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APPLICATION OF LEADERSHIP STYLES IN DIGITAL HEALTHCARE SYSTEMS

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ABSTRACT

Leadership will always change according to the times, including leading in digital era. Leadership is the art of inviting and moving other people to work to achieve goals. This research aims to analyze the relationship between transformational leadership and LMX theory that provide valuable frameworks for leadership in the digitalization era by promoting adaptability, innovation, employee engagement, collaboration, and the development of strong interpersonal relationships in a technologically driven work environment. The qualitative approach is used utilizing the databases Semantic Scholar, Google Scholar and PubMed. There is a strong relationship between traits (intelligence, personality, integrity) and leadership. Digital era is an era where society is centered on systems that are integrated online in solving social problems and balancing economic growth. In this digital era, healthcare leaders need to improve their tech savvy skill so they can guide their organizations in adopting and leveraging these technologies. They need to be more proactive, be innovative and dynamic, and set a good example in order to bring the organization up ahead. To improve the quality of digital health services, effective leadership is required.

Keywords: Leadership; Leadership Style; Digital Era; Healthcare Quality; Traits

INTRODUCTION

Transformation is bound to occur in any sector and how that change occurs is of course that change occurs along with changes or revolutions over time. If we are currently booming or the term Industrial Revolution 4.0 is becoming popular, in the country of cherry blossoms this term has been replaced by a new term that is being introduced, namely Society 5.0. This new digital era, where the process of globalization and evolution is running very quickly, for example the Internet of Things (IoT) and Artificial Intelligence (AI), are causing substantial changes in society's surroundings and values. This era is also called the age of challenging uncertainty (VUCA era) because there are many changes and complex needs growing in this era, and it is very critical that we fully utilize the Information and Communication Technology (ICT) in various sectors considering that in this era uncertainty arises due to technological evolution. which is very fast (Fukuyama, 2018). Technology will help in every element of human life including in the healthcare industry. This sector has been impacted by the COVID-19 pandemic, new technological advancements, and the change in the approach of patients and medical staff to the treatment process. The internet, digital technology, and their relationships to new medicines and best practices for better health management processes are all part of the digital transformation of healthcare (Stoumpos at al., 2023).

The characteristics of society will change with this technology. This is because many things are experiencing disruption in the economic, education, socio-cultural and health sectors. To implement disruptive technology, organizations may need to inaugurate a viable digital learning culture. Health information technology (HIT) encompasses any clinical information system utilized for providing care or facilitating the real-time dissemination of health-related information. The adoption of HIT entails the stages of development, implementation, integration, ongoing utilization, and iterative enhancement of the system to

guarantee seamless and continuous service delivery (Alanazi, 2022). It certainly requires a leader who can adjust and adapt to the changes that occur and they need to be knowledgeable with digital technology connected to healthcare systems.

Facing the digitalization transformation, leaders must have basic factors of personality, transformation leadership, inspire others and be role models. Many studies have developed among researchers about the basic factors of personality. These factors are neuroticism, extraversion (surgency), openness (intellect), agreeableness, and conscientiousness (dependability) (Goldberg, 1990). In general, (Judge at al., 2022) a robust correlation exists between the Big Five personality traits and effective leadership. According to (Mumford et al., 2000) there are three competencies for effective problem solving and performance that a leader should have. The skill models are problem-solving skills, social judgment skills, and knowledge. All these qualities of leadership will always be needed wherever and at whatever changing time.

LITERATURE REVIEW

Leadership

Leadership theory is never static and keeps evolving over time. Leadership according to (Colquitt at al., 2013) states leadership as using authority to carry out employee activity towards achieving goals. Another definition according to (Luthans, 2008) is that leadership cannot exist without resources, ideas, and employee cooperation. Leadership according to (Robbins & Judge, 2016) states leadership as the ability to influence a group towards the achievement of a vision or goal. In the opinion of (Vecchio, 2006), in his book Organizational Behavior; Core Concept; states that leadership can be described as the process of a leader in reaching organizational members wanting to carry out the intended activities. The definition of leadership according to (Gibson at al., 2006) states leadership as using authority or power to encourage individuals to achieve several goals.

