

Editor -in-chief's Note

Organizational Digital Intelligence (ODI): Conceptualization, Framework, and Implications for Digital Transformation"

Mitra Samiei  *

Director-in-Charge, Department of Knowledge &
Information Science , Allameh Tabataba'i University,
Tehran, Iran

Accept Date: 30 May 2023

Abstract

Digital transformation has fundamentally changed the nature of work, shifting organizational activities from physical, task-based models to digitally mediated processes. As businesses compete to create engaging experiences for employees and customers, Organizational Digital Intelligence (ODI) has emerged as a critical determinant for success in the digital age. Organizational Digital Intelligence is defined as an organization's capability to effectively monitor, understand, evaluate, and employ digital technologies in decision-making, learning, and value creation. ODI goes beyond mere technology adoption; it encompasses an organization's capacity to adapt to digital changes, analyze data, engage in intelligent learning, and develop technological capabilities that sustain competitive advantage and innovation. Organizational Digital Intelligence features a three-stage framework and consists of digital ambition, digital skills, and digital literacy, each effected through the following activities: monitoring and shaping (ambition), selecting and structuring (skills), and stimulating and educating (literacy). It also identifies key features of digital intelligence – including digital literacy and competence,

Receive Date: 30 May 2023

eISSN: 2717-3313

ISSN: 2717-3305

How to Cite: Samiei, M. (2023). Organizational Digital Intelligence (ODI): Conceptualization, Framework, and Implications for Digital Transformation", *International Journal of Digital Content Management (IJDCM)*, 5(8), Editor -in-chief's Note. DOI: 10.22054/dcm.2026.95723.1320

critical thinking, digital security and privacy, digital ethics, adaptability to emerging technologies, digital collaboration, data-driven decision-making, and continuous learning – which enable both individuals and organizations to leverage digital opportunities while managing associated risks, such as the spread of digital misinformation among users with low digital intelligence. To contextualize organizational assessment, McKinsey & Company's Digital Quotient (DQ) framework is employed, which assesses organizational digital maturity across four dimensions: culture, strategy, capabilities, and organization and talent. Based on this framework, as well as the proposed ODI model, this article argues that comprehensive and adaptive assessment tools – capable of evaluating both technical and digital soft skills – are essential for organizations to identify their strong and weak points in digital readiness. Finally, amidst the continuous transition from the Fourth to the Fifth Industrial Revolution, fostering organizational digital intelligence is not a choice but a necessity for organizational resilience, competitiveness, and long-term sustainability in an increasingly interconnected digital economy.

Keywords: Organizational Readiness, Digital Transformation, Organizational Digital Intelligence, Organizational Resilience, Digital Index Framework.

Introduction

Today, workplaces have undergone an unprecedented transformation due to the emergence of digital technologies, and the nature of work has shifted from its physical and task-oriented form to digital methods. The digital workplace will serve as a platform for addressing employee expectations, fostering continuous communication among them, and organizing work environments of various dimensions, such as organizational culture, governance methods, technology infrastructure, and operational processes. Currently, businesses strive to create pleasant experiences for their customers, but until organizations can create attractive experiences for their employees, who are the primary audience of a brand, they will be unable to create this experience for customers. Success in the digital age for organizations depends on how work activities are transformed in digital workplaces, focusing on improving organizational digital intelligence.

The digital workplace is a blend of culture, physical resources, processes, and digital technologies seeking to create a unified, coherent, and engaging experience for employees and other organizational stakeholders. Through comprehensive collaboration among officials, by establishing a secure and pervasive connection, aligned with the expectations of each of its users, it provides various benefits to individuals and organizations. These benefits include increased agility, empowerment, productivity, collaboration, enthusiastic participation, knowledge sharing, innovation, and improved digital skills of employees, as well as reduced operational costs, increased revenue, attraction and retention of digital talent, and better customer experience for an organization (Shami Zanjani, 1404).

In the world of trade and business, the term "digital intelligence" refers to information obtained through existing technologies. Digital intelligence utilizes this information to implement an online marketing strategy and to gather necessary cybersecurity information. This information is established in accordance with regulations outlined by the Global Commission on Internet Governance.

Organizational digital intelligence is defined as an organization's ability to monitor, understand, evaluate, implement, and properly utilize digital technologies. Digitization in the form of new technologies such as artificial intelligence, the Internet of Things, and advanced manufacturing has a profound impact on the future of work.

This digital transformation necessitates the education and development of new skills in individuals. Therefore, a fundamental challenge in this area is the growth of individuals' capabilities as organizational talents (Habibi, 2015).

One of the main topics in in-service training and talent management is the discussion of improving individuals' digital intelligence. Organizations should strive to develop their core competencies by increasing this intelligence. Knowledge workers in modern organizations must possess digital skills. In this way, the organization will be ready to take advantage of environmental opportunities and counter threats. The organization's competitive capability will increase, and the achievement of organizational goals will become possible. This intelligence is one of the types of organizational intelligence whose application is mandatory for organizations.

