



Developing Model of Digital Leadership for the New Normal Age

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Abstract. The new normal is a new order created to adapt to the Covid-19 pandemic, a new habit built on adaptation to promote a clean and healthy lifestyle. The pandemic is a real-life example of a volatile-uncertain-complex-ambiguous (VUCA) world. It has resulted in huge changes in leadership and management of business entities. The goal of this study is to analyze digital leader characteristics from related digital leadership papers on the world wide web and develop a digital leader framework. Google Scholar was used as a web browser tool to collect data. The study's keywords included digital leadership, digital leaders, digital leader characteristics, digital leader qualities, digital leader traits, leadership traits for a new normal age, and leadership skill for a new normal age. The synthesis matrix techniques with congruence index of sources technique have been used to analyze the content of the literature review. For further model development, the accuracy of essential aspects from at least three sources was required. This study discovered 61 high-quality digital leaders from seven journals. The finalized digital leader characteristics have been synthesized and analyzed by using congruence index criterion, which requires a minimum three sources. According to the findings of this study, ten characteristics of digital leaders met this criterion: innovative visionary, digital intelligence, agile, role model, diversity champion, creative, knowledge-oriented, digital talent scout, employee-oriented, and business intelligence. These characteristics were used to develop a model called "Ten Characteristics of a Digital Leader for the New Normal Age."

Keywords: Levers of control · Family-owned restaurants · Management control system · Company competitiveness

1 Introduction

The Covid-19 pandemic is a succinct description of how VUCA World came to be. This has resulted in a fundamental shift in leadership and management of business organizations. VUCA World has been used since the 1990s at the United States Army War College in a book titled "Leaders Make the Future" [1]. VUCA is an acronym that stands for volatile, uncertain, complex, and ambiguous [2]. The term refers to the middle of the battle, which explains the chaotic situations of today's battlefield. The Covid-19 pandemic reveals a fragile world. Everything has changed as a result of a flu outbreak (volatility), which has created uncertainty in the existing regulations (uncertainty), resulting in new

and integrated problems (complexity), and steps to overcome ambiguity. As a result, leading a business in the present life differs greatly from managing an organization in the VUCA world [3].

The pandemic situation has caused significant disruption. The new normal is a new order created to adjust to the Covid-19 pandemic, a new habit built on adaptation to promote a clean and healthy lifestyle. The pandemic gave rise to the concept of the new normal, that has resulted in a rapid increase in the digital marketplace, increased the affluence of the modern economy, and irreversibly altered persons' lifestyles. Whether it is societal progress, enterprise development, or the fast-paced lifestyle in stimulating digital development, the 'online and remote life model' has become the new normal. 'What is the new normal, post-pandemic?' ask corporate leaders, as industries become more complicated and ambiguous. Customers get less expendable income, the assumptions are empty, personnel work from home. Opportunities exist, no matter how bleak things appear. Organizations, on the other hand, will need to transform [4]. To respond to the pandemic, technology will be needed, and organizations will need to restructure [5]. The Covid-19 pandemic is considered an accelerator of digital transformation in organizations [6].

Digital transformation (DT) means a more comprehensive digitalization experience compared to the previous. It alters business operations, business models, customer relationships, and processes, resulting in damaging changes to all organizational forms. Today, organizations face a significant challenge in managing DT. Leadership is a critical success factor that improves organizational success in DT. Digital leaders (DL) must have different ways of thinking and qualities than traditional leaders in the digital age. Digital leadership (DLS) not someone who is a master in computer assembly, computer operation, or programming. However, DLS is defined as someone who can lead an organization or company by utilizing modern information and communication technologies in the internet age to accomplish the organization's or company's goals [6].

A leader with adequate digital literacy and skills is required for a successful DT. A leader, not technology, is essential for success [7]. However, DL must understand what essential characteristics assist them in becoming mature digital participants and connecting with their employees, team members, and entities. Despite the fact that numerous articles on the Internet provided comprehensive information about the characteristics of a DL, there were some significant discrepancies among those papers. The purpose of this study was to assess the attributes of a DL from the literary works and build a model of defining attributes of a DL for the new normal age in order to have a good understanding of what essential characteristics of a DL must possess in order to achieve an effective DT.

This study discovered, through a review of the literature, that numerous Internet journals proposed important DL characteristics for a new normal age.

