



Original article

Examining the Assumptions of Generative Artificial Intelligence Systems on Future Leadership

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Abstract

AI technologies are expected to bring about changes in both the theoretical and practical aspects of leadership. When forecasting these developments, the assumptions of generative AI technologies can be beneficial in revealing certain hints. The objective of this study is to analyze the underlying assumptions of generative AI systems in relation to their comprehension of future leadership. The research was carried out in accordance with the principles of the exploratory case study model, which is typically employed as a qualitative research design. The research study group comprises Chatsonic, Microsoft Copilot, Gemini, ChatGPT, and YouChat chatbots. These chatbots use AI support to determine future leadership knowledge. The study involved posing four questions to the chatbots in order to investigate their comprehension of future leadership. Field specialists provided assistance in deciding these questions. The chatbots were posed with these inquiries in January 2024, and the responses were subjected to descriptive analysis. The document analysis methodology corroborated the results derived from this investigation. The research findings indicate that conceptual skills will play a significant role in shaping the future understanding of leadership. Conversely, the implementation of generative AI in businesses will diminish the significance of conceptual talents, particularly in the execution of mundane activities. Furthermore, future businesses will use generative AI to help leaders tackle more complex technological issues. Moreover, the use of generative AI in firms may pose potential challenges for leaders in terms of conceptual issues such as ethics and secrecy. The research findings indicate that generative AI technologies place significant emphasis on key aspects of future leadership comprehension. In this regard, it is advisable to conduct empirical research on the potential implications of emerging AI technologies for future leadership paradigms.

Keywords: Future Leadership, Qualitative Research, Chatbots, Generative Artificial Intelligence.

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INTRODUCTION

Organizational integrity and leadership are important components of an organization's effectiveness and success. Integrity in leadership closely relates to authenticity, ethical decision-making, and the ability to inspire trust among employees (Walumbwa et al., 2007). For leaders to inspire trust in organizations, it is critical to make honesty, integrity, and emotional depth values important elements of organizational culture (Arifin et al., 2018).

To establish an organizational culture that is in line with the organization's goals, leaders need to have a deep understanding of individuals. To meet this requirement, scholars have extensively researched human traits and behaviors in organizational contexts, as well as the interactions between leaders and their followers and the power dynamics within formal and informal structures. (Uslu & Welch, 2018). The definition of leadership and the precise attributes and behaviors that define effective leadership are subject to constant discussion, hence posing challenges in the application of the leadership idea (Raffo & Clark, 2018). Conversely, the absence of a universally acknowledged definition of leadership underscores its intricate nature and the diverse applications it might assume. However, academic research suggests that there are several essential qualities that effective leaders should demonstrate. In their study, Reed et al. (2019) undertook a thorough examination of the conceptualizations and competencies associated with leadership within the given context. The results of their study suggest that a significant portion of leadership knowledge is based on a combination of established methods rather than being rooted in a single theoretical framework. This finding implies that the qualities of successful leadership are not limited to a specific framework but instead include a wide range of skills and abilities. The indicated attributes cover the capacity to proficiently guide organizational change, inspire followers towards a certain purpose, and persuade a group of people to actively pursue a common target.

According to Baker (2022), the primary trait of leadership is the ability to effectively influence a community of individuals toward a common goal. Recently, innovations in the context of leadership (Bodolica vd., 2020; Kremer vd., 2019; Shen and Eren, 2012; Vlok, 2012; Yoon vd., 2018), creativity (Herrmann and Felfe, 2014; Hughes vd., 2018; Koh vd., 2019; Moos, 2015; Zacher and Johnson, 2015), emotional intelligence (Bayighomog and Arasli, 2022; Gómez-Leal vd., 2022; Reshetnikov vd., 2020; Shafait & Huang, 2023), adaptability (Ali vd., 2020; Bagwell, 2020; Garavaglia vd., 2021; Huang vd., 2020), efficient use of technology (Christensen vd., 2018; Kurzhals vd., 2020; Richardson, 2021; Steinmetz, 2014), communication (Galli, 2021; Jankel & Joniaková Jováakova, 2021; Lee, 2021) have been examined. In this context, it can be argued that leadership is a complex phenomenon influenced by a multitude of variables.

