watson, 2023). In the case of digital instruments, tools can be used which facilitate the exchange of information, sort and assign the tasks, and keep track of the accomplishment of these tasks. These are key elements in conveying the concept of performance (McMahon & Watson, 2023). Besides, education programs that focus on teamwork skills, like emotional intelligence, conflict resolution, and cultural competence, are essential to the teams, and they help each group to

overcome the obstacles at each stage (Salas et al., 2012). Figure 2 depicts Tuckman's team development stages graphically as follows:

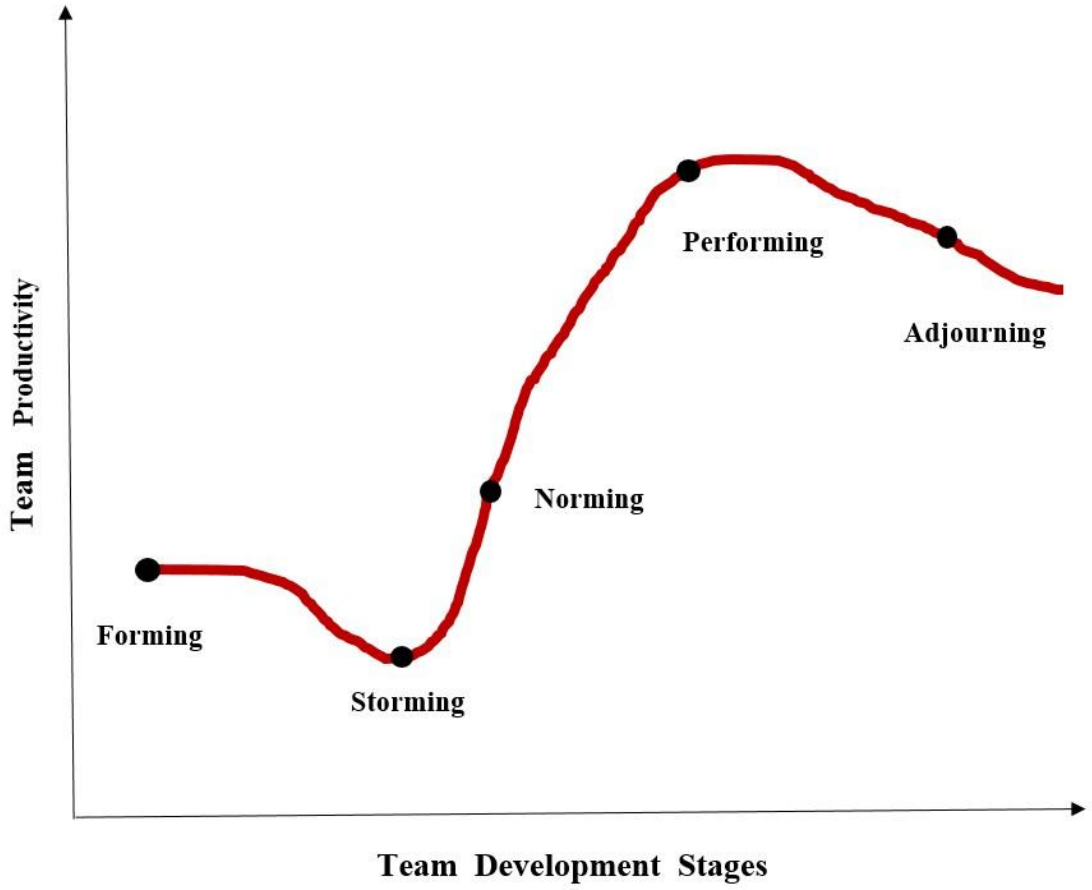

Figure 2: Tuckman's Team Development Model

Source: Tuckman, 1965

3.3 Shared Mental Models

Shared Mental Models (SMMs) are key in strengthening the team's functionality and communication across various subjects. It is a "team-level construct representing a shared understanding of the knowledge relevant to a team that is created through the interaction of the team members" (Mathieu et al., 2000, p. 275), and besides that, SMMs are important topics shared among individuals that include goals, roles, and expectations within the team (Marks et al., 2000). For example, SMM refers to a collective cognitive framework that enables students to build mutual understanding of their roles, obligations, and goals in a

team. This common understanding makes the process of coordination and communication smoother, which are necessary for top-notch teamwork (Mathieu et al., 2000).

In academic situations where teams often meet new challenges and task parameters are different, having a mental framework in common helps students to be more effective in aligning their efforts toward common goals (Fox et al., 2001). This, together with the reduction of miscommunication and duplications, enhances the team's work quality. The team's capacity to regularly track the group's development and the clarity of its goals also make the team more adaptable and hence innovating easier, which are necessary competencies in management education (Van den Bossche et al., 2011). The promotion of SMMs among the team members can be an expected performance indicator. The research reveals that groups with a high level of developed SMMs work well since these models give a basis for personal forecast leading to better teamwork and decision-making (Mohammed et al., 2010; Santos et al., 2015).

The development of shared mental models among students can be influenced by several factors, including the composition of the team, the nature of the task, and the learning environment. For instance, diverse teams, which include members with different perspectives and experiences, may face challenges in developing SMMs due to the varying mental models each member possesses (Mohammed et al., 2010). However, this diversity can also be an asset, as it can lead to more comprehensive and innovative solutions when the team successfully integrates these different perspectives into a cohesive SMM (Santos et al., 2015).

4. Team-based learning in management education

Teamwork plays a vital role in management education, attributable to its significance in equipping students for professional achievement within the intricate work settings. The

incorporation of TBL in management education facilitates the cultivation of vital competencies such as communication, problem-solving, and leadership, which are valued by employers (Pfaff & Huddleston, 2003). Especially, TBL is identified as a useful pedagogical approach for students' team learning to analyze and diagnose business and organizational situations from behavioral science theory (Moyo, 2024). Investigating the efficacy of TBL in management education, Moyo (2024) states that it reinforces students' diagnostic skills, teamwork skills, and reflective skills in the practice of organizational behaviour. Furthermore, TBL allows students to assimilate varied perspectives, thereby promoting a more profound comprehension of inclusivity and cultural diversity (Halfhill & Nielsen, 2007).

The advantages of TBL transcend mere academic and professional readiness. Engaging in collaborative learning fosters a sense of community and belonging, which can prove particularly beneficial for students confronting the myriad challenges inherent in management education (Cavanagh et al., 2016). In addition, teamwork enriches the educational experience by enabling students to participate in group assignments, projects, and presentations, all of which contribute to their academic success and personal growth (Vu & Dall'Alba, 2007). Through these collaborative endeavours, students cultivate critical thinking, creativity, conflict resolution, and empathy—attributes that are indispensable in both academic and professional arenas (Ohland et al., 2012).

TBL in management education also holds considerable importance in the development of leadership and followership attributes, both of which are vital in any professional context (Falchikov & Goldfinch, 2000). Employers are increasingly inclined to recruit graduates who demonstrate proficiency in effective teamwork, thereby rendering teamwork an essential facet of the higher education experience. By nurturing these competencies, academic institutions prepare students with the relevant skills necessary for thriving in the

workforce and contribute to their sustained professional advancement. Collaboration among executive management teams, consisting of individuals with varying strengths and expertise, is vital for addressing intricate challenges and executing crucial decisions. This collaborative methodology enhances the quality of education, research, and outreach initiatives within universities, consequently augmenting their overall relevance and impact (Wageman et al., 2008).

Furthermore, extant research underscores the critical importance of teamwork in interdisciplinary and cross-cultural contexts within the sphere of higher education (Moyo, 2024; Ohland et al., 2012). As students increasingly partake in globalised learning environments, teamwork emerges as an indispensable element for fostering cultural competence, empathy, and global awareness (Sharma et al., 2021). The aptitude to collaborate effectively within diverse teams, particularly in fields such as engineering, healthcare, and business, where interdisciplinary collaboration is essential for tackling complex challenges (Manley et al., 2011).

Despite its advantages, the formulation of effective teamwork strategies in higher education continues to pose significant challenges. Educators are tasked with addressing concerns related to group dynamics, equity in assessment, and the management of conflicts that may arise within teams (Dolmans et al., 2016). Additionally, the transition towards online and hybrid learning modalities has introduced novel challenges in nurturing teamwork, necessitating innovative strategies to maintain student engagement and collaboration (McMahon & Watson, 2023).

To enhance teamwork practices in management education, academic institutions are investigating new methodologies and technological advancements. The application of digital tools, including collaborative platforms and virtual simulations, has exhibited potential in improving TBL and offering students authentic experiences within a controlled

academic framework (Brown et al., 2020; Gardner & Korth, 1998). These innovations are paramount as higher education institutions strive to equip students for the collaborative demands of the contemporary workplace.

5. Honing teamwork skills among management students

In the contemporary globalised economic landscape, the cultivation of soft skills, with particular emphasis on teamwork, has emerged as increasingly imperative for graduates transitioning into the workforce. Proficiency in teamwork is indispensable for achieving success in professional domains as well as in various facets of life (Gaskamp et al., 2016). Within the realm of higher education, the promotion of these skills facilitates students' ability to become more adaptable, flexible, and responsive to evolving circumstances (Azevedo et al., 2012). Through participation in collaborative efforts, students augment their communication and interpersonal capabilities, assume leadership responsibilities, and acquire the aptitude to effectively manage and resolve conflicts (Halfhill & Nielsen, 2007). Empirical research indicates that students engaging in team-based activities frequently encounter enhanced academic performance, greater satisfaction with their educational experiences, and an elevated probability of degree attainment (Cavanagh et al., 2016).

Consequently, the formulation of a curriculum that emphasises teamwork is of paramount importance in higher education. The integration of collaborative learning experiences alongside the encouragement of active engagement and transparent communication within the curriculum equips students with the requisite competencies to excel in collaborative settings (Gaskamp, 2016).

The enhancement of undergraduate teamwork skills is vital, as it promotes collaboration, enriches the learning experience, and contributes to individual growth. Critical to the successful implementation of TBL are four essential elements that must be incorporated (i) teams must be properly formed and managed; (ii) students must be motivated to come to

class prepared; (iii) students must learn to use course concepts to solve problems; (iv) students must be truly accountable (Sweet & Michaelsen, 2012). Effective teamwork necessitates self-reflection, peer assessment, conflict resolution, leadership, and communication competencies (Fellenz, 2006). Scholarly investigations underscore the significance of self and peer-assessment frameworks, practical illustrations, and evaluation rubrics in the cultivation of these essential skills (Zhang et al., 2019). Given that numerous academic disciplines necessitate robust teamwork competencies, graduates must possess these skills to maintain a competitive edge in the labour market (Kilic, 2016).

The goal of management education is to equip students with both theoretical understanding and practical abilities to make informed decisions, manage teams, and navigate complex business environments (Benoliel & Schechter, 2018). Upon graduation, management undergraduates may pursue careers in a variety of fields, such as business, government, healthcare, and non-profit organisations (Azevedo et al., 2012).

The relevance of teamwork to management undergraduates is particularly significant as it prepares them for the collaborative nature of modern business practices. In addition to being a fundamental component of effective management, teamwork is also a vital talent. Management students get the ability to collaborate well with their peers through group projects, case studies, and simulations; this fosters leadership, communication, and conflict resolution abilities (Kilic, 2016). These experiences mirror real-world work environments where managers are required to guide groups of people, plan events, and work together to accomplish company goals. In addition, engaging in teamwork strengthens students' capacity to manage a range of viewpoints, transition between roles, and cultivate empathy - all essential skills for managing effectively in multicultural and interdisciplinary contexts (West & Lyubovnikova, 2013).