Leadership is the art of inviting and moving other people to work to achieve goals. In numerous investigations, researchers have focused on identifying specific personal attributes or traits that qualify an individual as a leader and contribute to their success in leadership roles. Traits consistently linked to effective leadership encompass intelligence, spanning both mental acuity and emotional intelligence, as well as personality factors such as extraversion, conscientiousness, openness to experience, and self-esteem. Additionally, integrity is recognized as a key trait associated with successful leadership in various studies. Daniel Goleman considers that IQ is a trait that is required. While crucial for individuals in entry- to high-level management positions, once leaders attain these roles, a high IQ loses its significance as most leaders already possess elevated intellectual abilities. According to (Goleman, 2004), the distinguishing factor between effective and ineffective leaders lies in their ability to manage their own emotions, understand the emotions of others, exhibit internal motivation, and demonstrate strong social skills. According to (Judge at al., 2022) a robust correlation exists between the big five personality traits and effective leadership. These traits include (1) Openness, characterized by curiosity, originality, intellectuality, creativity, and receptiveness to new ideas. (2) Conscientiousness, demonstrated through organization, systematic approaches, punctuality, achievement orientation, and reliability. (3) Extraversion, reflected in outgoing, talkative, sociable behavior, and a penchant for social situations. (4) Agreeableness, encompassing affability, tolerance, sensitivity, trust, kindness, and warmth. (5) Neuroticism, characterized by traits such as anxiety, irritability, temperamental tendencies, and moodiness.

Westerman G et al., (2014) in emphasizing the significance of leadership in driving digital transformation, asserted that a digital leader is someone who mobilizes the organization by fostering a comprehensive understanding of digital initiatives and wields influential capabilities over the workforce. (Alanazi, 2022).

According to Klein, states characteristics of digital leaders are divided into three groups: Characteristics related to digital business, characteristics concerning social leadership attitude, and characteristics related to general mindset. (Klein, 2020).

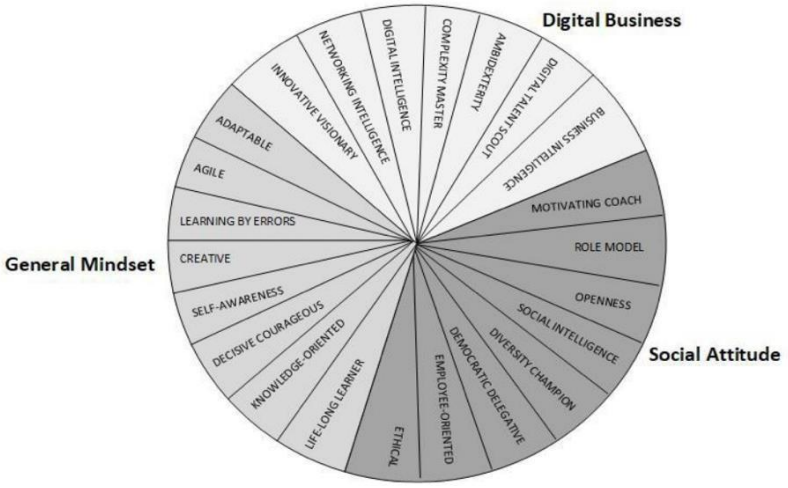

Figure 1. Leadhership Characteristics in Era of Digital Transformation
Source: Klein, M. (2020)

Leadership Style

Leadership style is a model used by a leader to guide the organization and its subordinates in achieving a certain goal. Numerous leadership theories can be tailored and applied effectively within the healthcare industry to enhance management in its intricate and dynamic setting. The adaptability of leadership theories allows healthcare leaders to select and implement approaches that align with the unique challenges and demands of the healthcare sector. By integrating appropriate leadership theories, healthcare organizations can optimize their management practices, foster teamwork, improve patient care, and navigate the complexities inherent in the healthcare landscape.

Traditional Leadership Styles

There are three basic leadership styles according to Kurt Lewin: Authoritarian (Autocratic), Delegative (Laissez faire), Participative (Democratic). (Jdetawy, 2018) Authoritarian leadership (Autocratic style), in this style, the leader directly gives directions and tasks to subordinates and subordinates must carry out tasks according to orders, in this case power or authority in the organization is really needed and the one who benefits the most Delegative leadership (Laissez-faire style), in this style the nature of leadership is not visible, the leader looks like he is hands-off to his subordinates. But it doesn't mean irresponsible. The meaning of hands-off here is to give freedom to subordinates to be creative and innovate. So, the role of the leader here is passive and acts as a facilitator and supporter if asked. Participative leadership (Democratic style), meaning involving leaders and employees in decision making, implementing activities, and various other activities. Or it could be said that this style adheres to a cooperative system.