In order to attain a competitive advantage, organizations endeavor to leverage a range of elements, including structure, strategy, technology, and culture. Nevertheless, leadership serves as the principal

catalyst for gaining a competitive edge. According to Agbor (2008), leaders have a pivotal role in influencing the organizational culture and adopting strategies to foster innovation, efficiency, and achievement. Enhancing the competencies of leaders through a variety of methodologies and initiatives is critical for business efficacy. The scholarly literature addresses the topic of enhancing leadership skills through the acquisition of digital skills in the context of digital transformation (Antonopoulou et al., 2021; Espina-Romero et al., 2023; Erhan et al., 2022; Gilli et al., 2023; Klus & Muller, 2021).

Certain scholars have posited that artificial intelligence (AI), a subject that has garnered significant attention in recent times, would assume a crucial function in the enhancement and consolidation of leaders' digital competencies (Cantú-Ortiz, 2020; Frick et al., 2021). Singh & Chouhan (2021) argue that AI will not only streamline organizational processes but also foster the creation of intelligent business systems, thereby boosting global competition. Additionally, Alsheibani et al. (2020) assert that the integration of AI into organizations will result in increased revenues, reduced costs, and increased productivity. Algozaibi et al., 2020 assert that AI technologies will transform the analysis, forecasting, and decision-making processes of modern organizations. However, it is crucial to emphasize that the number of these studies is limited. On the other hand, it's believed that AI technology could alter both the theoretical and practical facets of leadership. Kurzweil posited in 2005 that non-biological intelligence will surpass human intelligence by 2045, leading to a more innovative human form that surpasses biological limitations. Makridakis (2017) shares a perspective that anticipates an increase in the significance of creativity and innovation within enterprises. The goal of the present study is to investigate the potential impacts of generative AI systems on future leadership comprehension. These systems have the capability of comprehending, manipulating, and generating data through various processes facilitated by AI technology advancement (Bozkurt, 2023). For this purpose, we first examine the conceptual relationship between AI and leadership.

The Relationship between Leadership and AI

The relationship between leadership and the progression of AI technology is a multifaceted and dynamic field of research. Leadership's role in leading and controlling AI is of utmost importance as it continues to revolutionize various industries. Nevertheless, the existing literature on the relationship between leadership and AI is scarce. Quaquebeke and Gerpott (2023) conducted a study that examined the potential impact of AI on the field of leadership, with a specific emphasis on its implications for research and development in this domain. This study elucidates the transformative potential of AI and its influence on leadership methodologies. Roman et al. (2022) assert that the incorporation of emerging technology, such as AI, has significantly altered the nature of leadership, hence requiring the adoption of adaptive leadership strategies. In contrast, Pham and Sampson (2022) emphasize the transformative impact of AI in the realm of educational leadership through an analysis of its application in the field of education and its capacity to usher in a novel framework for educational advancement.

Upon examining the literature on leadership and AI, it is evident that there is research suggesting that AI robots will assume leadership roles in businesses in the future (Parry et al., 2016; Smith & Green, 2018; Wang, 2021). Nevertheless, despite the existence of varying viewpoints in this research, it is widely acknowledged that the presence of a leader is essential for the functioning of AI technologies (Pugliese et al., 2015). However, there is a widely held belief that AI will play a significant role in the managerial practices of future organizational leaders. Santiago (2019) highlights the growing significance of self-managing algorithms in decision-making procedures and posits that human leaders will undergo certain transformations in their conventional responsibilities. According to Henderikx & Stoffers (2022), future leadership will place greater emphasis on soft skills such as empathy, honesty, compassion, humility, and understanding the potential of digital technology. Leaders will prioritize the management aspects of soft skills, including coaching, motivation, and empowering employees. AI can be employed in this interaction to accomplish quantifiable managerial responsibilities and assess the quantifiable aspect of performance. Nevertheless, the extent of this association and the anticipated responsibilities and competencies of future leaders have yet to be addressed. In this context, this research can contribute to answering this question by revealing some predictions about the role of artificial intelligence in the leadership understanding of the future, the skills that leaders should have, and the organizations of the future.

Purpose of the Study

The purpose of this research is to examine the assumptions of generative AI systems regarding the future understanding of leadership. For this purpose, the following questions were sought to be answered:

1. According to generative AI systems, what are the basic competencies that leaders should have in future organizations?
2. Which competencies may become less important in the future leadership understanding?
3. With the development of generative AI systems, what will be the role of AI in the management of organizations in the future?
4. What are the potential dangers awaiting leaders with the active use of generative AI in organizations?