As employers increasingly seek graduates who can demonstrate both technical proficiency and the capacity to communicate effectively within teams, the development of teamwork abilities in management education is also associated with better job outcomes (Mathieu, 2017). As a result, integrating teamwork into the curriculum is crucial to graduating students who can make a significant contribution to organisational performance in addition to being aware of management principles.

6. Challenges of team-based learning

Learning in teams offers unique benefits to understand and address contemporary, global, and local challenges through effective and thoughtful learning journeys. Moreover, teamwork can provide a mechanism for learners to apply course concepts to real life and personal and professional experiences as they work together as members of a team. However, learning in teams is not always thoroughly planned or effectively delivered. Some of the limitations identified in existing research on team-based learning include erroneous study designs, inaccurate or incomplete implementation of the team-based learning methodology, insufficient or lack of statistical information, and small sample sizes (Vlachopoulos et al., 2021). McKay and Sridharan (2021) state that challenges also include issues with communication conflicts within the team, discrepancies in work standards and output quality, among team members, unresponsive teammates, and task division problems.

Team members often struggle with establishing trust and rapport, understanding assessment tasks, and managing time (Ter Beek et al., 2022). There are several pitfalls for learning in teams. In general, students resist team learning if they have had previous negative experiences of teams and if they have experienced unequal distribution of workload within teams (Brown et al., 2020). Wageman et al. (2008) highlight the need to

make students aware of the importance of collaborative learning and what is expected of them through training to apply team-based learning in higher education.

In addition, teamwork challenges include interpersonal conflicts, lack of trust, ineffective communication, role confusion, unequal participation, and difficulties coordinating schedules. Cultural differences, varying working styles, and decision-making problems due to disagreements also create obstacles (Hackman, 2002). Parratt (2014) highlights issues such as coordination problems, unequal contributions, and power dynamics among team members in team-based assignments. Pereira da Silva et al. (2020) add that teams face difficulties in coordination, communication gaps, meeting deadlines, lack of enthusiasm, role ambiguity, resistance to collaboration due to individualistic approaches, ineffective management strategies, and unfamiliarity with text analysis, cultural, and historical contexts.

Teams involve difficulties in coordination, gaps in communication and meeting deadlines, lack of enthusiasm among team members, role ambiguity and accountability, resistance to collaboration due to the individualistic approach, haphazard management strategies, and unfamiliarity with text analysis, cultural and historical contexts (Ter Beek et al., 2022).

Furthermore, cognitive distortions such as the self-serving bias can be a barrier to effective teamwork. These distortions cause individuals to overestimate their abilities and contributions while undervaluing those of others, leading to impaired communication and distrust among team members, ultimately affecting team effectiveness (Ashcraft & Treadwell, 2008). Despite these obstacles, fostering a collaborative team environment through clear instructions from colleagues and strong organisational skills can facilitate effective team development (McKay & Sridharan, 2021).

7. Strategies to overcome barriers to team-based learning

Effective environments for learning in teams must be thoughtfully designed and specifically supported. Additionally, effective learning in teams ensures that the team process, as well as the project outcome, are both considered and assessed. Many of our social problems are incredibly complex, and they require multiple voices, concepts, and perspectives to be highlighted. Hence, providing space for dialogue and purpose for a team can be a powerful teaching modality that can promote lasting learning. Taking time to develop team agreements, clarifying team objectives, and team processes is essential to success (Manion et al.,2020).

Overcoming barriers to effective teamwork in higher education is a complex task that demands a well-rounded mix of strategies that are both interpersonal and structural. One key factor is the influence of gender inclusiveness, which can endow teams with intellectual and social resources and foster both male and female members to gain a sense of responsibility for the team's success (Hosseini et al., 2018). Another important issue is the method of assigning group members. Strategies, such as self-selection, instructor-selection, random assignment, hybrid methods, and purposeful assignment, can be used. Self-selected groups are often good when it comes to communication and enthusiasm, but they are weak when it comes to time management and commitment (McMahon & Watson, 2023). Cooperative learning is an effective strategy for students to work together in problem-solving and knowledge sharing, thus improving their learning outcomes (McKay & Sridharan, 2021). Besides, a well-organised framework for teamwork can promote the whole team's competence. This framework provides a seamless understanding and commitment to team goals, the development of teamwork skills such as communication and conflict resolution, and coaching teams towards high-performing units. These, however, not only improve team dynamics but also encourage students to engage with

peers, which leads to a better understanding of course material (Gardner & Korth, 1998). Factors considered critical in the design and implementation of learning in teams in higher education include: (i) thoughtful and meaningful design; (ii) team building and teaching of team skills; (iii) introducing team tools (for example, team agreements and contracts); (iv) imparting communication and conflict resolution skills; and (v) asssessing both team process and team deliverable (Manion et al., 2020).

Munirudheen and Kumudha's (2014) study shows that dealing with the obstacles to knowledge co-production in higher education is a must. Health care workers' lack of motivation often results from the fact that they have not been provided with the basic skills and the willingness to do the job they were hired for, which is sometimes due to the lenient admission policies (Munirudheen & Kumudha, 2014). Moreover, according to the study, the best practices for the management of the students' attitudes and abilities include the abovementioned strategies, which are each quite different in terms of their forms and means. The proposed actions include mentoring programs, peer instruction, and adequate assistance for the students who demand it. In addition, the research gives prominence to the idea that building an inclusive atmosphere, which celebrates the different abilities and points of view of the entire team, thereby facilitating a constructive dialogue among the various members (Munirudheen & Kumudha, 2014). These purposes do not intend to become the primary goal of the academic world, yet are crucial for the formation of dynamic and productive learning teams.

The problem on the way to truthfulness in the team can also be solved either by forming such an atmosphere where everyone will be openly sincere with each other /or by removing all the obstacles within the team. A paramount method in this regard is to build up/encourage communication and open the dialogue between the participants.

Communicating is not only helpful to explain which tasks and roles are, but it also minimises the drawbacks of misunderstandings, which are often the causes of teamwork failure (Salas et al., 2012). Apart from that, the initiation of trust within the team's formation is the key to this idea. The process of trust establishment can be made easier by encouraging transparency, accountability, and mutual respect among team members. Trust plays the role of the fundamental background on which collaboration is founded and acts as a substructure for decreasing the influence of conflicts and biases, which might be a hindrance to this process (Sharma et al., 2021).

One more way is to set specific common goals to make the team's work align with the overall team's purpose. Team members are better able to work together and refuse to succumb to the motivational and engagement strains if they are clear about how their efforts are part of the team dynamic (Hackman, 2002). Apart from that, diversity and equal participation should be encouraged in teams to deal with power dynamics and avoid voices from dominating the team's success, thus giving all the members the chance to contribute to the team's success (Hosseini, 2018).

Recent researches also highlight the importance of using technology to promote teamwork, especially in remote or hybrid settings. The tools that help in the ways of communication, work coordination, and monitoring progress can solve the logistical and geographical problems. These solutions include collaborative platforms and project management software (McMahon & Watson, 2023). More importantly, Salas et al. (2012) argue that teams can be better equipped to handle challenges and move beyond them if only they are trained in teamwork skills like emotional intelligence, conflict resolution, and cultural competency. In addition, adopting these strategies as the standard of operation within

educational institutions can be used to create a more cooperative and efficient learning environment.

8. Directions for future research

Despite TBL promoting collaborative skills, including teamwork, negotiating power, and conflict resolution potential among students, only a limited number of studies have explored the transfer of learning into behavioral changes in successive real-world performance (Haidet et al., 2014). Thus, a more structured approach, better training for both students and teachers, and an emphasis on assessing the process rather than the outcome of collaboration have been suggested as a potential solution to address some of these challenges (McMahon & Watson, 2023).

The literature on TBL remains at an important maturation point, calling for more scholarly' explorations (Haidet et al., 2014). What factors predict or are related to students' perceptions of the TBL method, and how student perceptions relate to learning in TBL environments, are areas to be looked at from the students' point of view. Moreover, 'how are attitudinal changes toward working in TBL teams related to teamwork behaviours in subsequent work settings?' and 'how are teachers' attitudes related to the success of the method?' are some of the research questions that are yet to be explored to stimulate conversations around the successful implementation of TBL in management education.

References

Ashcraft, D. M., & Treadwell, T. (2008). The social psychology of online collaborative learning: The good, the bad, and the awkward. In K. L. Orvis & A. L. R. Lassiter (Eds.), *Computer-supported collaborative learning: Best practices and principles for instructors* (pp. 140–163). IGI Global.

Azevedo, A., Ferrari, F., Silva, G., & Carmo, I. (2012). Competency development in business graduates: A European comparative study. *The International Journal of Management Education, 10,* 128–141.

Benoliel, P., & Schechter, C. (2018). Teamwork doubting and doubting teamwork. *Improving Schools, 21*(3), 225–239. https://doi.org/10.1177/1365480218791908

Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). National Academy Press.

Brown, M. I., Prewett, M. S., & Grossenbacher, M. A. (2020). Distancing ourselves from geographic dispersion: An examination of perceived virtuality in teams. *Group Dynamics: Theory, Research, and Practice, 24*(3), 168–185. https://doi.org/10.1037/gdn0000120

Cavanagh, A. J., Aragón, O. R., Chen, X., Couch, B. A., Durham, M. F., Bobrownicki, A., Hanauer, D. I., & Graham, M. J. (2016). Student buy-in to active learning in a college science course. *CBE—Life Sciences Education, 15*(4), ar76. https://doi.org/10.1187/cbe.16-07-0212

Cohen, P. R., & Levesque, H. J. (1991). Teamwork. Nous, 25(4), 487–512. https://doi.org/https://doi.org/10.2307/2216075

Dolmans, D. H. J. M., Loyens, S. M. M., Marcq, H., & Gijbels, D. (2016). Deep and surface learning in problem-based learning: A review of the literature. *Advances in Health Sciences Education, 21*, 1087–1112. https://doi.org/10.1007/s10459-015-9645-6

Falchikov, N., & Goldfinch, J. (2000). Student peer assessment in higher education: A metaanalysis comparing peer and teacher marks. Review of Educational Research, 70(3), 287–322. https://doi.org/https://doi.org/10.3102/00346543070003287

Fellenz, M. R. (2006). Toward fairness in assessing student groupwork: A protocol for peer evaluation of individual contributions. *Journal of Management Education, 30*(4), 497–518. https://doi.org/10.1177/1052562906286713

Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for

autonomy and emotions. *Journal of Vocational Behavior, 59*(3), 291–309. https://doi.org/10.1006/jvbe.2001.1803

Gardner, B., & Korth, S. (1998). A framework for learning to work in teams. Journal of Education for Business, 74(1), 28–33. https://doi.org/https://doi.org/10.1080/08832329809601657

Gaskamp, C., Haque, T. M., Cullen, J. C., & Martin, J. (2016). Experiential Learning through Project-Based Teamwork: A Half-Principle for Teaching Globalization Competence. Journal of Teaching in International Business, 27(4), 252–270.

Hackman, J. R. (2002). Leading Teams: Setting the stage for great performances. Harvard Business Press.

Haidet, P., Kubitz, K., & McCormack, W. T. (2014). Analysis of the team-based learning literature: TBL comes of age. *Journal on Excellence in College Teaching*, *25*(3–4), 303–333.

Haidet, P., Levine, R., Parmelee, D., Crow, S., Kennedy, F., Kelley, A., Perkowski, L., Michaelsen, L., & Richards, B. (2012). Perspective: Guidelines for Reporting Team-Based Learning Activities in the Medical and Health Sciences Education Literature. Academic Medicine, 87 (3), 292-299.