What is Organizational Digital Intelligence?

Organizational Digital Intelligence refers to an organization's ability to understand, analyze, and effectively utilize digital technologies for decision-making, learning, and value creation. This concept goes beyond mere use of technology and emphasizes the organization's capacity to adapt to digital transformations, analyze data, intelligent learning, and develop technological capabilities. With the expansion of digital transformation and emerging technologies, digital intelligence has become a key factor for competitive advantage, innovation, and sustainability of organizations. Digital intelligence within organizations requires redefinition with more considerations. From this perspective, organizational digital intelligence is defined as the organization's ability to use digital capabilities in solving organizational problems.

Digital intelligence, defined as "a set of social, emotional, and cognitive abilities enabling individuals to face challenges in this domain and adapt to the demands of digital life," is an acquired ability and is, in fact, a fundamental element in developing skills for the future workforce in organizations.

Organizational Digital Intelligence Framework

The application of digital intelligence in an organization requires a well-defined framework. Since limited studies have been conducted in

this area, designing a complete framework for this purpose is challenging. Nevertheless, based on the literature and research background, general principles can be considered. An initial framework in this regard is as follows:

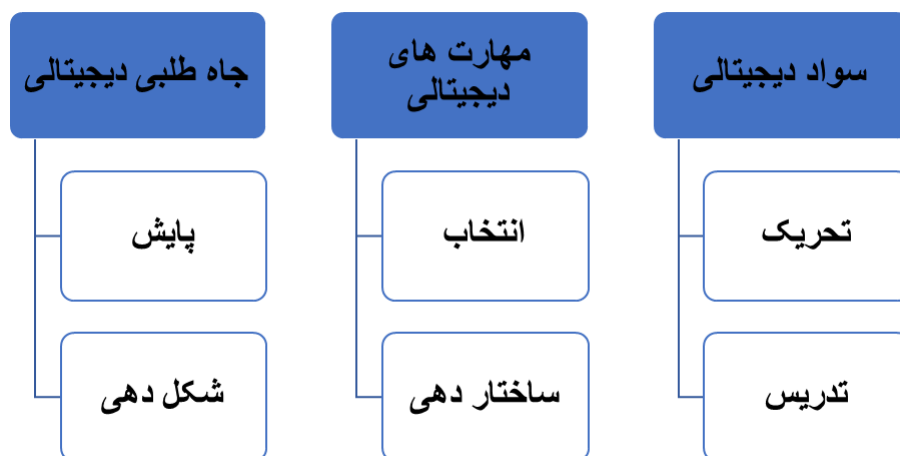


Figure 1. Organizational Digital Intelligence Framework

The organizational digital intelligence framework consists of three main stages. This framework begins with digital ambition. This is followed by the stage of developing digital skills, and the final stage relates to digital literacy. Therefore, the stages of this framework are:

- Digital ambition
- Digital skills
- Digital literacy

Each stage also involves two main activities. The activities of the digital ambition stage include monitoring and shaping. The activities of the digital skills development stage include selection and structuring. Finally, the activities of the digital literacy stage include stimulation and teaching. Organizational digital intelligence is essential for the success of organizations in the current era. This intelligence includes opportunities for evaluation and feedback within the organization. Evaluation tools must be comprehensive and consistent. This way, they can evaluate not only hard skills and professional techniques but also digital soft skills. Such evaluations

can provide a better understanding of the organization's merits and demerits. Organizations are immersed in today's digital world and will influence what the future of the world will be. A crucial point for organizations is the connection between digital intelligence and the spread of digital misinformation. The increased output capacity of this misinformation is related to the low digital intelligence of the users who share it. Without accurate digital information detection and critical thinking skills, individuals are more likely to share misinformation without knowing its consequences.

Other obvious consequences of low DQ include failing to resist online manipulation and the loss of privacy. This is not a challenge that every family can grapple with alone, but rather a problem that society must address collectively. It is very important that all organizations begin digital education. The world needs digital intelligence, and the increasing interconnectedness of lives has rendered the health and prosperity of societies dependent on it. The Importance of Organizational Digital Intelligence Organizational digital intelligence is defined as an organization's ability to monitor, understand, evaluate, implement, and correctly utilize digital technologies. Digitization, in the form of new technologies such as artificial intelligence, the Internet of Things, and advanced manufacturing, has a profound impact on the future of work. This digital transformation requires training and the development of new skills in individuals. Therefore, a fundamental challenge in this area is the growth of individuals' capabilities as organizational talents. One of the main topics in in-service training and talent management is improving individuals' digital intelligence. Organizations must strive to develop their core competencies by increasing this intelligence. Knowledge workers in current organizations must possess digital skills. In this way, the organization will be prepared to seize upon environmental opportunities and counter threats. The organization's competitive capability will increase, and the achievement of organizational goals will become possible.