METHOD

Research Design

The present investigation adhered to the guidelines of the exploratory case study model, which is a qualitative research design. Qualitative research is a type of research that focuses on meanings, interpretations, and context in general, enabling a more holistic and deeper exploration of phenomena

(Turato, 2005). Additionally, before conducting intensive and large-scale research, researchers conduct exploratory case studies to identify uncertainties. (Aytaçlı, 2012). The research considered the assumptions of this model due to the uncertain nature of future leadership comprehension.

Study Group of the Research

The study group for the research consists of Chatsonic, Microsoft Copilot (Bing Chat), Gemini (Google Bard), ChatGPT, and YouChat chatbots. These chatbots utilize AI to determine the future understanding of leadership. According to Gururangan et al. (2020), AI has the capability to provide textual data for qualitative research. Studies undertaken in this manner have garnered attention in the literature (Karakoç Keskin, 2023; Kızılgeçit et al., 2023). Given the circumstances, it was deemed suitable to incorporate chatbots as the experimental group in the study. The study group was determined using the purposive sampling method. The essential factor in selecting the chatbots for the study was their possession of an algorithm capable of summarizing data derived from extensive datasets.

Data Collection Tool

In order to determine the questions that can be asked to chatbots in the research, firstly, the opinions of 5 researchers (1 Associate Professor, 3 Doctors, 1 PhD student) who have studies in the field of leadership were collected through an online form. After that, a review was conducted in the literature using the keywords leader, leadership, leader characteristics. During this review, the following questions, which were put forward by Fullan et al. (2023) about school leadership after AI and listed by the experts, were used in the research:

1. What will be the basic competencies that leaders should have in organizations with generative AI technologies?
2. Which competencies of leaders will become less important with the development of generative AI technologies?
3. What will be the role of AI in the management of organizations in the future with the development of generative AI systems?
4. What are the potential dangers for leaders with the use of generative AI in organizations?

Data Collection and Analysis

In the process of collecting and analyzing the data, the chatbots were first asked the questions listed above in January 2024. In this process, it was observed that chatbots provided explanations to the questions under the main headings. These explanations were divided into codes and themes according to the assumptions of descriptive analysis. Descriptive analysis is a type of qualitative analysis based on summarizing and interpreting data according to predetermined themes (Yıldırım & Şimşek, 2003). This study accepted each of the main headings as a code, grouping similar codes under the same themes.

Here, Katz's characteristics of effective leaders (as cited in Holsinger, 2018) guided the creation of themes. Accordingly, effective leaders have high levels of technical skills, interpersonal or human skills, and conceptual skills. Tables and word clouds present the codes and themes that emerged from this grouping, bolstered by the researcher's observations and necessary explanations.

Validity and Reliability

In order to ensure the validity and reliability of the study, expert opinion was used to determine the questions to be directed to chatbots. In addition, a field expert researcher contributed to the study by supervising the whole process. In addition, for code-theme agreement, another expert other than the researcher participated in the process and inter-coder agreement was calculated. This value was calculated as .82 for the first sub-problem, .84 for the second sub-problem, .88 for the third sub-problem and .85 for the fourth sub-problem. On the other hand, each question was addressed in the context of the literature and the issue was approached from a broad perspective in determining the leadership understanding of the future. Therefore, data diversification was used in the research and measures were taken to increase the quality (Yıldırım, 2010).

RESULTS and DISCUSSION

Analysis of the Fundamental Skills and Abilities Possessed by Leaders in Organizations Utilizing Generative AI Technologies

The initial sub-problem of the study aimed to address the inquiry regarding the fundamental qualities that leaders ought to possess in forthcoming firms, according to generative AI systems. The inquiry was posed to a group of five chatbots backed by AI, and the fundamental proficiencies that prospective leaders ought to possess are outlined in Table 1, categorized by the respective subjects.