Halfhill, T. R., & Nielsen, T. M. (2007). Quantifying the "softer side" of management education: An example using teamwork competencies. *Journal of Management Education, 31*(5), 683–711. https://doi.org/10.1177/1052562906287777

Hosseini, M. R., Bosch-Sijtsema, P., Arashpour, M., Chileshe, N., & Merschbrock, C. (2018). A qualitative investigation of perceived impacts of virtuality on effectiveness of hybrid construction project teams. *Construction Innovation, 18*(1), 109–131. https://doi.org/10.1108/CI-10-2016-0052

Hughes, R. L., & Jones, S. K. (2011). Developing and Assessing College Student Teamwork Skills. New Directions for Institutional Research, 149, 53–64.

Hurt, A. C., & Trombley, S. M. (2007). *The punctuated-Tuckman: Towards a new group development model*. Educational Resources Information Center (ERIC), ED504567.

Kilic, A. (2016). Effects of cooperative learning on teamwork skills and academic competencies of web design students. Contemporary Educational Technology, 7(1), 64–79.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. Psychological Science in the Public Interest, 7(3), 77–124. https://doi.org/https://doi.org/10.1016/0030-5073(79)90053-9

Manion, K., Shah-Preusser, N., Dyck, T., Thackeray, S., & Palahicky, S. (2020). Learning in teams: Collaboratively guiding the journey. *Collected Essays on Learning and Teaching*, *13*, 25–40. https://doi.org/10.22329/celt.v13i0.6373

Manley, K., McCormack, B., & Wilson, V. (2011). International evidence on nurse and midwife prescribing: An update on policy and curriculum planning implications. Journal of Nursing Management, 19, 632–642.

Marks, M. A., Zaccaro, S. J., & Mathieu, J. E. (2000). Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of Applied Psychology, 85*(6), 971–986. https://doi.org/10.1037/0021-9010.85.6.971

Mathieu, J. E., Gallaagher, P. T., Domingo, M. A., & Klock, E. A. (2017). Emphasizing team-oriented leadership and leadership development in organizations. Annual Review of Organizational Psychology and Organizational Behavior, 6, 135–158.

Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. (2000). The influence of shared mental models on team process and performance. *Journal of Applied Psychology, 85*(2), 273–283. https://doi.org/10.1037/0021-9010.85.2.273

McKay, J., & Sridharan, B. (2021). Student perceptions of collaborative group work. Studies in Higher Education, 49(2), 221–234. https://doi.org/10.1080/03075079.2023.2227677

McLeod, S. A. (2010). *Zone of proximal development*. Simply Psychology. Retrieved October 3, 2014, from https://www.simplypsychology.org/Zone-of-Proximal-Development.html

McMahon, J. W., & Watson, C. (2023). Remote teamwork and hybrid collaboration: Strategies for success in the modern workplace. Journal of Organizational Behavior, 44(1), 45–62.

Michaelsen, L. K., & Sweet, M. (2008). The essential elements of team-based learning. *New Directions for Teaching and Learning*, 7–27. https://doi.org/10.1002/tl.330

Mohammed, S., Ferzandi, L., & Hamilton, K. (2010). Metaphor no more: A 15-year review of the team mental model construct. *Journal of Management, 36*(4), 876–910.

Moyo, S. (2024). Evaluation of Team-Based Learning and Learning Intervention Model as a Teaching Methodology for Organizational Behavior Management Coursework. Open Journal of Business and Management, 12, 3166-3207. https://doi.org/10.4236/ojbm.2024.125160

Munirudheen, A., & Kumudha, A. (2014). Strategic management interventions for coproduction in public higher education. *Global Journal of Commerce & Management Perspective, 3*(4), 172–176.

Nguyen, H. N., & Mohamed, S. (2011). Leadership behaviors, organizational culture and knowledge management practices: An empirical investigation. *Journal of Management Development, 30*(2), 206–221. https://doi.org/10.1108/02621711111105786

Ohland, M. W., Loughry, M. L., Woehr, D. J., Bullard, L. G., Felder, R. M., Finelli, C. J., Layton, R. A., Pomeranz, H. R., & Schmucker, D. G. (2012). The comprehensive assessment of team member effectiveness: Development of a behaviorally anchored rating scale for self- and peer evaluation. *Academy of Management Learning & Education, 11*(4), 609–630. https://doi.org/10.5465/amle.2010.0177

Parratt, J. A., Fahy, K. M., Hastie, C. R., Chaseling, M., Lohmann, G., & O'Brien, K. (2014). Expert validation of a teamwork assessment rubric: A modified Delphi study. *Nurse Education Today, 36*, 77–85. https://doi.org/10.1016/j.nedt.2015.07.023

Pereira da Silva, L., Carvalho, P. V., & De Souza, F. T. (2020). Interprofessional teamwork in healthcare: Challenges and perspectives. Journal of Interprofessional Care, 34(4), 426–433.

Pfaff, E., & Huddleston, P. (2003). Does It Matter if I Hate Teamwork? What Impacts Student Attitudes toward Teamwork. Journal of Marketing Education, 25(1), 37–45. https://doi.org/https://doi.org/10.1177/0273475302250571

Saavedra, R., & Kwun, S. K. (1993). Peer evaluation in self-managing work groups. *Journal of Applied Psychology, 78*(3), 450–462. https://doi.org/10.1037/0021-9010.78.3.450

Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazzara, E. H. (2012). Team Creativity and Innovation: The impact of team composition and individual creativity. Organizational Behavior and Human Decision Processes, 118(1), 102–115.

Santos, C. M., Uitdewilligen, S., & Passos, A. M. (2015). Why is your team more creative than mine? The influence of shared mental models on intra-group conflict, team creativity and effectiveness. *Creativity and Innovation Management, 24*(4), 645–658. https://doi.org/10.1111/caim.12129

Sharma, P., Shahi, A. S., & Bajwa, S. (2021). Teamwork in globalized learning environments: A pathway to cultural competence and empathy. Journal of Global Education and Research, 5(2), 120–135.

Stewart, G. L., & Barrick, M. R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *Academy of Management Journal, 43*(2), 135–148. https://doi.org/10.2307/1556372

Sweet, M., & Michaelsen, L. K. (2012). Team-Based Learning in the Social Sciences and Humanities. Stylus Publishing.

Ter Beek, M. H., Cledou, G., Hennicker, R., & Proença, J. (2022). Can we communicate? Using dynamic logic to verify team automata (extended version). Technical report. https://doi.org/10.5281/zenodo.7418074

Tucker, J. M., & Brewster, M. P. (2015). Evaluating the effectiveness of team-based learning in undergraduate criminal justice courses. *Journal of Criminal Justice Education, 26*(4), 446–470.

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(6), 384–399. https://doi.org/10.1037/h0022100

Tuckman, B. W., & Jensen, M. A. C. (1977). Stages of small-group development revisited. *Group & Organization Studies, 2*(4), 419–427. https://doi.org/10.1177/105960117700200404

Van den Bossche, P., Gijselaers, W. H., Segers, M., Woltjer, G., & Kirschner, P. A. (2011). Team learning: Building shared mental models. *Instructional Science, 39*(3), 283–301. https://doi.org/10.1007/s11251-010-9128-3

Vlachopoulos, P., Jan, S. K., & Buckton, R. (2021). A case for Team-Based Learning as an effective collaborative learning methodology in higher education. *College Teaching, 69*(2), 69–77. https://doi.org/10.1080/87567555.2020.1816889

Vu, T. T., & Dall'Alba, G. (2007). *Students' experience of peer assessment in a professional course*. Assessment and Evaluation in Higher Education, 32(5), 577–594. https://doi.org/10.1080/02602930601116896

Wageman, R., Nunes, D., Burruss, J., & Hackman, J. R. (2008). Senior leadership teams: What it takes to make them great. Harvard Business Review Press. https://doi.org/https://books.google.lk/books?id=jl21CgAAQBAJ

West, M. A., & Lyubovnikova, J. (2013). Illusions of team working in healthcare. Journal of Health Organization and Management, 27(1), 134–142. https://doi.org/https://doi.org/10.1108/14777261311311843

Willingham, D. T. (2009). *Why don't students like school?: A cognitive scientist answers questions about how the mind works and what it means for your classroom*. San Francisco, CA: Jossey-Bass.

Yang, Y. T. (2022). Gender diverse teams produce more novel and higher-impact scientific ideas. Proceedings of the National Academy of Sciences USA, 119(36), e2200841119. https://doi.org/https://doi.org/10.1073/pnas.2200841119

Zhang, W., Qi, F., Liu, W., Chen, J., & Zhang, Y. (2019). Self-and Peer Evaluation in the Development of Collaborative Skills among University Students. Chinese Education and Society, 52(5), 446–458.

Zull, J. E. (2011). *From brain to mind: Using neuroscience to guide change in education* (1st ed.). Stylus Publishing (Routledge).

MOS REVIEW

Vol. 2, Issue. 2, May 2025

Leadership Styles

E. G. M. P. K. Jeewanthi[1]

Seuwandhi B. Ranasinghe[2]

Department of Management and Organization Studies,

Faculty of Management and Finance, University of Colombo, Sri Lanka

Abstract

This paper explores the evolving landscape of leadership styles within management research, emphasizing the theoretical, methodological, and contextual dimensions. It begins by defining leadership styles as the characteristic behaviors and strategies leaders employ to influence their teams, drawing on classical typologies such as autocratic, democratic, transformational, transactional, servant, and authentic leadership. Recent research underscores a shift toward more dynamic, inclusive, and ethical leadership approaches. The paper reviews key theoretical frameworks underpinning leadership style research, including trait, behavioral, contingency, transformational, and social identity theories, as well as the social constructionist perspective, which views leadership as a relational and discursively constructed phenomenon. Methodologically, the paper discusses the dominance of quantitative approaches and the growing use of qualitative and mixed methods to explore the lived, contextual experiences of leadership in practice. Finally, it outlines future research directions that advocate for culturally inclusive, critically informed, and context-sensitive studies. leadership in complex organizational settings.

Keywords: Manager, Leadership Styles, Social Construction, Context

[1] Corresponding author: egmuthu1999@gmail.com

[2]Supervisor of the research: seuwandhi@mos.cmb.ac.lk

1. Leadership Styles

Leadership has long been recognized as a pivotal factor influencing organizational effectiveness, employee satisfaction, and performance outcomes. At the core of leadership theory lies the concept of *leadership styles*, which refer to the characteristic behaviors, strategies, and attitudes leaders employ to guide, influence, and interact with their teams (Northouse, 2021). Leadership styles shape how decisions are made, how power is distributed, and how organizational goals are achieved. Over the decades, scholars have developed a wide range of typologies to classify leadership styles, including but not limited to autocratic, democratic, laissez-faire (Lewin et al., 1939), transformational, transactional (Bass & Avolio, 1994), servant (Greenleaf, 2002), and authentic leadership (Avolio & Gardner, 2005).

Research has underscored the growing complexity of leadership in contemporary, dynamic organizational contexts. With increasing emphasis on diversity, globalization, digital transformation, and employee empowerment, traditional leadership paradigms have evolved to accommodate more adaptive, inclusive, and context-specific approaches (Dinh et al., 2014).

2. Recent research around Leadership Styles

As we know, leaders with autocratic leadership styles do not consider the ideas of their subordinators (Debebe, 2020) while in democratic leadership styles leaders seek suggestions from their subordinators in making decisions (Srivathsav et al., 2023). Transformational leadership inspires, motivates, and encourages subordinates to generate changes and innovate to help organizational growth (Karie & Kulmiye, 2023) while transactional leadership on the other hand, seeks for a transactional based relationship between the leader and the follower (Srivathsav, et al., 2023). Recent scholarship has increasingly recognized that leadership styles are not static constructs but dynamic and context-sensitive, shaped by the evolving demands of modern organizations. Emerging research highlights several trends that have redefined how leadership styles are conceptualized, operationalized, and applied across diverse organizational settings.