This intelligence is one type of organizational intelligence whose implementation is essential for organizations. A critical point for an organization is the connection between digital intelligence and the spread of digital misinformation. The increased output capacity of this misinformation is related to the low digital intelligence of the users who share it. Without accurate digital information literacy and critical

thinking skills, it is more likely that individuals will share misinformation without knowing its consequences.

Characteristics of Digital Intelligence

Digital intelligence is a set of cognitive, behavioral, and ethical abilities that help individuals operate consciously, safely, and responsibly in digital environments. This concept is not limited to technological proficiency but also encompasses the ability to analyze information, make decisions, engage in continuous learning, and interact effectively in the digital space. Possessing digital intelligence is regarded as one of the prerequisites for success in life, education, and business in the era of digital transformation.

Digital literacy and competency; critical thinking and information analysis; digital security and privacy; digital ethics and responsibility; adaptability to new technologies; collaboration and digital communication; problem-solving and data-driven decision-making; continuous learning and innovation are characteristics enabling individuals and organizations to effectively leverage the opportunities of new technologies and perform well against the threats of the digital space. Therefore, developing digital intelligence not only helps increase productivity and innovation but also paves the way for the formation of responsible, agile, and future-ready citizens and organizations in the digital age.

What is the McKinsey Digital Quotient (DQ) Framework?

It is a tool developed by McKinsey & Company to help organizations assess their digital capabilities and identify areas for improvement. This framework is designed to provide insights into how a company adapts to the digital landscape and utilizes digital technologies for business transformation.

The McKinsey Digital Quotient Framework typically involves a series of assessments and surveys covering various aspects of digital maturity within an organization. These assessments may focus on areas such as strategy, capabilities, culture, organizational structure, and more. This framework often provides a quantitative score or "Digital Quotient" that indicates the organization's overall digital maturity. This score can be used to benchmark against industry peers and identify opportunities for growth and development in the digital space.

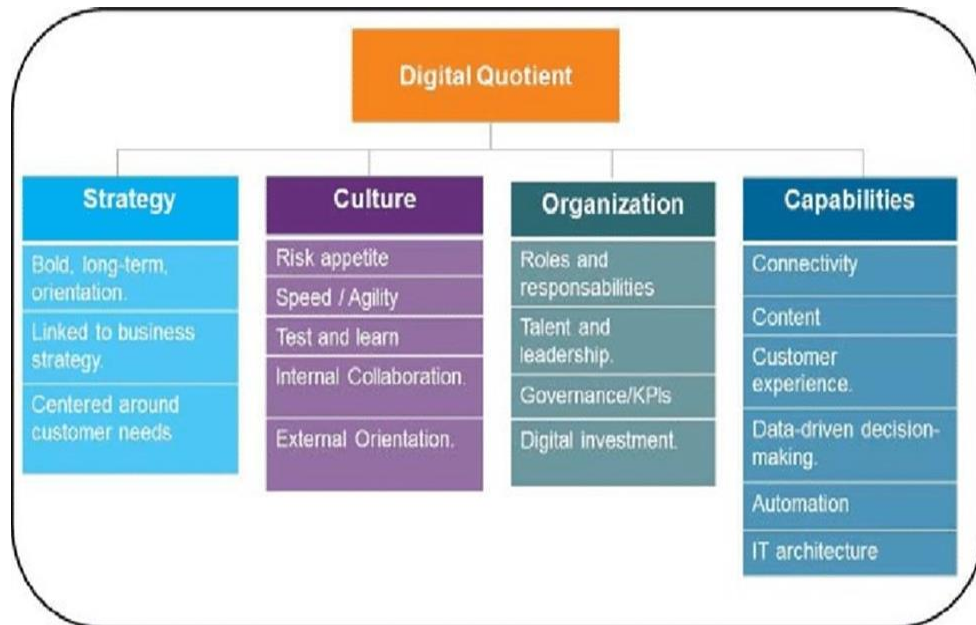


Figure 2. Components of McKinsey's Digital Quotient Framework

McKinsey's Digital Quotient Framework consists of several measurable elements with four high-level components. The four high-level items of the framework, with their sub-components, are:

1. Culture

- Risk Appetite: What level of risk can the organization currently tolerate, and what might it need to be?
- Test and Learn: Is a test-and-learn approach part of the general mindset? What are some specific areas where this practice could be more beneficial?
- Speed/Agility: What is the overall "pace" of genesis regarding change, implementation, and responsiveness to external changes?
- Collaboration: What level of cohesion and shared purpose and activity exists? Are there silos, and do they need to be broken down?
- External Orientation: What is the tendency towards focusing more on internal processes and activities, or focusing on the customer and external market conditions?

2. Strategy

- Business Strategy: How does digital thinking relate to the organization's overall strategic direction?
- Bold and Long-Term Orientation: What is the future vision? Is it aligned with market trends and changes and external conditions? How much change might be needed?
- Focus on Customer Needs: What is the strategy centered on? Is it sufficiently customer-centric?

3. Capabilities

- