

Chapter 2

Artificial Intelligence: A New Paradigm for Leadership

Burak Nedim Aktaş

 <https://orcid.org/0000-0003-3011-4706>

Beykoz University, Turkey

ABSTRACT

This chapter explores the transformative role of technology, particularly artificial intelligence (AI), in reshaping leadership within organizational contexts. The ongoing advancement of technology has brought about significant changes in the workplace, particularly in relation to the roles of AI automation, that has led to a reevaluation of conventional job responsibilities and a restructuring of the path humans interact with computers. Based upon pre-existing research pertaining to the convergence of AI and leadership, this chapter provides an analysis of the effects of AI-driven transformations on leadership styles and the consequent need for the cultivation of new leadership competencies. The chapter places significant emphasis on the need of connecting AI capabilities with leadership attributes, underscoring the importance of achieving congruence between AI and leadership providing insights into the manner in which AI impacts strategic decision-making procedures, possible ethical considerations, and the prospective trajectory of leadership in the period dominated by AI.

INTRODUCTION

The importance of technology in the workplace has been steadily on the rise and shows no signs of slowing down. Technological progress has made it possible to automate tasks that were once done by people. Ongoing discussions are examining the relationship between humans and computer systems, exemplified by the field of human-computer interaction (HCI), which envisions computers evolving from mere “tools” to active “partners” in human work interactions. In today’s workplaces, computers are already beginning to take on roles traditionally held by human supervisors, guiding, and overseeing human employees (Wesche & Sonderegger, 2019). Furthermore, the current advancements in artificial intelligence (AI) technology suggest that it will soon become feasible to support individuals in tackling increasingly complex tasks and assisting them in problem-solving by analyzing large datasets (Mızrak,

DOI: 10.4018/979-8-3693-1155-4.ch002

2023a). For instance, AI is already being deployed in some industries to handle routine HR department responsibilities or aid managers in administrative tasks, allowing them to focus on more critical activities (Petrat, 2021).

New technology and talents are introducing shifts in the leadership landscape. Artificial intelligence (AI) is rapidly expanding its role in leadership, and each leadership style exhibits distinct characteristics that prove effective in specific situations (Milton & Al-Busaidi, 2023; Hyacinth, 2017). Bhattacharya (2021) asserts that organizations must strategize to maintain their competitiveness in light of AI's transformative impact on the market. To proficiently oversee AI-powered operations, organizations need to bolster their leadership skills. Furthermore, they should be prepared to compete in this evolving landscape, as algorithms and networks are gaining increasing importance in the global economy. Lauterbach and Bonime-Blanc (2016) warn that even conventional businesses are at risk of falling behind as AI rapidly reshapes the rules of competition.

Therefore, AI is altering companies and commercial practices, necessitating the development of new talents and attributes in top executives. To successfully manage their enterprises in this technology-driven setting, senior leaders must have the abilities of knowing, doing, and being. AI-driven technologies are producing new sorts of occupations and altering the way people work, necessitating the agility and adaptability of top executives (Heukamp, 2020). Future skill development must be rethought in light of AI, especially in the domain of leadership. In an AI-based economy, there has to be congruence between AI and leadership (Moldenhauer & Londt, 2019).

The growing adoption of AI-powered technologies in corporate governance and operations has accelerated the digitization of leadership tasks, involving the transfer of leadership responsibilities to digital systems, over the past few decades (Bhatta, 2021). AI is frequently integrated into enterprise digital transformation initiatives alongside other advanced digital technologies that typically enhance the ongoing operations of businesses, dispelling some of the more extravagant claims made about the technology's revolutionary potential (Brock & von Wangenheim, 2019).

From these points of view, investigating AI and unveiling its impact on organizations would be a crucial task. More specifically, the advancement of AI is obviously creating a new paradigm for leadership, which is one of the most significant roles in any organization. Thus, based on the related and available literature, this chapter compiles the outputs of studies that are about the relationship between AI and leadership, how this relationship effects processes in organizations such as decision-making, possible ethical issues, and what the future holds about it.

The chapter starts with the conceptual framework, including definition of leadership and AI. Subsequently, the relationship between leadership and AI is discussed, including dynamics of human-AI collaboration, impact of AI on strategic decision-making processes, the future directions and expectations, and ethical considerations. Finally, the conclusion summarizes the main points discussed in the chapter and acknowledges potential limitations.

Methodological Approach

The chapter utilizes an approach to gather, assess, and synthesize relevant scholarly research. The aim is to provide a comprehensive examination of the existing body of literature concerning the intersection of artificial intelligence (AI) and leadership. The analysis delves into the implications, significance, and strategic dimensions of leadership within the framework of AI. Comprehensive inquiries were undertaken throughout many scholarly databases and search engines, including but not limited to Web of Science,

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/artificial-intelligence/336788

Related Content

Teleworks: A Reality Among Lecturers in Tertiary Institutions in Nigeria

Ifeoma Rita Anekwe, Onyeizugbe Chinedu, Ndubuisi-Okolo Purity, Anekwe Rita Ifeoma and Akaegbobi Grace (2022). *International Journal of Applied Management Sciences and Engineering* (pp. 1-9).

www.irma-international.org/article/teleworks/286178

Feminist Creative Leadership Approaches

Susannah L. Brown and Ashley Hartman (2017). *Encyclopedia of Strategic Leadership and Management* (pp. 233-243).

www.irma-international.org/chapter/feminist-creative-leadership-approaches/173524

A Bayesian Approach to Project Control

Franco Caron (2016). *Analyzing Risk through Probabilistic Modeling in Operations Research* (pp. 125-137).

www.irma-international.org/chapter/a-bayesian-approach-to-project-control/140421

Leaders Impede Change

Jennie Lee Khun (2025). *Innovative Approaches to Managing Conflict and Change in Diverse Work Environments* (pp. 105-130).

www.irma-international.org/chapter/leaders-impede-change/375141

Conflict Resolution and Leadership Mindfulness into Action (MIA) for Cultural Humility and Awareness (MIA-CHA): Toward Ending Microaggressions and Fostering Harmony

Mariana I. Vergara Esquivel, Barbara Wallace, Apeksha Mewani, Adriana Reyes, Victoria Marsick, Lyle Yorks, Edmund W. Gordon, Xiaoxue Du, Fung Ling Ong, Clare Parks, Irma Hidayana, Susan Tirhi, Karla Ruiz, Adam Mac Quarrie, Carl D. Brustad Tjernstad, Jingyi Dong, Ingunn Hagen, Marit Honerød Hoveid, Jimmy Cuaran Guerrero, Pedro Rocha, Fausto Calderon, Katharina Steinlechner, Fernando Caicedo, Mariana I. Tamariz and John-Martin Green (2017). *Encyclopedia of Strategic Leadership and Management* (pp. 71-82).

www.irma-international.org/chapter/conflict-resolution-and-leadership-mindfulness-into-action-mia-for-cultural-humility-and-awareness-mia-cha/173513