According to Klein [8], Industry 4.0's digitalization is more than just a technological issue because it generates fundamental change in business processes and entities. Noticeably, they can count on a new understanding of leadership. In networked and distributed organizational structures, so-called "Digital Leader - DL" are supposed to act quickly and flexibly. They must, on the other hand, manage the company's DT. Because most businesses are still in the early stages of DT, there is a lack of common understanding

and a standard DLS model. The main characteristics of the leadership in the era of DT are Innovative Visionary; Networking Intelligence; Adaptable; Motivating Coach; Digital Intelligence; Complexity Master; Social Intelligence; Democratic Delegates; Agile; Learning by Errors; Role Model; Diversity Champion; Decisive Courageous; Creative; Openness; Self-Awareness; Ambidexterity; Knowledge-Oriented; Digital Talent Scout; Employee-Oriented; Business Intelligence; Life-Long Learner; and Ethical [8].

Companies, according to Hai [9], must improve their leadership capacity in order to carry out effective DT. In terms of DT thinking, changing leadership methods, and managing work within organizations, leaders must be innovators. In the chaos of the digital age, leaders should be armed with DLS thinking and adapt it to the direction and operation of the company. They must then raise employee levels through training programs, DT, constructing an in-house culture, agile and relentless learning, and technology advancements, so that personnel can keep going to adapt and thrive. To complete an effective DT, technologies, DT processes, and people must all work together. Some skills that can help improve leadership effectiveness in DT are as follows:

1. Be creative, innovative, and think outside of the box in order to inspire them to feel alive;
2. Keep up with technology trends, monitor the market, and speak with experts and other DL.
3. Communicating with and sharing information with peers about their advancement, experiences, and best practices will help relieve stress because collaboration and human strength should never be doubted;
4. The ability to adapt and respond quickly in a fast-paced environment. The DL should be adaptable, capable of devising strategies for dealing with the unknown, and capable of changing behavior in response to new challenges. Avoid becoming overly attached to a single plan; the leader must be ready for possible scenarios and see fault as a process rather than an endpoint. Predicting opportunities and develop strategies to utilize on them would be necessary factors of growing business;
5. Data-driven decision-making is the foundation for steering business transactions in the most profound direction. Big Data, Business Intelligence (BI), Data Science, and Algorithms are all concepts that every digital technology leader should be familiar with [9].

According to Eberl et al. [10], the current state of the literature highlights skills, roles, and leadership styles as crucial attributes of a DL. The majority of the reviewed literature (53 percent) focuses on skills, while roles and styles of leadership are only represented in 27% of the papers examined. They proposed eight characteristic of DLS: 1) Diversity and inclusion; 2) Sustainability; 3) Trust; 4) Freedom to experiment; 5) Openness; 6) Transparency; 7) Employee focus; and 8) Customer centricity [10].

Schiuma [11] identified five critical DL' competencies and reported on the fundamental DL skills. Digital vision necessitates leaders imagining and communicating the organization's digital future to employees. Digital knowledge entails a thorough understanding of digital tools and how specific technologies affect the businesses of customers. Failing quickly, the ability to fail and learn quickly in order to save resources for the organization, complete efficient projects or tasks, and put an end to something

that is not working. Empowerment, or the delegation of authority to those lower in the organizational hierarchy to the transformative leadership compass, ensures effective DT by encouraging involvement in decision making, conveying confidence in high performance, and assisting workgroups in feeling a part of a larger transformation. Because leaders must develop cross-functional teams, such as business and information technology (I.T.) teams, to deliver complex projects in a DT context, they must manage diverse teams or manage each team member differently [11].

Durmaz [12] reported that leadership has a vital role in the organization. However, many factors negatively or positively influence the organization's success. One of the most important factors in leadership effectiveness is industrial development. Many researchers noted that leaders should have current information and communication skills in order to improve the relationship between leaders and employees in the organization. In this regard, Industry 4.0 has provided numerous opportunities for organizations. Leaders had to adapt to the new market by training their employees, especially during the pandemic lockdown. According to our perceptions, transformational leaders' characteristics may be correct leadership styles that provide proper adaptation to changes in their environment and improve employee and organizational success in the long run. Transformational leadership is thought to be the most suitable model for the DT process, whereas transformational leaders are new models characterized by "the four dimensions: 1) idealized influence; 2) inspirational motivation; 3) intellectual stimulation; and 4) individualized consideration" [12].

Morgan [13] proposed the following "do's" for DL: 1) Study industry-wide technological advancements and apply them to your situation. 2) Form highly collaborative internal teams with leadership support. 3) Recognize, encourage, and support your organization's "digital champions." 4) Recognize and accept the limitations of your expertise and knowledge; 5) Set a good example; and 6) demonstrate a willingness to try new things. Encourage your employees to take risks; 7) Promote the creative and innovative use of technology. 8) Apply your experience to identify business issues where technology can assist; 9) Maintain your focus on the importance of viewing technology as a tool; and 10) accurately describe and articulate the advantages of technology in your organization [13].