There is growing emphasis on inclusive leadership, particularly in response to increasing workplace diversity and the need for psychological safety. Inclusive leadership is characterized by openness, accessibility, and availability, creating environments where diverse voices are valued and empowered (Carmeli et al., 2010; Nishii, 2013). Randel et al. (2018) illustrates how inclusive leadership enhances team performance by fostering a sense of belonging and

uniqueness among employees. This is in contrast to autocratic styles which affect employee performance and their grievances and frustration (Debebe, 2020)

Another emergent focus is on ethical and servant leadership styles in the context of corporate social responsibility and stakeholder governance. Studies have shown that ethical leadership contributes to positive organizational outcomes, including trust, engagement, and reduced deviance (Hoch et al., 2018). Similarly, servant leadership, which prioritizes the needs of followers, has been linked to higher levels of job satisfaction, organizational citizenship behavior, and team effectiveness (Eva et al., 2019).

Contemporary leadership research is also increasingly contextual and culturally sensitive. The GLOBE study and its subsequent analyses have shown that leadership expectations and preferences vary significantly across cultures, with some societies favoring participative styles while others lean toward assertiveness and hierarchy (Dorfman et al., 2012). This has fueled a broader movement toward understanding leadership as a socially constructed and situationally adaptive process.

3. Theories used to study Leadership Styles

The study of leadership styles has been informed by a diverse array of theoretical perspectives that aim to explain how leaders influence, motivate, and interact with followers. These theories serve as the conceptual foundations through which leadership behaviors are categorized, analyzed, and evaluated within organizational and social contexts.

One of the earliest theoretical approaches to leadership is the Trait Theory, which posits that effective leaders possess innate characteristics that differentiate them from non-leaders (Zaccaro, 2007). Moving beyond static attributes, Behavioral Theories focus on the actions of leaders rather than their inherent qualities. Contingency Theories, such as Fiedler's Contingency Model and the Path-Goal Theory, introduced the idea that the effectiveness of leadership styles depends on contextual variables including leader-member relations, task structure, and positional power (Fiedler, 1967; House, 1971). These frameworks marked a significant shift by acknowledging that no single leadership style is universally effective across all situations.

The Transformational and Transactional Leadership Theory, developed by Bass (1985), remains one of the most influential in contemporary leadership research. Transformational

leaders inspire and intellectually stimulate followers, while transactional leaders focus on exchanges and rewards. Empirical studies have consistently linked transformational leadership with higher levels of employee satisfaction, commitment, and performance (Bass & Riggio, 2006; Judge & Piccolo, 2004).

In recent years, scholars have also turned to Authentic Leadership and Servant Leadership as frameworks emphasizing ethical, relational, and follower-centered leadership (see Walumbwa et al., 2008; Eva et al., 2019). Social Identity Theory of Leadership on the other hand, argues that leaders are most effective when they are seen as prototypical of the group they lead (Hogg, 2001). This perspective has enriched understanding of leadership in diverse and pluralistic organizational settings by incorporating group dynamics and identity processes into leadership analysis.

The social constructionist perspective on the other hand represents a paradigmatic shift in leadership studies, moving away from essentialist, trait-based, and objective behavioral categorizations of leadership styles toward understanding leadership as a relational, discursive, and contextually situated phenomenon (Fairhurst & Grant, 2010). From this viewpoint, leadership styles are not fixed attributes or behaviors possessed by individuals, but are co-constructed through social interactions, language, and cultural meanings within particular organizational and societal contexts. Social constructionism emphasizes the idea that reality is not discovered but created through shared interpretations and communicative acts (Berger & Luckmann, 1966). Applying this to leadership, scholars argue that what counts as "effective leadership" or a particular "style" of leading (e.g., transformational, servant, or authentic) is shaped by social norms, institutional logics, and discursive practices that evolve over time (Alvesson & Spicer, 2012). While there are many studies on the functionalist elements of leadership styles and its effects, there is limited research on how leadership styles are socially constructed using Berger and Luckmann's (1966) conceptual lenses.

4. Methodologies used in Leadership Styles Research

The study of leadership styles in management has employed a wide range of research methodologies to explore how leadership is understood, practiced, and evaluated in organizational contexts. These methodological approaches—quantitative, qualitative, and mixed methods—reflect both the epistemological diversity within leadership research and the evolving complexity of leadership phenomena in contemporary organizational studies.

Quantitative methodologies have traditionally dominated leadership research, particularly in testing theories such as transformational and transactional leadership. These studies often utilize standardized instruments and large datasets to identify statistically significant relationships between leadership styles and outcomes such as employee performance, satisfaction, and organizational effectiveness. The *Multifactor Leadership Questionnaire* (MLQ), developed by Bass and Avolio (1995), is one of the most widely used instruments in this tradition, allowing researchers to quantitatively assess the presence of different leadership styles across samples. Meta-analytic reviews have further cemented the role of quantitative methods in establishing empirical generalizations. For instance, Judge and Piccolo (2004) conducted a meta-analysis examining the predictive validity of transformational and transactional leadership, confirming strong links between these styles and various organizational outcomes. Similarly, Derue et al. (2011) conducted a meta-analytic integration of trait and behavioral theories of leadership, reinforcing the predictive utility of measurable leadership constructs.

In contrast, qualitative methodologies provide deeper, context-sensitive insights into the lived experiences and social constructions of leadership. These methods are particularly valuable in exploring leadership styles as relational, cultural, and identity-driven phenomena. Approaches such as ethnography, narrative inquiry, case studies, and discourse analysis allow researchers to investigate how leadership is enacted, interpreted, and negotiated in everyday organizational settings (Parry, 1998). For example, Alvesson and Sveningsson (2003) conducted an ethnographic study revealing the mundane and often contradictory practices of middle managers, challenging idealized portrayals of charismatic leadership styles. Similarly, Fairhurst (2007) used discourse analysis to examine how leadership is constructed through communicative interactions, thereby problematizing fixed categorizations of leadership styles.

Mixed methods research integrates both quantitative and qualitative approaches, enabling a more holistic understanding of leadership styles. This methodology is increasingly employed to bridge the strengths of both paradigms—combining the generalizability of quantitative data with the depth of qualitative insights (Creswell & Clark, 2018). In leadership studies, mixed methods are often used in sequential or concurrent designs to explore how leadership styles are experienced and perceived across different organizational levels. For instance, Hannah et al. (2009) used a mixed methods design to investigate the development of authentic leadership

styles. Their approach combined survey data with interviews to reveal how leaders internalize authenticity through reflection and feedback. Mixed methods designs have also been used in cross-cultural leadership research to examine how leadership styles are interpreted and adapted across different socio-cultural contexts (Dinh et al., 2014).

5. Contexts of leadership style research

Leadership styles have been studied across a range of contexts, revealing important cultural and situational nuances. In Western settings, transformational leadership is often linked to enhanced project outcomes, although its effectiveness is moderated by cultural dimensions like power distance (Abbas & Ali, 2023). In contexts such as Russia, the impact of leadership style depends on individual cultural orientation, with authoritarian styles leading to higher emotional exhaustion among high power-distance followers (Ehrnrooth et al., 2024).

Leadership research in both Asia and Africa highlights the influence of culture and context on leadership effectiveness. In the context of Africa, studies show that transformational leadership positively correlates with perceived organizational effectiveness within multinational corporations operating in South Africa (Muzondiwa et al., 2022). Moreover, research rooted in African philosophies emphasizes Ubuntu-based servant leadership, framing leadership as relational, communal, and ethically grounded—a dimension underrepresented in traditional Western leadership theories (Zvavahera, 2021). Within South African workplace settings, cultural intelligence was shown to predict empowering leadership styles more strongly than directive approaches, highlighting the role of leader CQ in culturally diverse teams (Solomon & Steyn, 2017). In East Africa (Kenya), regional research among devolved government officers found that transformational leadership significantly improves strategy implementation, whereas transactional leadership showed no positive effect (Gichuki et al., 2024). In the context of Asia, although there are fewer studies, has demonstrated that transformational leadership enhances job satisfaction and innovation by inspiring creativity and empowerment (Marliana et al., 2025).

Cross-cultural studies show that transformational leadership is generally effective across countries, but its specific behaviors—such as intellectual stimulation—vary in impact based on national cultural values (Liu et al., 2014; Van Dierendonck et al., 2021). During the contexts of crises, effective leadership often involves a combination of ethical responsiveness, emotional intelligence, and adaptability, with transformational leadership particularly valued

in healthcare and high-pressure industries (Collins et al., 2023). These findings highlight the importance of contextualizing leadership styles to culture, geography, and crisis dynamics.

6. Directions for Future Research

While substantial progress has been made in the empirical and theoretical understanding of leadership styles, emerging workplace dynamics and societal shifts demand a recalibration of research agendas. Much of the empirical literature on leadership styles is Western-centric, raising concerns about cultural inclusivity. Future studies could investigate indigenous and context-specific leadership frameworks, particularly in underrepresented regions in the Global South (Tuleja & Green, 2022). A significant opportunity exists to move beyond static typologies and examine leadership styles as evolving, co-constructed processes. Building on discursive and relational approaches (Fairhurst & Grant, 2020), future studies could explore how leadership styles are continuously negotiated through everyday practices and organizational discourse.

References

Abbas, M., & Ali, R. (2023). Transformational versus transactional leadership styles and project success: A meta-analytic review. *European Management Journal, 41*(1), 125–142. https://doi.org/10.1016/j.emj.2021.10.011

Alvesson, M., & Spicer, A. (2012). Critical leadership studies: The case for critical performativity. *Human Relations, 65*(3), 367–390. https://doi.org/10.1177/0018726711430555

Alvesson, M., & Sveningsson, S. (2003). Managers doing leadership: The extra-ordinarization of the mundane. *Human Relations, 56*(12), 1435–1459. https://doi.org/10.1177/00187267035612001

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*(3), 315–338. https://doi.org/10.1016/j.leaqua.2005.03.001

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Psychology Press.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Anchor Books.

Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal, 22*(3), 250–260. https://doi.org/10.1080/10400419.2010.504654

Collins, M.D., Dasborough, M.T., Gregg, H.R., Xu, C., Deen, C.M., He, Y., & Restubog, S.L.D. (2023). Traversing the storm: An interdisciplinary review of crisis leadership. *The Leadership Quarterly, 34*(1), 101661. https://doi.org/10.1016/j.leaqua.2022.101661.

Creswell, J. W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.

Debebe, R. (2020). The Effect of leadership style and organizational culture on performance of small and medium enterprises in Jig-Jiga city: A Literature Review. *Munich Personal RePEc Archive*. Retrieved from https://mpra.ub.uni-muenchen.de/104822/

Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J. (2014). Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives. *The Leadership Quarterly, 25*(1), 36–62. https://doi.org/10.1016/j.leaqua.2013.11.005

Dorfman, P. W., Javidan, M., Hanges, P. J., Dastmalchian, A., & House, R. J. (2012). GLOBE: A twenty-year journey into the intriguing world of culture and leadership. *Journal of World Business, 47*(4), 504–518. https://doi.org/10.1016/j.jwb.2012.01.004

Derue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology, 64*(1), 7–52. https://doi.org/10.1111/j.1744-6570.2010.01201.x

Ehrnrooth, M., Koveshnikov, A., Balabanova, E., & Wechtler, H. (2024). Western and non-Western leadership styles and employee wellbeing: A case of a high-power-distance context. *Frontiers in Psychology, 14*, 1261893. https://doi.org/10.3389/fpsyg.2024.1261893

Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D., & Liden, R. C. (2019). Servant leadership: A systematic review and call for future research. *The Leadership Quarterly, 30*(1), 111–132. https://doi.org/10.1016/j.leaqua.2018.07.004

Fairhurst, G. T. (2007). *Discursive leadership: In conversation with leadership psychology*. SAGE Publications.