Leader-Member Exchange Theory

The leader-member exchange theory delves into the dynamics of the connection between management and employees within an organization. The effectiveness of an organization is frequently influenced by the quality of relationships between leaders and their team members. The primary objective of the leader-member exchange theory is to scrutinize these interactions comprehensively and offer strategies to enhance and optimize the working relationship between leaders and employees (Northhouse, 2016).

Transformational leadership

Transformational leadership has long been recognized as a critical factor to organizational digital technology adoption. Transformational leadership was developed by James MacGregor Burns, and the process involves the profound alteration and transformation of individuals, focusing on emotions, values, ethics, standards, and long-term goals. The transformational theory necessitates leaders to articulate their vision in a way that is not only meaningful and exciting but also fosters unity and a shared sense of purpose. A manager who is dedicated, possesses a clear vision, and empowers others can be aptly characterized as a transformational leader within this framework (Northhouse, 2016).

Digital era

The digital era is a picture of industrial evolution by identifying and finding ways to overcome the challenges of digital transformation in society, which means that all technology, robots, and cloud storage are the answers to the problems in our lives. This era was introduced by the Sakura Country (Japan) in 2019 which was initiated in anticipation of the industrial revolution 4.0.

The journey to society 5.0 starts from society 1.0 which is characterized by a society that survives by hunting and collecting wild animals and plants for consumption without any effort to cultivate them (hunter-gatherer society). Then Society 2.0 started to know how to plant or was called an agrarian society. In 3.0, people are starting to recognize industry to overcome several problems (industrial society). Then in 4.0 technology began to be used in society.

Currently, countries in the world, including Indonesia, are preparing to face digitalization era that focuses on human life as a continuation of the technology that exists in society 4.0. One description of society 5.0 begins with the existence of robots that have artificial intelligence with the aim of helping humans, but if this technology is not addressed properly, it will certainly have a bad impact on humans. This is where the role of education is needed to provide education regarding technology and its use in life. So that it doesn't get misused.

This framework enables society to harness contemporary science-driven knowledge such as AI, robotics, and IoT to cater to human needs. The primary objective of this framework is to establish a community where individuals genuinely relish life and experience a sense of comfort. Introduced in January 2019, Society 5.0 was conceived as a response to the apprehensions surrounding the potential degradation of humanity associated with the Fourth Industrial Revolution. In essence, the disparities between the concepts of Revolution 4.0 and Society 5.0 are minimal. The distinction lies in the emphasis of Society 5.0, which places a greater focus on the human context. While the Fourth Industrial Revolution employs AI and artificial intelligence as pivotal elements shaping the future, the digital era leverages modern technology while retaining humans as the central component.

The era of digitization signifies a period where all technologies seamlessly integrate with human life. The internet, beyond serving as a mere information provider, becomes an integral part of daily living. Within the realm of digital systems, the innovation derived from

technological advancements holds the potential to bridge human disparities and address future economic challenges. In the information society, often referred to as Society 4.0, cross-sectional knowledge sharing proves insufficient due to the limitations inherent in human capabilities.

In the digital era, this limitation is surpassed as the synergy between the digital realm and the real-world environment reaches new heights. While Society 4.0 relies on the internet to access databases in cyberspace, the digital era goes a step further. It involves the accumulation of substantial data from physical space sensors, storing it in cyberspace. Subsequently, this vast dataset undergoes analysis and interpretation through Artificial Intelligence (AI). The findings from this analysis are then conveyed to individuals in the physical realm through various formats. This process signifies a shift towards a more integrated and technologically advanced era, emphasizing the dynamic interaction between the digital and physical spheres.

Society 5.0 strives to create a community where individuals can experience a superior quality of life, simultaneously fostering economic development and addressing prevalent social issues. This envisioned society is designed to be fully operational, catering to a diverse range of needs without discrimination based on factors such as age, geographic location, gender, language, and more. The overarching goal is to build a holistic and inclusive environment that ensures a high standard of living for all, irrespective of individual differences and backgrounds. For example, an increase in society 5.0 in the health sector, people aged 60 > 90 years old according to WHO are experiencing a generative process and most of them bring various problems in terms of health, or some of their body functions do not function according to humans at that age. children to middle age. In this case, society 5.0 seeks to provide comfortable living for elderly people by creating various technologies that can be used as health aids in everyday life. Like an automatic driving car that can detect irregularities in the user's health, health, and medical care easily and automatically (Fukuyama, 2018).