Table 1. Essential Skills for Future Leaders Based on AI Technologies

Chatsonic	Microsoft Copilot	Gemini	ChatGPT	YouChat
Following innovations	Data literacy	Emotional intelligence	Technology competence	Adaptability to change
Strategic use of technology	Problem solving skills	Agility	Data management and analytics	Emotional Intelligence
Fast decision making	Creativity	Empathy	Human-AI collaboration	Strategic thinking
Openness to learning	Communication skills	Cultural intelligence	Change management	Innovation orientation
Empathy and communication	Adaptation to change	Critical thinking	Strategic thinking	Ethical awareness
Team building		Creative thinking	Openness to learning	Technology knowledge
Future orientation		Ethical judgment	Communication skills	Collaboration and leadership skills
Risk management				
Having a vision				
Managing change				

After analyzing Table 2, it's clear that chatbots prioritize empathy, communication, adaptability, emotional intelligence, openness to learning, and strategic thinking above other conversational agents. However, when we consider the importance of embracing innovation, managing change, and focusing on the future, it's worth noting that a leadership style that values continuous improvement is essential for understanding and preparing for what's to come. On the other hand, when we group the qualities thematically, we see that conceptual skills stand out prominently compared to the other attributes. The concentration of conceptual skills in Figure 1 supports this.

Facilitating the generation, dissemination, and transmission of knowledge within businesses is imperative for leaders to possess proficiencies in innovation and knowledge management (Sayed & Edgar, 2019). The importance of knowledge management is particularly significant within the realm of AI, as it plays a crucial role in the effective utilization of AI technologies (Haalem & Kevin, 2018). The literature underscores the significance of leadership abilities for organizational learning and decision-making. According to Wang (2021), AI has the potential to enhance analytical efficiency, enabling managers to make decisions based on facts and evidence.

In conclusion, the use of AI in businesses highlights the significance of essential skills such as adaptability to change, emotional intelligence, embracing innovations, and strategic thinking. These skills can be regarded as technical proficiencies. Furthermore, an understanding of the future of leadership underscores the significance of empathy and communication skills as crucial competencies. Future leaders must adopt a development-oriented mindset and approach events with a holistic perspective, as this is highly significant.

Research Findings on Leadership Competencies that May Decrease in Significance with the Advancement of AI Technologies

The second part of the study aimed to investigate whether competencies might become less important in future leadership understanding. To examine this question, five chatbots were asked, and their responses were analyzed. Table 3 presents the results of this analysis.

Table 3. Leadership Competencies Diminished by the Advancement of AI Technologies

Chatsonic	Microsoft Copilot	Gemini	ChatGPT	YouChat
Routine Decision Making	Processor use	Technical knowledge	Resistance to technology	Management of routine tasks
Management of routine tasks	Management of routine tasks	Decision making	Technological Detail Mastery	Data Analysis and Forecasting Capabilities
Detailed Data Review		Problem solving	Micromanagement Capabilities	Focus on Operational Details
Operational Decision Making		Contact	Pressure to Make Fast Decisions	
Technology Use		Motivation	Routine Work Management One-Way Communication Skills	

Upon examination of Table 3, it becomes evident that ChatGPT obtained the highest ranking in this particular aspect. Chatsonic, Gemini, YouChat, and Microsoft Copilot are the subsequent chatbots on the list. Table 4 presents the data acquired through the process of categorizing the subjects proposed by chatbots into several themes.

Table 4. Themes Related to Characteristics that Will Become Less Important in Future Leadership

Theme	Codes	f
Technical Skills	Detailed data review, Technology usage, Processor usage, Technical knowledge, Technological detail mastery, Data analysis and prediction skills	6
Interpersonal or Human Skills	Communication, Motivation, One-way communication	3
Conceptual Skills	Managing routine tasks (4), Making routine decisions, Making operational decisions, Focusing on operational details, Decision making, Problem solving, Resistance to technology, Micro management skills, Pressure to make quick decisions	12

After analyzing Table 4, it is clear that the progress of AI technology has resulted in chatbots only being able to identify potential changes in the management of routine tasks, making them less important in the leadership process. However, it should be noted that skills related to conceptual skills may become less significant, with technical skills taking on greater importance. It is worth mentioning that AI technology has minimal impact on interpersonal or human skills. This observation is further supported by the word cloud.



Figure 2. Word cloud illustrating the attributes that will diminish in significance in future leadership

Upon examination of the literature, it becomes evident that the domain of leadership capabilities has undergone transformation due to the progress of AI technology, leading to a diminished significance of some competencies. It is believed that as AI technologies advance, technical abilities and certain e-competencies may gain greater significance (Chaudhary et al., 2022; Wart et al., 2017). As AI systems get better at doing a wide range of technical tasks, automating tasks, and integrating into business processes, it may become less important for leaders to have technical knowledge in areas like e-technology. Furthermore, as AI technologies advance, the importance of skills in e-communication and e-team building may diminish as these technologies improve and streamline communication and collaboration processes in enterprises (Wart et al., 2017).