Fairhurst, G. T., & Grant, D. (2020). The social construction of leadership: A sailing guide for contemporary scholarship. *Management Communication Quarterly, 34*(2), 171–210. https://doi.org/10.1177/0893318919890945

Fiedler, F. E. (1967). *A theory of leadership effectiveness*. McGraw-Hill.

Gichuki, G. K., Karanja, K., & Atikiya, R. (2024). The influence of transformational and transactional leadership styles on the implementation of strategic plans by devolved governments in Kenya. *Journal of Agriculture, Science and Technology, 23*(2), 76–123. https://doi.org/10.4314/jagst.v23i2.6

Greenleaf, R. K. (2002). *Servant leadership: A journey into the nature of legitimate power and greatness* (25th anniversary ed.). Paulist Press. (Original work published 1977)

Hannah, S. T., Woolfolk, R. L., & Lord, R. G. (2009). Leader self-structure: A framework for positive leadership. *Journal of Organizational Behavior, 30*(2), 269–290. https://doi.org/10.1002/job.586

Hoch, J. E., Bommer, W. H., Dulebohn, J. H., & Wu, D. (2018). Do ethical, authentic, and servant leadership explain variance above and beyond transformational leadership? A meta-analysis. *Journal of Management, 44*(2), 501–529. https://doi.org/10.1177/0149206316665461

Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review, 5*(3), 184–200. https://doi.org/10.1207/S15327957PSPR0503_1

House, R. J. (1971). A path-goal theory of leader effectiveness. *Administrative Science Quarterly, 16*(3), 321–339. https://doi.org/10.2307/2391905

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*(5), 755–768. https://doi.org/10.1037/0021-9010.89.5.755

Karie, O. H., & Kulmiye, B. A. (2023). Leadership Styles and Organizational Performance: A Literature Review. *European Journal of Social Science Studies, 9*, 110-121. doi:10.46827/ejsss.v9i2.1574

Lewin, K., Lippitt, R., & White, R. K. (1939). Patterns of aggressive behavior in experimentally created 'social climates.' *The Journal of Social Psychology, 10*(2), 269–299. https://doi.org/10.1080/00224545.1939.9713366

Liu, W., Waldman, D. A., & Zhang, Z. (2014). Top management's transformational leader behaviors and innovation orientation: A cross-cultural perspective in eight countries. *Journal of International Management, 20*(2), 124–136. https://doi.org/10.1016/j.intman.2013.04.003

Marliana, T., Yanuar, I. E. S., Sova, M., & Rosa, T. (2025). Transformational leadership and job satisfaction: A study of creative industries in Asia. *Darussalam Journal of Psychology and Educational Studies, 3*(2), 94–106. https://doi.org/10.70363/djpe.v3i2.270

Muzondiwa, Y. T., Swarts, I., & Schultz, C. M. (2022). The relationship between transformational leadership, perceived organisational effectiveness and organisational culture in a selected multinational corporation in Africa. *SA Journal of Human Resource Management, 20*, Article a1888. https://doi.org/10.4102/sajhrm.v20i0.1888

Nishii, L. H. (2013). The benefits of climate for inclusion for gender-diverse groups. *Academy of Management Journal, 56*(6), 1754–1774. https://doi.org/10.5465/amj.2009.0823

Northouse, P. G. (2021). *Leadership: Theory and practice* (9th ed.). Sage Publications.

Parry, K. W. (1998). Grounded theory and social process: A new direction for leadership research. *The Leadership Quarterly, 9*(1), 85–105. https://doi.org/10.1016/S1048-9843(98)90043-1

Randel, A. E., Galvin, B. M., Shore, L. M., Ehrhart, K. H., Chung, B. G., Dean, M. A., & Kedharnath, U. (2018). Inclusive leadership: Realizing positive outcomes through belongingness and being valued for uniqueness. *Human Resource Management Review, 28*(2), 190–203. https://doi.org/10.1016/j.hrmr.2017.07.002

Solomon, A., & Steyn, R. (2017). Leadership styles: The role of cultural intelligence. *SA Journal of Industrial Psychology, 43*, Article a1436. https://doi.org/10.4102/sajip.v43i0.1436

Srivathsav, S., Goutham, S., Subash, R., & Gomathy, C. (2023, September). A Study on Leadership Styles and Importance in Organization. *International Journal of Scientific Research in Engineering and Management,* 10(1), 1-19. https://ijsrem.com/download/a-study-on-leadership-styles-and-importance-in-organization/

Tuleja, E. A., & Green, T. D. (2022). Global leadership across cultures: A dialogic and comparative perspective. *International Journal of Cross-Cultural Management, 22*(1), 45–63. https://doi.org/10.1177/14705958221086057

Van Dierendonck, D., et al. (2021). Transformational leadership across cultures: Follower perception and satisfaction. *Administrative Sciences, 11*(1), Article 32. https://doi.org/10.3390/admsci11010032

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34*(1), 89–126. https://doi.org/10.1177/0149206307308913

Zaccaro, S. J. (2007). Trait-based perspectives of leadership. *American Psychologist, 62*(1), 6–16. https://doi.org/10.1037/0003-066X.62.1.6

Zvavahera, P. (2021). Exploring African leadership: Traditions, values, and contemporary practices. *Journal of Leadership in Organizations*. https://doi.org/10.22146/jlo.95752

MOS REVIEW

Vol. 2, Issue. 2, May 2025

Digitalization in Organizations

P.G.L. Chamodi[1]

Kumudinei Dissanayake [2]

Department of Management and Organization Studies,

Faculty of Management and Finance, University of Colombo

Abstract

This article explores the concept of digitalization in organizations as presented in the existing research. It reviews definitions of digitalization and related concepts, recent research trends, theories applied, as well as the conceptualizations, methodologies, and contexts in which digitalization-related research have been conducted. The review suggests directions for future research to be taken up in the area of digitalization in organizations. These directions are specifically focusing on contemporary issues and emerging avenues in the areas of cybersecurity and data privacy, the workforce digital skills gap, organizational resilience and sustainability, sector-specific digitalization strategies, cross-national comparisons in digital transformation, and impact of emerging technologies.

Keywords: Automation, Digitalization, Digital tools, Emerging technologies, Technological change, Workforce adaptation

[1] Corresponding author: 2021ms9932@stu.cmb.ac.lk

[2]Supervisor of the research

1. Introduction

Digitalization has turned into a strong transformative force in modern business world by changing the way companies compete, operate, and deliver value. Companies are in a continuous race to adopt and integrate digital tools in management, marketing, financial, and supply chain operations. Such a transition is not only about using new technologies but re-shaping business models to improve efficiency and agility in organizations (Bharadwaj et al., 2013). In particular, technologies like AI, cloud computing, big data analytics, blockchain, and IoT have helped businesses reduce operational cost, better inform decision-making, and create innovative business models. These technologies help businesses achieve their vision of competitive advantage by extracting relevant insights from big data, automating processes, and improving productivity to enable better and faster decision-making in a fast-changing environment (Westerman et al., 2011).

Digitalization is not merely a technological change, but a strategic imperative that calls for organizational restructuring, workflow transformation, and transformation in the way customers interact with the company. Thus, it needs a fundamental mind shift from the traditional approaches to business to more agile, digital-first approaches that allow companies to innovate and compete globally (Kane et al., 2015). With that in mind, companies undergoing this change are faced with the challenge of reimagining their existing processes and workflows to better align with new technology platforms.

The initiation of cloud computing, artificial intelligence, and IoT has speeded industry digitalization per business strategies. These technologies now serve as the center of how businesses provide products and services to their customers and how these insights into their operations are conceived. Certainly, the role of the cloud has introduced advancements in how business stores, accesses, and manages data, thus facilitating scaling and collaboration across geographies. The advent of AI and machine learning technologies completes the dreamy picture of fastened and accurate decision-making, in which high volumes of data are being processed and analyzed in real-time (Fitzgerald et al., 2013). The COVID-19 pandemic has brought to light the very need for digitalized operations, where most organizations have been obliged to embrace digital solutions and enable remote capabilities just to keep afloat. The digital instrument accelerated business continuity from improved collaboration capacity and greater customer engagement in their continued virtual setting (Chesbrough, 2020).

2. Defining Digitalization in the Context of Organizations

2.1. Digitalization: Broad Perspective

Digitalization is broadly defined as the integration of digital technologies into all aspects of business operations, enabling organizations to transform traditional models into more efficient and automated systems. It is a critical driver of economic growth and business transformation. However, it is often confused with related terms such as **digitization**, **digital technology adoption**, and **digitalization** each of which carries distinct meanings. The differentiation among these terms is essential to understanding their role in an organization's digital journey (Channel Insider, 2023).

2.2 Digitization

Digitization is often a step in digitalization, but it is not the whole process. It refers to the process of converting analog information into digital formats, allowing for easier storage, access, and transmission. Brennen and Kreiss (2016) describe it as the encoding of text, images, sound, and video into binary data that computers can process. Similarly, the OECD (2019) defines digitization as the transformation of analog data into digital representations that facilitate automation and computational processing. Tilson et al. (2010) emphasize that digitization is a technical process that enables data to be electronically manipulated, stored, and distributed. According to Yoo et al. (2012), digitization serves as the foundation for digitalization and digital transformation, as it allows physical objects, documents, and processes to be represented digitally.

Moreover, Verhoef et al. (2021) argue that digitization is a critical first step in digital transformation, enabling efficiency gains and data-driven decision-making. The Gartner IT Glossary (2020) reinforces this view, stating that digitization primarily involves changing analog content into a digital format without modifying existing processes, laying the groundwork for automation. As Schwab (2017) notes, digitization is a key enabler of the Fourth Industrial Revolution, allowing businesses to leverage vast amounts of digital data to enhance efficiency, innovation, and competitiveness. Overall, while digitization itself does not fundamentally alter business models or processes, it is an essential step that facilitates broader digitalization and transformation efforts. By integrating such technologies more deeply, companies not only ensure

that they keep up with the speed of technology but also harness them to realize ongoing improvements, bettering customer satisfaction, and building competitive advantages.

2.3 Digital Technology Adoption

This involves the acceptance and integration of specific digital tools or systems within an organization. It focuses on the implementation of technologies such as enterprise software, digital communication platforms, and automation solutions as part of broader digitalization efforts (Vial, 2019).

2.4 Digitalization

Digitalization refers to using digital technologies to improve existing business processes and workflows (Parida et al., 2019). It involves automation, streamlining operations, and enhancing efficiency through digital tools, but it does not necessarily change the fundamental business model. Digitalization leads to fundamental changes in how businesses operate and deliver value to their customers.

According to Legner et al. (2017), digitalization is "the transformation of business processes, organizational structures, and business models enabled by digital technologies." Similarly, Bharadwaj et al. (2013) define digitalization as "the use of digital technologies to alter organizational processes and improve performance." More broadly, Vial (2019) describes digitalization as "a sociotechnical process that leverages digital technologies to create, modify, and sustain new business models and operations." Calderon-Monge and Ribeiro-Soriano (2023) further emphasize that digitalization is not just a technological shift but a structural transformation that impacts management, marketing, and financial strategies

According to Verhoef et al. (2021), this process involves not only the adoption of technologies such as cloud computing, big data, and artificial intelligence but also a fundamental shift in organizational practices to leverage digital innovation. Brynjolfsson and McAfee (2014) describe digitalization as a strategic imperative that drives enhanced operational performance and competitive advantage by transforming products, services, and business models. In addition, Parviainen et al. (2017) emphasize that digitalization requires continuous adaptation, as organizations must regularly update their processes and systems to keep pace with rapid

technological advancements. Together, these perspectives illustrate that digitalization is both a technological upgrade and a strategic transformation, impacting every layer of an organization.