According to Karippur and Balaramachandran [14], the competencies of an effective DL should include the ability, knowledge, and experience to govern technology for strategic advantage. Furthermore, DL should be involved in technology decisions, risk management, and effectively using technology to reap returns and add value to the organization, and seven leadership attributes for DLS were proposed: 1) Digital visionary - the ability of leaders to create a valid and direct vision for the organization's digitalization process and to implement strategies to make it a reality. 2) smart risk taker - leaders should take risks to open the door to new possibilities, markets, customers, and innovations. 3) Encourage innovation - To support DT and remain competitive, leaders must drive innovation. 4) Agility - DL must be agile in order to deliver both the big picture in the long run and monitor daily activities; 5) Ambiguity tolerance - leaders must be aware of uncertain or ambiguous information that prevents clarity of understanding or direction. 6) natural collaborator - work with partners (e.g., platform companies) to find

new digital business opportunities; and 7) develop digital talent - leaders are expected to find the talent/skills needed to drive and deliver the digital strategy [14].

2 Research Methods

This research is a documentary analysis study. The purpose of this research is to examine the key characteristics of DL in the new normal age. For data analysis, secondary data was used. To collect data, Google Scholar was used as a search engine tool. DLS, DL, DL characteristics, DL qualities, DL traits, new normal age leadership traits, and new normal age leadership were used as keywords. For data collection, only related journals from 2020, the start of the Covid-19 pandemic, to March 2022 that provide information about the characteristics of DL were used. Information from these sources was eventually synthesized and analyzed in order to develop a DLS model. The matrix synthesis method was combined with the resource index technique for content analysis. Further model development required consistency of key components from at least three sources.

3 Results and Discussion

According to Google Scholar, 7 journal articles with info concerning DLS capabilities were discovered and used for data synthesis and analysis. Depending on such journal articles, 62 DL qualities were identified, some of which may be redundant or interrelate. The highest proliferation of DL qualities discovered in this study was 23, as reported in the journal “Leadership Characteristics in the Era of DT.” In contrast, the journal “The Suitable Leadership for Industry 4.0” discovered that the lowest number of DL characteristics was four. A DL’s average number of qualities was between eight and nine. These characteristics were compared to see how similar they were for model development (Table 1).

In Table 2, which contains 31 DL characteristics from 7 different sources, equal traits and repetitive qualities were restructured and provided under the same or similar names. The consistency of attributes used to finalize what characteristics were considered for the proposed model was decided from at least three different references for this study’s data analysis criterion. The results show that 10 characteristics of DL met this criterion: innovative visionary, digital intelligence, agile, role model, diversity champion, creative, knowledge-oriented, digital talent scout, employee-oriented, and business intelligence. Among these traits, innovative visionary and business intelligence ($f = 4$) had the highest frequency followed by digital intelligence ($f = 3$), agile ($f = 3$) and role model ($f = 3$), respectively.

These ten DL qualities for the new normal age were then used to create a DL attributes model for the new normal age (see Fig. 1).

Table 1. Google Scholar Information Summary on Qualities of Digital Leaders

| No | Journal | Author(s) | Numbers of Digital Leader Qualities |
|----|---|---|-------------------------------------|
| 1. | Leadership Characteristics in The Era of DT | Klein, M. [8] | 23 |
| 2. | DT: Opportunities and Challenges for Leaders in the Emerging Countries in Response to Covid-19 Pandemic | Thanh Nguyen Hai [9] | 5 |
| 3. | Digital Leadership – Mountain or Molehill? A Literature Review | Eberl, Julia Katharina and Drews, Paul [10] | 8 |
| 4. | The transformative leadership compass: six competencies for DT entrepreneurship | Giovanni Schiuma [11] | 5 |
| 5. | The Suitable Leadership for Industry 4.0 | Osman Durmaz [12] | 4 |
| 6. | Digital Leadership for the Built Environment | Bethan Morgan [13] | 10 |
| 7. | Antecedents of Effective Digital Leadership of Enterprises in Asia Pacific | Karippur & Balaramachandran [14] | 7 |