With the progression of AI technology, there is a possibility that the conventional emphasis on social and emotional intelligence competencies may undergo a shift in significance. Despite the widespread recognition of emotional intelligence as a fundamental leadership talent, the growing impact of AI on analytical and decision-making processes may diminish the significance of certain social and emotional intelligence competencies (Hopkins & Bilimoria, 2008; Singh, 2013). If AI systems can offer data-driven insights and analysis, executives may find it less imperative to rely entirely on their emotional intelligence when making choices. On the other hand, when AI systems can handle complicated tasks and situations accurately and effectively, traits that are usually associated with emotional intelligence, like being able to adapt and deal with complexity, may become less important (Chaudhary et al., 2022).

The advent of AI technology within businesses has the potential to alter the significance of skills associated with creativity and knowledge management. With the advancement of AI technologies, the significance of leaders possessing knowledge management competencies may diminish since these

technologies enable the sharing, storage, and retrieval of knowledge. The significance of creativity as a leadership talent may decrease if AI becomes more incorporated into creative processes like content generation and design (Čermáková, 2023).

In summary, the integration of AI technologies within organizations will alleviate the burden on leaders to manually manage routine tasks, thereby reducing their reliance on expertise in data analysis and technical proficiency. Consequently, leaders will assume diminished responsibility for addressing daily challenges and decision-making procedures. Leaders will be able to make judgments based on concrete facts and data, with the assistance of AI, without being influenced by their emotions. Consequently, the influence of emotional intelligence, a crucial factor in comprehending future leadership, on decision-making processes would diminish.

Research on the Impact of AI in the Administration of Future Enterprises

The third part of the study aimed to investigate how generative AI systems could affect future company administration, with a specific focus on the role that AI would play in this domain. To begin with, the study asked the same question to five different chatbots and their responses are presented in Table 5.

Table 5. The Significance of AI in the Governance of Prospective Enterprises

Chatsonic	Microsoft Copilot	Gemini	ChatGPT	YouChat
Data Analysis and Forecasting	Efficient operation of organizations	Data analysis	Data analysis and forecasting	Data analysis and forecasting
Automated Decision Making	Decision-making processes	Decision making	Automation in business processes	Automation
Business Process Optimization	Optimizing business processes	Process automation	Assistance in decision making	Customer service
Human Resources Management	Improving customer experience	Improving productivity and performance	Customer service and communication	Risk management
Strategic Planning and Analysis	Big data analysis	Discovery of new opportunities Risk mitigation	Risk management Human resource management	Business process optimization

Upon examination of Table 5, it becomes evident that Gemini and ChatGPT have enumerated a greater number of features (n = 6) pertaining to the functions of AI in the administration of forthcoming businesses. Other chatbots prioritize an identical number of features (n = 5), which is worth mentioning. Table 6 shows the job distribution based on the themes.

Table 6. Themes Pertaining to the Functions of AI in the Administration of Prospective Enterprises

Theme	Codes	f
Technical Issues	Data analysis and forecasting (3), Business process optimization (3), Automated decision making, Strategic planning and analysis, Big data analysis, Data analysis, Process automation, Business process automation, Automation	13
Themes Related to Interpersonal or Human Skills	Human resource management (2), Improving customer experiences, Customer service and communication, Customer service	5
Themes Related to Conceptual Skills	Risk management (2), Efficient operation of organizations, Decision making processes, Decision making, Productivity and performance improvement, Discovery of new opportunities, Reduction of risks, Assistance in decision making processes	9

Upon examination of Table 6, it becomes evident that AI will play a significant role in the management of forthcoming organizations, particularly in technical and conceptual matters. The present estimation suggests that AI will make a greater contribution to the management processes of forthcoming firms, particularly in the areas of data analysis, prediction, and optimization within business processes. The word cloud also demonstrates this.



Figure 3. AI's potential roles in enterprises depicted in a word cloud.