The dynamic and rapidly evolving digitalization is driving disruptive change across all industries. Cloud computing, for example, has revolutionized how businesses store, manage, and access data, improving scalability and agility while reducing infrastructure costs. AI is transforming business operations by automating tasks, providing insights, and enhancing decision-making. IoT connects physical devices and sensors, enabling real-time data analysis that improves manufacturing, monitoring, and supply chain management. Digitalization impacts not only internal processes but also consumer interactions and supply chain management, leading to new business models and industry-wide disruptions (Calderon-Monge & Ribeiro-Soriano, 2023). Organizations that embrace digitalization can unlock hidden patterns in data, recognize inefficiencies more quickly, and increase overall operational speed and accuracy. However, companies must also address challenges such as siloed data systems, scaling impact, and the complexity of implementing new digital technologies. Digitalization efforts often require expert guidance to successfully integrate and scale solutions across an enterprise.

3. Recent Research in the Area of Digitalization in Organizations

Recent studies have extensively explored the multifaceted impacts of digitalization on organizational procedures, structures, and outcomes. To illustrate, Gruia et al. (2021) examined the manner in which firms adopt digital technology such as AI, big data, automation, and cloud computing for the purpose of transforming from traditional business models towards digitally centered operations. Their European case studies of the manufacturing, finance, and retail sectors found advancements in operational productivity and customer engagement with variations in adoption scales between multinational companies and SMEs. Gorenšek and Kohont (2019) analyzed Euro-Mediterranean conceptualization of digitalization with emphasis on its strategic applicability in the management of workforces, customer engagement, and data-driven decision-making.

In addition, Müller and Schmidt (2024) analyzed the influence of emerging technologies like AI, IoT, and blockchain on organizational effectiveness. The study established that investments in digital technologies positively impact supply chain management, customer engagement, and decision-making. However, they noted that SMEs tend to be resource-

poor and lack digital literacy, which holds them back from adopting full-scale digital transformation approaches. In terms of employee motivation, Thileepan and Raveendran (2022) studied the impact of digital transformation in the Ceylon Electricity Board in Sri Lanka. The study shows that digitalization enhances job satisfaction, collaboration, and creativity if adequate training is offered. However, there are challenges like resistance and lack of digital skills that were highlighted.

How digitalization affects management control (MC) in organizations has been explored by Fähndrich (2023). According to Fähndrich, digitalization has expanded MC functions, introduced new digital monitoring tools, and reshaped organizational structures. Both positive effects, such as improved decision-making, and negative effects, like employee resistance to automation, were observed. Adopting a critical perspective, Trittin-Ulbrich et al. (2021) examined the adverse consequences of digitalization, including worker surveillance, precarious employment, and monopolization by tech giants. They highlighted increasing control over workers through algorithmic management and data monitoring, particularly in platform-based corporations like Uber, Amazon, and Google.

How digitalization drives disruption in the auto and media industries has been explored by Rachinger et al. (2019) in the context of Austria and Hungary. The study indicated how digital technologies drive value creation, value proposition, and value capture. The finding reaffirmed that Industry 4.0 technologies, for instance, automation and IoT, drive innovation but come with risks of balancing technological effectiveness and creativity. Also, a recent work by Mollick (2024), has described how AI is evolving as an organizational strategy, redefining the very essence of how companies' function and organize themselves.

Legner et al. (2017) consider the role of SMAC technologies (Social, Mobile, Analytics, and Cloud) in driving digitalization in business and society. Their study differentiates between digitization (the technological process of converting analog to digital) and digitalization (the broader transformation of business and social systems). They identify three gigantic waves of digitalization: process automation based on computers, internet-based revolution, and the advent of SMAC technologies and AI-driven digital ecosystems. The study emphasizes that digitalization is neither an event nor a one-time change but rather an on-going socio-technical process that endlessly reconfigures organizations, industries, and policy environments.

Further, Müller and Schmidt (2024) explain how digital technologies enhance workflow management, communication, and organizational effectiveness. Their study analyzes the ways in which data analytics, automation, and real-time digital tools improve decision-making and streamline workflow processes. Drawing from a synthesized review of literature and case studies, the research provides valuable insights into how businesses employ digitalization to optimize operations and remain competitive. Lu (2024) explores AI, big data analytics, cloud computing, and IoT impacts on organizational change strategy. The study draws on existing literature to assess the influence of digital technologies on operational models, workforce management, and decision-making. From a review of existing literature, Lu (2024) offers an overview of trends, challenges, and adaptation mechanisms in digital transformation by industries.

4. Theories used in the digitalization-related research

Research on digitalization within organizations employs various theoretical frameworks to understand its multifaceted impacts. These frameworks offer valuable insights into how firms adapt to technological changes, how employees respond to new technologies, and how digitalization affects organizational structures and processes. Below are some key theories used to explore digitalization.

4.1 Dynamic Capabilities Theory (DCT)

Dynamic Capability Theory, as developed by Teece, Pisano, and Shuen (1997), builds on the resource-based view (RBV) by emphasizing that firms achieve competitive advantage not simply by having valuable resources but by dynamically integrating, developing, and reconfiguring them in accordance with environmental shifts. Unlike static capabilities, dynamic capabilities allow firms to sense opportunities, exploit them, and reconfigure resources for the sake of long-term competitiveness (Teece, 2007). This kind of flexibility is particularly critical in industries that are undergoing rapid technological transformation, where firms must innovate and evolve relentlessly. Dynamic capabilities are particularly important for innovation, strategic decision-making, and organizational learning. Firms with well-developed dynamic capabilities can develop new products (through R&D), alter business models, and respond effectively to disruptions (Teece, 2018). In the context of digitalization, Gruia et al. (2021) applied this theory to illustrate firms' transition from traditional to digital-centered operations through the adoption of technologies like AI and big data. Similarly, Legner et al. (2017) present digitalization as a wave that businesses

must constantly adapt to, while Müller and Schmidt (2024) show how AI and IoT define supply chain optimization and business productivity, revealing businesses' agility in a rapidly evolving technological environment.

4.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Fred Davis in 1986, explains how users adopt technology based on two key factors: perceived usefulness (PU) and perceived ease of use (PEU). PU refers to how much a user believes the technology will improve their performance, while PEU reflects how effortless they think it will be to use. These factors shape a user's attitude toward use, which influences their behavioral intention to use and ultimately determines actual technology usage. The model suggests that if users perceive a technology as useful and easy to use, they are more likely to adopt it. TAM is widely applied in fields like information systems, where it helps predict user adoption of digital platforms, marketing, where it explains customer acceptance of digital products, and education, where it analyzes student adoption of online learning tools. Gorenšek and Kohont (2019) utilized TAM to evaluate the responses of employees and customers to digital technologies, emphasizing that ease of use and perceived usefulness are key drivers of technology adoption. Although not explicitly mentioned, Lu (2024) aligns with TAM's principles by discussing workforce adaptation to AI, big data, and IoT, suggesting that these factors influence how employees embrace new technologies.

4.3 Resource-Based View (RBV)

The Resource-Based View (RBV) argues that a firm's competitive advantage stems from its unique internal resources and capabilities, rather than external market forces. This perspective, introduced by Barney (1991), highlights that firms achieve success by leveraging valuable, rare, inimitable, and well-organized (VRIO) resources. These resources include skills, knowledge, assets, and processes that competitors cannot easily replicate, allowing firms to sustain long-term advantages. RBV also recognizes the role of dynamic capabilities, which enable firms to adapt and develop new resources in response to changing environments. By strategically managing internal assets, companies can enhance efficiency, innovation, and long-term profitability. Müller and Schmidt (2024) applied RBV to demonstrate how investments in AI, IoT, and blockchain technologies enhance operational efficiency and decision-making processes. Through RBV, organizations can

recognize digitalization as a critical resource that improves cost reduction, process efficiency, and better decision-making, ultimately driving competitive advantage.

4.4 Sociotechnical Systems Theory (STS)

Sociotechnical Systems Theory (STST) suggests that organizations function best when social and technical elements are considered as an integrated whole. It emphasizes that technology, processes, and human behavior are deeply interconnected, meaning that changes in one aspect inevitably influence the others. STST promotes a holistic approach to system design, ensuring that both technological advancements and social dynamics are balanced for optimal performance. Originally developed in the 1950s by Eric Trist and Ken Bamforth at the Tavistock Institute, STST was a response to rigid, bureaucratic work structures like Taylorism. It has since been applied across various fields, including healthcare, manufacturing, and digital transformation, highlighting the importance of organizational culture, collaboration, and adaptability alongside technological innovation. Gorenšek and Kohont (2019) applied STS to illustrate that the successful implementation of digital solutions requires not only advanced technology but also a workforce capable of adapting to new systems and processes. Similarly, Legner et al. (2017) discuss how BISE (Business and Information Systems Engineering) plays a crucial role in ensuring that both technological and human factors align for effective digital transformation.

4.5 Actor-Network Theory (ANT)

Actor-Network Theory (ANT) is a social theory that treats both human and non-human entities as active participants (actors) in constantly evolving networks of relationships. It emphasizes that nothing exists in isolation, and all elements; people, technology, objects, and ideas play an equal role in shaping social realities. ANT focuses on how networks form, change, and interact rather than relying on fixed structures, highlighting the fluid and dynamic nature of reality through concepts like "translation," which describes how actors influence each other over time. Developed within science and technology studies, ANT is closely associated with Bruno Latour, John Law, and Michel Callon. It is widely applied in fields like technology, media, politics, and sustainability, offering insights into how interactions between various actors shape innovation, decision-making, and social change. By considering both material and symbolic influences, ANT provides a powerful lens for analyzing complex systems and their evolving interconnections. Fähndrich (2023) applied ANT to analyze the impact of digital tools on management control systems and

organizational structures. This theory helps explain how digital technologies interact with and shape the behaviors and actions of individuals and organizations within a broader network.

4.6 Innovation Diffusion Theory (IDT)

The Diffusion of Innovation (DOI) theory, developed by Everett Rogers, explains how new ideas, technologies, or products gradually spread through a population rather than being adopted instantly. The process occurs through communication channels within a social system over time. Adoption depends on factors such as the relative advantage, compatibility, complexity, trialability, and observability of the innovation. Rogers also categorized adopters into five groups: innovators, early adopters, early majority, late majority, and laggards, each with different levels of willingness to embrace change. The adoption process consists of five stages: knowledge (awareness), persuasion (forming an attitude), decision (adoption or rejection), implementation (using the innovation), and confirmation (evaluating results). The DOI theory is widely applied in marketing, technology, healthcare, and organizational change to understand how innovations gain traction and what influences their success or failure. Müller and Schmidt (2024) applied IDT to study the spread of AI-driven automation and smart analytics across industries, demonstrating how innovation can transform business practices over time. Lu (2024) also indirectly supports this theory by exploring how AI and IoT influence organizational structures and decision-making processes, contributing to the diffusion of technological innovations within industries. These diverse theoretical frameworks collectively enrich our understanding of digitalization's complex role in organizational contexts, offering insights into both the opportunities and challenges it presents.

5. Conceptualizations of Digitalization in Organizational Research

Digitalization has been conceptualized in multiple ways in organizational research, primarily due to its dynamic and multifaceted role in influencing business processes. Understanding how digitalization impacts organizations requires examining it through different theoretical lenses, which is why it has been framed as an independent variable, moderating variable, and socio-technical process.