Digital health, also known as digital healthcare, is a wide-ranging, multidisciplinary system that combines technology and healthcare. Mobile health (mHealth) apps, electronic health records (EHRs), electronic medical records (EMRs), wearable devices, telehealth services, telemedicine, and personalized medicine are all included. (Bernstein, 2021). Digital health might have a role in health transformation by assisting patient involvement in the methods of delivering health care (Iyawa at al., 2016). For this reason, medical professionals must adjust to the new era of digital health. A better understanding of digital health may lead to more creativity and enhance the effectiveness of medical services.

RESEARCH METHOD

A literature search was performed using the databases Semantic Scholar, Google Scholar, and PubMed. Search terms used are “Leadership, Leadership style, Digital era, Healthcare quality”. 60 relevant articles were studied and among them 24 directly related articles were selected for this review.

RESULTS AND DISCUSSIONS

The digital system era is a society that has a high level of intelligence. The land of the rising sun (Japan) is the country that will take the lead in realizing this society before other countries. The era of digital systems is an era where society is centered on systems that are integrated online in solving social problems and balancing economic growth. There are several skills that a person must have to face the digital era, namely problem solving, critical thinking,

and creativity. A leader must be able to predict future challenges, so that they and the organization they lead can survive for the future. The world is developing very rapidly, so leaders and various organizations must be prepared to deal with global changes.

The Society 5.0 will do everything more often with technology because as previously explained, the use of technology will become the main axis in life in society 5.0, resulting in them being able to do various things that initially could only be done in certain places and can be done anywhere. can do various things that we previously thought were impossible. This will bring significant changes to the behavior, perspective, and abilities of every human being. With complex goals and the existence of SDGs, it is necessary to have leaders who can manage various human resources, and this technology well and precisely, and flexibly without being too tied to rules so that the advantages obtained in society 5.0 can be utilized effectively good. Not being bound by rules or being flexible here does not mean being able to do things according to personal desires and not obeying the rules. What is meant by flexibility is not following old rules, for example, you must always be offline, and then you don't have to force yourself to use old rules, before the advent of technology. And flexibility here also means not imposing the leader's will on employees and giving them space to make decisions and be creative according to their abilities.

In the context of Society 5.0, leadership becomes crucial for navigating the complexities of this technologically advanced and linked environment. While the importance of specific traits varies according to the specific challenges and possibilities identified in Society 5.0, certain leadership traits remain generally valuable. The relationship between traits and leadership has been a subject of study for many years. Researchers have explored various traits that are often associated with effective leadership. While there is no particular set of traits for successful leadership, certain traits are commonly found in effective leaders. These include intelligence (IQ and EQ), good personality, and integrity.

Leading this society requires differences from leading society in ancient times. In this digital era, it is better to use a transformational leadership style combined with LMX theory. Transformational leadership and Leader-Member Exchange (LMX) theory are recognized and valued in the digitalization era for several reasons:

1. Adaptability and Change Management
   This type of leadership focuses on encouraging and motivating people to reach their highest potential. In the context of digitalization, where rapid changes and adaptability are crucial, transformational leaders can effectively guide teams through the challenges of technological advancements and organizational change.
2. Innovation and Creativity
   This style encourages creativity and innovation. In the digital era, organizations need to constantly innovate to stay competitive. Transformational leaders foster a culture of creativity, enabling teams to generate new ideas and solutions. High-quality leader-member relationships, as emphasized in LMX theory, promote open communication and trust. This can enhance the exchange of innovative ideas within a team, fostering a collaborative and creative environment.
3. Employee Engagement and Empowerment
   Leaders who inspire and empower their followers create a sense of purpose and engagement. In the digital age, where remote work and virtual teams are common, engagement becomes even more critical for productivity and team cohesion. LMX theory emphasizes the unique interaction between leaders and followers. Leaders who invest time and effort in building positive relationships can better understand and support their team members, leading to higher levels of engagement.