Upon examination of the literature, it becomes apparent that the emergence of generative AI systems has led to a growing recognition of the importance of AI in enterprise corporate governance. The rapid development of generative AI has made it an attractive research subject. This highlights the increasing significance of AI in organizational settings (Duan et al., 2019). AI has the ability to perform a variety of roles in organizational administration. For example, AI has responsibilities in various fields such as knowledge management, digitalization, decision support systems, predictability, automation,

marketing, e-commerce, health, agriculture, public administration, diplomacy, ethics, quality costs, cinema, strategic management, human resource management, talent management, work ethics, work efficiency, collaboration, training, and development (Arslan et al., 2021; Behl et al., 2021; Bekuru & Nwinyokpugi, 2021; Bilan et al., 2022; Evseeva et al., 2021; Jarrahi et al., 2022; Kashyap et al., 2021; Li et al., 2022; Loftus & Upchurch, 2021; Ma, 2022; Maalla, 2021; Rožman et al., 2022; Ruban, 2022).

AI is progressively gaining prominence in various organizational domains, exerting influence on knowledge management, human resource management, and decision-making procedures. It is expected that AI systems will play a substantial role in multiple domains, such as automation, task execution, decision support systems, data analysis, and prediction facilitation (Aksoy et al., 2020; Güven and Güven, 2023; Takil et al., 2022; Yılmaz et al., 2021). On the other hand, the growing importance of AI systems in shaping the future of the business landscape is evident in their potential influence on corporate operations and decision-making processes through the use of data analysis. In addition, there is a growing interest in the advancement and application of AI systems in order to improve operational effectiveness and output in various corporate operations by automating a wide range of manual processes (Yu et al., 2019).

Therefore, it may be said that we are presently undergoing a period in which generative AI has started to exert a significant impact on enterprises. Intelligent AI solutions provide support to leaders across multiple domains, encompassing task execution, optimization of business processes, automation, data analysis, human resources management, and risk management. There is a prevalent belief that these disciplines will advance simultaneously with the progress of AI technologies.

Exploration of the Potential Hazards Faced by Leaders in Organizations Due to the Implementation of Generative AI

The fourth sub-problem of the study was to address the inquiry into the potential hazards that leaders may encounter while utilizing generative AI in organizational contexts. In the present case, the pertinent inquiry was initially posed to a group of five chatbots. The resulting answers are displayed in Table 7.

Table 7. The Utilization of AI in Organizations Poses Potential Risks to Leaders

Chatsonic	Microsoft Copilot	Gemini	ChatGPT	YouChat
Unemployment and workforce	Transformation data security and individual privacy	Job loss	Data security risks	Security risks
Data Security and Privacy	Leading to misleading results in decision-making processes	Bias	Risk of algorithmic bias and unfairness	Unemployment
Ethical issues	Unemployment	Trust risks	Technological dependency	Ethical issues
Dependency and loss of control	Misuse of customers' personal information	Automation	Human Relations and communication problems	Data privacy
Social acceptance and sensitivity		Loss of Control	Employee concerns and resistance to change Ethical and legal issues Human resources and talent management	Dependency

Upon examination of Table 7, it becomes evident that ChatGPT (n = 7) exhibits the highest number of items in this particular aspect. Subsequently, Chatsonic, Gemini, and YouChat (n = 5) are seen. Microsoft Copilot (n = 4) exhibits the lowest number of features in this context, which is worth mentioning. Table 8 displays the allocation of headings based on the themes within this particular context.

Table 8. Themes Regarding Potential Threats After Leaders Use AI in Organization

Theme	Codes	f
Technical Issues	Trust risk (2), Data security and privacy, Data security and privacy of individuals, Misuse of customers' personal information, Automation, Data security risks, Data privacy	8
Themes Related to Interpersonal or Human Skills	Unemployment (2), Unemployment and labor force transformation, Job loss, Human relations and communication problems	5
Themes Related to Conceptual Skills	Ethical issues (2), Dependency and loss of control, Social acceptance and sensitivity, Misleading decision-making, Bias, Loss of control, Algorithmic bias and risk of injustice, Technological dependency, Employee concerns and resistance to change, Ethical and legal issues, Human resources and talent management, Dependency	15

Upon examining Table 8, it becomes evident that the primary dangers faced by leaders following the implementation of AI in enterprises primarily arise in the domain of conceptual skills. Subsequently,

potential risks and barriers associated with the growing popularity of AI systems in order to protect their organizations. Cebulla et al. (2023) argue that establishing ethical norms and exemplary conduct is essential to mitigating potential risks. Additionally, identifying potential challenges and performing assessments is critical to enabling the successful integration of AI into corporate settings (Jöhnk et al., 2020), especially as enterprises' readiness to adopt AI systems is of great importance.