5.1 Digitalization as an Independent Variable

As an independent variable, digitalization is often studied for its direct influence on organizational outcomes, such as efficiency, performance, and change management. Here, researchers analyze

how the introduction of digital technologies such as automation, big data analytics, and artificial intelligence, affects business processes and operations. For example, Westerman et al. (2014) suggest that digitalization can significantly improve operational performance by streamlining business processes and enabling real-time data analytics, which enhances decision-making. Côrte-Real et al. (2017) further expand on this by exploring the relationship between digital transformation and organizational performance, showing that companies that invest in digital tools can achieve better performance outcomes compared to those that don't adopt these technologies. This perspective emphasizes digitalization as a catalyst for transformation, driving changes in organizational structures, culture, and strategies.

5.2 Digitalization as a Moderating Variable

In other research, digitalization is treated as a moderating variable. This means that digitalization influences the relationship between other key factors, such as investments in technology and overall business performance. As a moderator, digitalization does not directly cause organizational change but instead interacts with other factors, making their effects stronger or weaker. For example, Müller & Schmidt (2024) examine how digitalization acts as a moderator between digital investments and organizational performance. They argue that the positive effects of digital investments are contingent upon how effectively an organization adopts and integrates digital technologies into its operations. Similarly, Rachinger et al. (2019) note that digitalization impacts how companies execute their digital strategies and how these strategies influence organizational growth. By moderating the relationship between technology investments and organizational performance, digitalization helps organizations realize the benefits of their technological investments more fully. Shiau et al. (2019) extend this argument by suggesting that the degree to which businesses adopt and successfully integrate emerging technologies like AI and big data depends on how they leverage digitalization as a core enabler.

5.3 Digitalization as a Socio-Technical Process

Legner et al. (2017) offer a different conceptualization by framing digitalization as an ongoing socio-technical process. Rather than viewing digitalization as a simple input that causes specific organizational outcomes, they suggest that it is a continuous and evolving transformation that reshapes not only technological infrastructure but also organizational culture, policies, and business models. In this view, digitalization is not a one-time event or a static variable but a

dynamic process that impacts organizations over time. For example, digitalization may start with the automation of basic tasks, but over time, it can lead to fundamental shifts in business models, as seen in industries that adopt e-commerce or AI-powered customer service systems. This conceptualization emphasizes the iterative and complex nature of digital transformation, where technological change interacts with and influences human factors, organizational structures, and business strategies.

6. Methodologies Used in Digitalization Research

Digitalization research employs a variety of methodologies to explore how organizations integrate, adapt to, and benefit from digital transformation. These methodologies help researchers gain deeper insights into the strategies organizations use to implement digital technologies, the challenges they face, and the outcomes they achieve. Below are the key methodologies commonly used in digitalization research:

6.1 Systematic Literature Reviews (SLRs)

A Systematic Literature Review (SLR) is a methodological approach used to collect, critically evaluate, and synthesize existing research on a specific topic. In this case, digital transformation in organizations. SLRs are particularly valuable because they provide an overview of current trends, theoretical frameworks, and gaps in the literature, helping researchers understand the evolution of digitalization and identify areas for further study.

Ly et al. (2020) conducted an SLR to analyze the evolution of digital transformation in business contexts, mapping out how digitalization has progressed across industries and examining the key factors that drive or hinder its adoption. This type of review helps build a comprehensive understanding of digitalization's historical development and its current state across various sectors. Lu (2024) applied SLR to explore the impact of emerging technologies such as artificial intelligence (AI) and the Internet of Things (IoT) on organizational change. By reviewing and synthesizing research on the application of these technologies, Lu's study highlights how they shape organizational structures, decision-making processes, and workforce capabilities.

6.2 Case Studies

Case studies are in-depth investigations of specific organizations or instances where digital transformation strategies have been implemented. This qualitative research methodology is highly valuable for understanding how organizations adapt to and manage digitalization in real-world settings. Case studies provide contextual insights into how digitalization affects different industries, business models, and management practices, often revealing both successes and challenges. Berman et al. (2018) used case studies to explore how digital transformation strategies were adopted in the manufacturing sector. The authors analyzed specific examples of manufacturing companies that implemented digital tools such as automation and data analytics to improve operational efficiency. Their case study approach allowed them to identify best practices and potential pitfalls when integrating digital technologies in the production process. Müller and Schmidt (2024) examined the impact of digitalization on supply chain optimization through a case study approach, focusing on how digital technologies like AI and IoT were employed to enhance logistics, reduce costs, and improve decision-making. Case studies like this one are particularly useful for identifying industry-specific strategies and understanding how organizations use digital tools to achieve tangible results.

6.3 Qualitative Research

Qualitative research methods, such as interviews and focus groups, are commonly used to explore how organizations navigate the challenges and opportunities presented by digital transformation. Qualitative studies provide rich, detailed insights into organizational behaviors, attitudes, and perceptions, often revealing the complexities of digitalization that quantitative methods may not capture. Khin and Ho (2019) conducted qualitative research using interviews with managers and key stakeholders to understand how organizations face digitalization challenges and seize digital opportunities. Through in-depth interviews, they gathered insights into the decision-making processes, barriers to digital adoption, and strategies for overcoming resistance. The qualitative approach allowed them to explore the human and organizational factors that play a crucial role in the success or failure of digital transformation efforts. This approach is particularly valuable for understanding the non-technical aspects of digitalization, such as leadership, culture, and employee perceptions.

6.4 Quantitative Surveys

Quantitative surveys are also frequently used in digitalization research, especially when researchers aim to collect data from a large number of respondents across multiple organizations. These surveys often focus on measuring the relationship between variables, such as the impact of digital tools on employee performance, customer satisfaction, or business efficiency. By analyzing statistical data, quantitative surveys help researchers identify patterns and trends in digital transformation across industries or regions. Thileepan and Raveendran (2022) conducted a survey to explore how digitalization impacts employee performance and productivity in Sri Lanka. Their quantitative analysis provided valuable insights into the effectiveness of digital tools and technologies in enhancing organizational efficiency and workforce engagement. Surveys like this can provide large-scale evidence on the effectiveness of digitalization across multiple organizations, regions, or industries. Another study by Müller and Schmidt (2024) used surveys to measure the correlation between digital transformation and business performance, focusing on how digital investments contribute to profitability and operational improvements.

6.5 Mixed-Methods Research

In addition to the aforementioned methodologies, some studies employ a mixed-methods approach, combining qualitative and quantitative techniques to provide a more comprehensive understanding of digitalization. This approach is especially useful for capturing both the human and technical aspects of digital transformation. For example, a study may use qualitative interviews to explore employee experiences with new technologies and complement this with a quantitative survey to assess the overall impact of digitalization on organizational performance. Rachinger et al. (2019) used a mixed-methods approach to explore how digital transformation affects business operations. Their study combined interviews with key informants and quantitative surveys to gather insights into how different companies manage the challenges and opportunities associated with digitalization.

7. Contexts of Past Research on Digitalization in Organizations

Research on digitalization in organizations spans multiple geographic regions, industries, and organizational types, offering a diverse set of insights into how businesses adopt, adapt to, and benefit from digital transformation. Different countries, industries, and organizational sizes

experience digitalization in unique ways, shaped by factors such as government policies, market conditions, organizational resources, and sector-specific demands. The following provides a more detailed exploration of these contexts:

7.1 Geographical Contexts of Digitalization Research

Studies focusing on specific countries have examined how local factors, including government policies, economic conditions, and cultural attitudes, influence the pace and nature of digital transformation. Legner et al. (2017) explores the role of government policies in Germany, focusing on how public initiatives and industry-wide strategies have supported digitalization across various sectors. Germany's strong manufacturing base, with its "Industry 4.0" initiative, has been a key factor in digital transformation, particularly in automation and the integration of Internet of Things (IoT) technologies. Westerman et al. (2014) studied digital transformation in the United States, identifying how market competition and customer demand drive businesses to adopt digital technologies. They argue that companies in the U.S. face significant pressure to innovate through digitalization to remain competitive, especially in industries such as retail and technology. Studies conducted in China and India (e.g., Bhattacharya & Laskar, 2021) show a different perspective. In these countries, digital transformation is often driven by the growing consumer demand for e-commerce and the support of governmental policies promoting digital infrastructure. Thileepan and Raveendran (2022) focused on small and medium-sized enterprises (SMEs) and the specific challenges these organizations face in digitalizing. With limited financial and human resources, SMEs often struggle to adopt advanced digital tools.

7.2 Industry-Specific Contexts

The digitalization process is also shaped by the specific needs and dynamics of various industries. Different sectors face unique challenges and opportunities when adopting digital technologies, and sector-specific strategies have been developed to address these needs. The manufacturing industry has seen extensive digital transformation, with Berman et al. (2018) examining how companies in this sector have implemented digital tools such as automation, machine learning, and predictive maintenance to improve efficiency and reduce costs. In the finance industry, Côrte-Real et al. (2017) explored the role of digitalization in enhancing customer service and improving operational efficiency. Digital tools such as mobile banking, blockchain, and AI-driven analytics are increasingly becoming integral to the finance sector. The study emphasizes how digital

transformation can help financial institutions provide more personalized services, automate routine tasks, and reduce operational costs. Müller and Schmidt (2024) examined digitalization in the public sector, focusing on how governments and public organizations are adopting digital technologies to improve service delivery and citizen engagement. Digital tools such as e-government platforms, digital voting systems, and automated public services are transforming how governments interact with citizens.

7.3 Organizational Type

The digitization process differs between large corporations and small and medium-sized enterprises (SMEs), with variations in resources, capabilities, and strategic priorities affecting how organizations approach digital transformation. Larger organizations, such as multinational corporations, typically have the resources to invest in cutting-edge digital technologies. For example, Hossain et al. (2020) found that large firms are better equipped to invest in technologies such as artificial intelligence (AI), cloud computing, and advanced analytics, which help streamline operations and improve customer experience. However, authors also highlighted that large organizations face challenges in aligning digital transformation efforts across diverse business units, requiring strong leadership and coordination. Müller and Schmidt (2024) emphasize that SMEs often struggle to justify the high initial costs of digitalization. As a result, many SMEs prioritize digital tools that provide immediate benefits, such as cloud-based software for accounting or customer relationship management, while postponing investments in more advanced technologies. Furthermore, a study by Jäger et al. (2020) explored how SMEs in Europe face resistance to change due to organizational culture and the lack of digital champions within the firm. Studies such as Wang and Yang (2020) found that startups in the technology sector leverage digital platforms, such as cloud services and digital marketing tools, to grow rapidly with lower overhead costs.

7.4 Cross-Industry and Cross-National Comparisons

Several studies have explored cross-industry and cross-national comparisons to understand how digitalization strategies differ across contexts. Bharadwaj et al. (2013), for instance, compared digital transformation in various industries, such as retail, finance, and healthcare, and found that the level of digital maturity and the pace of transformation vary widely across sectors. Additionally, Kane et al. (2015) explored the differences in digital transformation adoption

between organizations in developed and developing countries. They found that companies in developed countries often lead in digital maturity, benefiting from better access to technology and a higher level of digital literacy among employees.

8. Directions for Future Research in Digitalization in Organizations

Future research in digitalization should focus on emerging challenges and opportunities as organizations continue to navigate the complex process of digital transformation. The pace of technological advancement, combined with evolving business needs, presents both opportunities and risks that must be explored to ensure the long-term success of digital strategies. Several key areas warrant further investigation.