Fig. 1. Ten Characteristics of a Digital Leader for a New Normal Age

Table 2. Results of Digital Leaders Characteristics

| No | Qualities | Klein [8] | Thanh [9] | Eberl [10] | Giovanni [11] | Osman [12] | Bethan [13] | Karippur [14] | Total |
|-----|------------------------------|--------------|--------------|---------------|------------------|---------------|----------------|------------------|-------|
| 1. | Innovative Visionary | ✓ | | | ✓ | | ✓ | ✓ | 4 |
| 2. | Networking Intelligence | ✓ | ✓ | | | | | | 2 |
| 3. | Adaptable | ✓ | ✓ | | | | | | 2 |
| 4. | Motivating Coach | ✓ | | | | ✓ | | | 2 |
| 5. | Digital Intelligence | ✓ | | | ✓ | | | ✓ | 3 |
| 6. | Complexity Master | ✓ | | | | | | | 1 |
| 7. | Social Intelligence | ✓ | ✓ | | | | | | 2 |
| 8. | Democratic Delegative | ✓ | | | ✓ | | | | 2 |
| 9. | Agile | ✓ | | | ✓ | | | ✓ | 3 |
| 10. | Learning by Error | ✓ | | ✓ | | | | | 2 |
| 11. | Role Model | ✓ | | | | ✓ | ✓ | | 3 |
| 12. | Diversity Champion | ✓ | | ✓ | ✓ | | | | 3 |
| 13. | Decisive Courageous | ✓ | | | | | | | 1 |
| 14. | Creative | ✓ | ✓ | | | | ✓ | | 3 |
| 15. | Openness | ✓ | | ✓ | | | | | 1 |
| 16. | Self-Awareness | ✓ | | | | | | | 1 |
| 17. | Ambidexterity | ✓ | | | | | | | 1 |
| 18. | Knowledge-Oriented | ✓ | | | | ✓ | ✓ | | 3 |
| 19. | Digital Talent Scout | ✓ | | | | | ✓ | ✓ | 3 |
| 20. | Employee-Oriented | ✓ | | ✓ | | | ✓ | | 3 |
| 21. | Business Intelligence | ✓ | ✓ | | | | ✓ | ✓ | 4 |
| 22. | Life-Long Learner | ✓ | | | | | | | 1 |
| 23. | Ethical | ✓ | | | | | | | 1 |
| 24. | Sustainability | | | ✓ | | | | | 1 |
| 25. | Trust | | | ✓ | | | | | 1 |
| 26. | Transparency | | | ✓ | | | | | 1 |
| 27. | Customer Centricity | | | ✓ | | | | | 1 |
| 28. | Individualized Consideration | | | | | ✓ | | | 1 |

(continued)

Table 2. (continued)

| No | Qualities | Klein [8] | Thanh [9] | Eberl [10] | Giovanni [11] | Osman [12] | Bethan [13] | Karippur [14] | Total |
|-----|------------------------|-----------|-----------|------------|---------------|------------|-------------|---------------|-------|
| 29. | Collaborative | | | | | | ✓ | ✓ | 2 |
| 30. | Technology Orientation | | | | | | ✓ | | 1 |
| 31. | Smart Risk Taker | | | | | | | ✓ | 1 |

Each attribute of a DL was clarified for the sake of future research development.

1. Innovative visionary – a DL should have an inspiring digital vision and foresight for innovative business models.
2. Business intelligence – a DL should be able to create new business models, establish an external customer focus, be ecosystem-centered, and understand the entire business.
3. Digital intelligence – a DL should have a broad vision of how things can be transformed digitally and be enthusiastic about digitalization.
4. Agile – a DL is capable of quickly coordinating teams, adapting to new business models, and developing DT strategies.
5. Role model – during the DT, DL should act as trailblazers and influencers.
6. Diversity champion – a DL must consider gender and cultural diversity, as well as accept different opinions, perspectives, needs, and requirements from employees, partners, and customers.
7. Creative – new organizational structures and business models should be developed by a DL.
8. Knowledge-oriented – a DL should be a curious, questioning, and profound thinker.
9. Digital talent scout – a DL should find ways to attract new high digital capabilities and invest in open and flexible talent recruitment and management systems.
10. Employee-oriented – a DL should focus on employee growth and wellbeing in the organization.

4 Conclusion

The study’s goal is to analyze the DL qualities of related DLS and develop the DL model’s characteristics. This study compiled 61 characteristics of DL from seven journals. Index criteria were used to synthesize and analyze these characteristics, which requires a minimum three sources for the ultimate DL trait. The findings show that 10 characteristics of DL meet these criteria, including innovative visionary, business intelligence, digital intelligence, agile, role model, Diversity champion, creative, knowledge-oriented, digital talent scout, and employee-oriented. These qualities were used to develop a model called the “Ten Characteristics of a DL for the New Normal.” This model can be used as a starting point for further research on the subject. Furthermore, because this study only used a documentary analysis approach, quantitative methods utilizing factor analysis

techniques are required to investigate and ensure the quality of DL for the new normal age.

The attributes of DL reported in this research were only drawn from limited journals, that may not portray the outcomes of research in this area, which is one of the study's limitations. Therefore, future research should include additional data analysis sources such as more research articles and related books on DLS.

Organizations can benefit greatly from the findings of this study in terms of research implications. On the one hand, they can create programs to help their employees in the new normal age develop these ten characteristics of a DL. On the other hand, they can use this information to further research into DLS for the new normal age, ensuring that these qualities are compatible with their nature and context.

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