4. Flexibility and Collaboration
   Transformational leaders often exhibit flexibility and adaptability, which are essential in the dynamic digital landscape. They encourage collaboration and teamwork, essential for navigating the complexities of digital projects. Leader-member exchange theory emphasizes differentiated relationships based on mutual trust and respect. In a digitalized work environment, where virtual collaboration is common, having strong interpersonal relationships becomes crucial for effective teamwork.
5. Digital Leadership Skills
   Many qualities of transformational leadership, such as vision, communication skills, and the ability to inspire, align with the skills needed for effective digital leadership. The personalized nature of leader-member exchange theory aligns with the need for leaders to understand and find the solution to the individual necessities and expectancies of team members in a digitalized setting.

CONCLUSION

Leadership is the art of inviting and moving other people to work to achieve goals. There are several skills that a leader must have to face the digital era, namely problem solving, critical thinking, and creativity. Leaders require personal attributes or traits for several reasons since these qualities are fundamental to their capacity as they lead and inspire others. These traits include intelligence, personality, and integrity.

There are several leadership styles which can be adapted, namely authoritarian leadership style, democratic leadership style, laissez faire leadership style, transformational leadership, and LMX theory. Digital era is an era where society is centered on systems that are integrated online in solving social problems and balancing economic growth. Transformational leadership and LMX theory provide valuable frameworks for leadership in the digitalization era by promoting adaptability, innovation, employee engagement, collaboration, and the development of strong interpersonal relationships in a technologically driven work environment.

REFERENCES

Alanazi, A. T. (2022). Digital leadership: Attributes of modern healthcare leaders. *Journal of Medical Science, 14*(2), 1–7. https://doi.org/10.7759/cureus.21969

Bernstein, C. (2021, March 11). *Digital health (digital healthcare).* Teach Target Networking. https://www.techtarget.com/searchhealthit/definition/digital-health-digital-healthcare

Colquitt, J. A., LePine, J. A., & Wesson, M. J. (2013). *Organizational behavior: Improving performance and commitment in the workplace.* New York: McGrow-Hill.

Fukuyama, M. (2018). Society 5.0: Aiming for a new human-centered society. *Japan SPOTLIGHT*, *66*(6), 47–50.

Gibson, J. L., Ivancevich, J. M., Donnelly, J. H., JR, & Konopaske, R. (2006). *Organization: Behavior, structure, processes.* New York: McGraw-Hill.

Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216–1229. https://doi.org/10.1037//0022-3514.59.6.1216

Goleman, D. (2004, January). What makes a leader? *Harvard Business Review, 82*(1), 82–91.

Iyawa, G. E., Herselman, M., & Botha, A. (2016). Digital Health Innovation Ecosystems: From Systematic Literature Review to Conceptual Framework. *Procedia Computer Science, 100,* 244–252. https://doi.org/10.1016/j.procs.2016.09.149

Jdetawy, L. F. (2018). The prominent leadership style/s adopted by Jordanian firms managers: A case study of the Jordanian private firms. *International Journal of Development Research, 8*(11), 24343–24367.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2022). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765–780. https://doi.org/10.1037/0021-9010.87.4.765

Klein, M. (2020). Leadership characteristics in the era of digital transformation. *Business and Management Studies An International Journal, 8*(1), 883–902. http://dx.doi.org/10.15295/bmij.v8i1.1441

Luthans, F. (2008). *Organizational behavior.* New York: McGraw Hill.

Mumford, M. D., Zaccaro, S. J., Harding, F. D., Jacobs, T. O., & Fleishman, E. A. (2000). Leadership Skills for a Changing World: Solving Complex Social Problems. *Leadership Quarterly, 11*(1), 11–35. https://psycnet.apa.org/doi/10.1016/S1048-9843(99)00041-7

Northhouse, P. G. (2016). *Leadership theory and practice.* California: SAGE Publications.

Robbins, S. P., & Judge, T. A. (2016). *Organizational behavior.* Pearson Education.

Stoumpos, A. I., Kitsios, F., & Talias, M. A. (2023). Digital transformation in healthcare: Technology acceptance and its applications. *International Journal of Environmental Research and Public Health, 20*(4), 1–44. https://doi.org/10.3390/ijerph20043407

Vecchio, R. P. (2006). *Organizational behavior: Core concepts.* Thomson/South-Western.

Westerman, G., Bonnet, D., McAfee, A. (2014). *Leading digital: Turning technology into business transformation.* Harvard Business Review Press.