8.1 Cybersecurity and Data Privacy

As organizations increasingly rely on digital technologies such as Artificial Intelligence (AI), Internet of Things (IoT), and big data analytics, cybersecurity and data privacy have become paramount concerns. Research is needed to examine how organizations can effectively manage the security risks associated with these technologies. The integration of AI and big data in organizational operations opens up new vulnerabilities, making businesses more susceptible to cyberattacks and data breaches. Lu (2024) highlights the need for research focused on developing frameworks for securing organizational digital infrastructures, particularly in industries dealing with sensitive customer data. Similarly, Chen et al. (2021) explore the need for cybersecurity measures in industries such as finance and healthcare, where digital technologies are essential but also vulnerable to cyber threats. More studies are required to understand how digitalization affects organizations' ability to mitigate cybersecurity risks and ensure compliance with data privacy regulations, especially with emerging technologies like AI and blockchain.

8.2 Workforce Digital Skills Gap

One of the major challenges organizations face in the digital age is the gap in workforce digital skills. Chen and Zhang (2020) emphasize that for digital transformation to succeed, organizations must focus on upskilling and reskilling employees to equip them with the necessary skills to work with advanced technologies. Research on how organizations can design and implement effective training programs is critical, especially considering the rapidly changing technological landscape. Studies could investigate the role of training and development programs in overcoming the digital

skills gap, particularly in sectors that heavily rely on automation, AI, and data analytics. For instance, Brynjolfsson and McAfee (2014) argue that the digital skills gap is contributing to the widening income inequality and creating challenges for businesses in attracting and retaining talent. Therefore, understanding the best practices for workforce development in the context of digital transformation is crucial for ensuring that organizations have the human capital needed to thrive in a digitally driven environment.

8.3 Long-Term Impact on Organizational Resilience and Sustainability

Another critical area for future research is understanding the long-term impact of digitalization on business sustainability and organizational resilience. Choi et al. (2022) suggest that digital transformation can enhance organizational resilience by enabling companies to adapt to market disruptions, improve operational efficiency, and ensure continuity during crises such as the COVID-19 pandemic. Research should focus on how organizations can use digital tools not only for short-term gains but also for long-term sustainability. For example, Müller and Schmidt (2024) highlight the role of digitalization in building workforce adaptability over time, emphasizing that organizations that leverage digital technologies can foster a more agile and resilient workforce capable of responding to rapid changes in market conditions. Moreover, further studies could examine how digital transformation strategies influence an organization's ability to remain competitive in a volatile business environment. Given the ongoing challenges related to climate change and the growing emphasis on sustainability, future research should also investigate how digitalization contributes to sustainable business practices, such as reducing carbon footprints, optimizing resource management, and fostering circular economy models.

8.4 Sector-Specific Digitalization Strategies

Future research could delve into sector-specific strategies for digital transformation. While general digitalization frameworks exist, industries such as healthcare, education, and public administration require tailored approaches due to their unique characteristics. For instance, the healthcare industry has specific needs related to patient data management, while the education sector faces challenges in adopting digital learning tools. Sartorius and Tenge (2021) argue that sector-specific research can provide insights into how digital tools can be used to optimize operations and improve service delivery within these contexts. Future studies could explore how sector-specific digital strategies

are developed and implemented, as well as how they affect operational efficiency, customer satisfaction, and employee performance.

8.5 Cross-National Comparisons in Digital Transformation

As digitalization is a global phenomenon, it is important to understand how it differs across national contexts. Kane et al. (2015) have explored the differences in digital adoption between organizations in developed and developing countries, pointing out that firms in developed economies typically have more access to advanced digital technologies and resources. Future research could compare digital transformation efforts across different regions and economies to better understand the barriers and enablers specific to various geographical contexts. For example, digital transformation strategies in the European Union might differ significantly from those in Southeast Asia or Sub-Saharan Africa due to differences in infrastructure, regulatory frameworks, and cultural attitudes towards technology. Bharadwaj et al. (2013) emphasize that understanding these regional differences is crucial for developing more contextually appropriate strategies that address the unique challenges faced by organizations in different parts of the world.

8.6 Impact of Emerging Technologies

Emerging technologies such as blockchain, AI, and quantum computing present new opportunities and challenges for organizations. Research is needed to explore how these technologies will shape future organizational structures and business models. Vial (2019) provides a framework for understanding how emerging technologies are impacting digital transformation, but further studies are needed to investigate their long-term implications on business practices and organizational structures. Researchers could also examine the ethical implications of these technologies, particularly in relation to privacy, bias, and decision-making.

References

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120.

Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly, 37*(2), 471-482.

Bhattacharya, M., & Laskar, M. (2021). Digital transformation in China and India: E-commerce growth and infrastructure challenges. *International Journal of Digital Transformation, 13*(2), 98-112.

Berman, S. J., Marshall, A., & Srivastava, M. (2018). The digital transformation playbook: Rethink your business for the digital age. *Columbia University Press.*

Brynjolfsson, E., & McAfee, A. (2014). The second machine age: Work, progress, and prosperity in a time of brilliant technologies. *W. W. Norton & Company.*

Chen, H., & Zhang, J. (2020). Addressing the digital skills gap in organizations: Strategies for workforce development. *Journal of Digital Learning, 7*(1), 53-65.

Chen, J., Zheng, X., & Li, Y. (2021). Cybersecurity and data privacy in digital transformation: Challenges and solutions. *International Journal of Information Management*, 57, 102266.

Chesbrough, H. (2020). The future of open innovation: A decade of progress and research in digital transformation. *Research Policy, 49*(8), 103872.

Choi, T. M., Cheng, T. C. E., & Zhan, Y. (2022). Digital transformation for organizational resilience and sustainability: Lessons from the COVID-19 pandemic. *International Journal of Production Economics*, 243, 108-123.

Côrte-Real, N., Ruivo, P., & Oliveira, T. (2017). Digital transformation and organizational performance: Evidence from a multi-country study. *Journal of Business Research*, 70, 53-61.

Davis, F. D. (1986). *A technology acceptance model for empirically testing new end-user information systems: Theory and results*. Massachusetts Institute of Technology.

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review, 55*(2), 1-12.

Fähndrich, J. (2023). How digitalization affects management control (MC) in organizations. *Journal of Management Studies, 42*(3), 457-474.

Gorenšek, P., & Kohont, A. (2019). Digitalization as a strategic factor in workforce management and customer interaction. *Euro-Mediterranean Journal of Business, 14*(2), 203-220.

Gruia, C., Ivan, D., & Sandu, A. (2021). Integration of digital technologies in business models: AI, big data, automation, and cloud computing. *Journal of Digital Transformation, 8*(1), 15-30.

Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive, 15*(2), 123-139.

Hossain, M. U., Rahman, S., & Islam, M. (2020). The role of AI and cloud computing in large corporations: A study of digital transformation efforts. *Journal of Business Information Technology, 41*(3), 233-249.

Jäger, A., Kessler, C., & Strebel, J. (2020). Challenges and resistance to digital transformation in SMEs: An empirical study. *Journal of Small Business Management, 58*(4), 643-666.

Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review, 56*(1), 1-25.

Khin, S., & Ho, T. C. (2019). The role of organizational culture in the adoption of digital technologies: Insights from interviews with senior managers. *Journal of Business Research*, 104, 107-117.

Legner, C., Hanelt, A., Seddig, D., & Böhmann, T. (2017). Digital transformation in business models: A socio-technical approach. *Business & Information Systems Engineering, 59*(5), 357-368.

Lu, H. (2024). Digital transformation strategies: AI, big data, cloud computing, and IoT's role in organizational change. *International Journal of Digital Innovation, 6*(1), 34-50.

Lu, J. (2024). Impact of AI and IoT on organizational change and workforce adaptation. *Journal of Digital Innovation, 15*(1), 43-58. https://doi.org/10.1108/JDI-01-2024-0011

Müller, J., & Schmidt, R. (2024). Digitalization and public sector transformation: Challenges and opportunities. *Journal of Public Administration Research, 29*(1), 77-93.

Müller, R., & Schmidt, A. (2024). The influence of emerging technologies on organizational efficiency and decision-making. *Journal of Technological Advancements, 12*(3), 209-223.

Rachinger, M., Fiss, C., & Reichwald, R. (2019). Digital transformation and its impact on business operations. *International Journal of Operations & Production Management, 39*(7), 903-923.

Sartorius, K., & Tenge, S. (2021). Sector-specific strategies for digital transformation in healthcare and education. *Journal of Sectoral Innovation, 8*(2), 113-126.

Shiau, W.-L., & Yu, H.-H. (2019). Leveraging digitalization for business performance: The role of AI and big data integration. *Journal of Business Research*, 104, 159-170.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Teece, D. J. (2018). Dynamic capabilities as an essential guide for innovation. *Innovation and Entrepreneurship, 14*(2), 12-22.

Thileepan, A., & Raveendran, S. (2022). Digital transformation in Sri Lankan SMEs: Challenges and opportunities. *Sri Lanka Journal of Business, 41*(1), 15-30.

Thileepan, V., & Raveendran, K. (2022). Digital transformation at the Ceylon Electricity Board: Enhancing employee engagement through digital tools. *Sri Lanka Journal of Business Studies, 20*(1), 10-24.

Trittin-Ulbrich, H., et al. (2021). Adverse effects of digitalization: Worker surveillance, precarious employment, and monopolization. *Journal of Critical Management Studies, 8*(2), 143-158.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems, 28*(2), 118-144.

Westerman, G., Bonnet, D., Ferraris, S., & Cappelli, M. (2020). Digital transformation for organizational success: An industry-wide study. *MIS Quarterly Executive, 19*(3), 247-268.

MOS REVIEW

Editorial Policies

- MOS Review is a bi-annual non-refereed student publication of the Department of Management and Organization Studies, Faculty of Management and Finance, University of Colombo, Sri Lanka. It will be published in November and May of each year in electronic form identified with an ISSN.
- All submissions to MOS Review should be original work of the author(s). Further, the submission should not have been published or submitted to any other publishing outlet for consideration.
- Plagiarism is an academic offence. The similarity index accepted by MOS Review is 20 per cent. The Editorial Committee will check for plagiarism in all submissions. However, it is the responsibility of the author(s) to check for plagiarism before the submission.
- Text editing will be handled by the Editorial Committee. However, it is the responsibility of authors to make sure that the submission is free from errors, typos, spelling and grammar mistakes by the time of submission.
- The submissions to MOS Review will be entertained through the official email: mos.review@mos.cmb.ac.lk Submission deadlines will be the end of September (Issue 1) and March (Issue 2) each year.
- The decisions of the Editorial Committee on the publication will be the final.

Author Guidelines

- The submission should be a conceptual paper which describes a single (broad) key concept in the students' research project (e.g., social entrepreneurship, workplace bullying).

- The first page must include a title with names and affiliations of the authors, and contact details (including the email addresses).

- An abstract with a maximum of 120 words and around 3-5 keywords should be submitted along with the conceptual paper.

- The content of the submission may include the following: terminology clarification, recent research findings around the concept, theories used in the conceptual domain, different conceptualizations and operationalizations of the concept, diverse methodologies used, different contextual backgrounds of the past research, and directions for future research agenda.

- The submission will be a joint work with the supervisor who approves the work for publication.

- The submission should be limited to 2000 words (excluding references). As the submission is a concept paper, no tables, figures, charts or annexures will be entertained.

- APA guidelines 7th edition should be followed for in-text citations and in compiling the reference list.

- The submission should be type-written. Formatting should be as follows:
  Font type: Times New Roman
  Font size: 12 points
  Line spacing: 1.5
  Paper size: A4
  Page margins: 1 inch all sides

MOS REVIEW

Volume 2 Issue 1

November 2024

CONTENTS

MOS REVIEW

ISSN 3021-6362