Incorporating AI systems into enterprises presents technological challenges and potential threats, such as hacking and virus dissemination (Bruyn et al., 2018; Al-Ghaili et al., 2022). Furthermore, overreliance on AI may reduce human participation, as noted by Cawthorpe (2023). Thus, it is vital for leaders to maintain their participation in decision-making processes by viewing AI systems as an additional tool rather than a replacement for human input.

The possible risks associated with the use of AI systems with malicious intent or the inherent shortcomings of these technologies encompass termination and financial harm (Kazim & Koshiyama, 2021). It is imperative for leaders to exhibit prudence and maintain awareness of ethical risks when employing AI technologies. On the other hand, the intentional misuse or unintentional overutilization of AI systems in organizational settings poses potential risks, such as job displacement and the decline of essential skills (Floridi et al., 2018; Solberg et al., 2022). Leaders must demonstrate accountability and equity when employing AI in businesses to mitigate these risks.

As a result, it is clear that the implementation of AI by leaders within organizations may pose potential hazards. Executives must prioritize their businesses' preparation for the incorporation of AI by recognizing the potential risks involved, addressing prejudices within this field, and implementing necessary measures to ensure data security and ethical compliance. However, organizational leaders may perceive the potential consequences of job displacement and unemployment resulting from the integration of AI into businesses as a significant challenge.

CONCLUSION

The incorporation of AI technology in organizational settings raises important ethical issues. Floridi et al. (2018) proposed a comprehensive framework of ethical principles and standards that are relevant to the design and deployment of AI systems. Therefore, it is critical to evaluate and enhance AI systems while advocating for ethical standards. Conversely, Morley et al. (2019) stressed the need to implement ethical guidelines in this field, given the potential risks associated with poorly designed AI systems. The authors emphasized the importance of translating ethical principles into practical applications. However, Mittelstadt (2019) pointed out that the implementation of specific regulations does not necessarily ensure the ethical use of AI systems.

The literature and media have extensively covered concerns about job displacement resulting from the implementation of AI systems in enterprises by leaders (Jobin & Ienca, 2019). The fear of AI

potentially threatening individuals' employment is widespread in society. Conversely, ethical considerations arise from AI systems' ability to perpetuate biases and undermine equity principles, which could impact employment. The use of service robots in front-line jobs and business transactions has led to these challenges. Executives should conduct a comprehensive assessment of AI and robotics' impact on employees, particularly in the service sector. This holds significant importance for creating fair and ethical workplaces.

The results of this study, which aimed to explore the fundamental assumptions of generative AI systems in the context of future leadership, have yielded significant insights. Despite the limited data available for the chatbots under review, the resulting assumptions, when combined with scientific knowledge, provide compelling evidence for improving our understanding of future leadership. It is expected that future leadership will prioritize conceptual skills such as adaptability, change management, emotional intelligence, openness to learning, and strategic thinking. However, competencies such as empathy and communication skills will continue to be essential for leaders. In addition, future leadership will be shaped by competencies such as proficient technology usage and data literacy.

As generative AI is implemented in businesses, certain conceptual skills will become more important while others will diminish in significance. Leaders' responsibilities regarding mundane activities will diminish, particularly within firms. On the other hand, leaders will be relieved of the burden of managing operational complexities and making judgments related to this matter. This scenario will also reduce the pressure on leaders to expedite decision-making processes. Moreover, the integration of AI in enterprises will relieve executives of tasks such as complex data analysis, forecasting, and technical expertise. Conversely, AI's benefits will help reduce communication challenges within businesses and eliminate one-way communication.

This study is limited to five chatbots and the conceptual framework derived from the literature. It should not be forgotten that the transformation that occurs after unpredictable, chaotic events in social life leads to the emergence of very different events and phenomena than expected. In this respect, the assumptions made as a result of the research cannot go beyond predicting the future of organizations and leadership. However, this study aims to raise awareness by emphasizing the impact of artificial intelligence on leadership's understanding of the future. In this context, examining the changes in employee behaviors, management processes, and leadership understanding after the use of artificial intelligence in organizations can reveal the leadership understanding of the future more clearly. In this regard, researchers are recommended to conduct research on the evolution of leadership after the use of artificial intelligence in organizations. In addition, revealing the productivity of artificial intelligence through such studies is considered important in terms of increasing the number of studies on this subject.

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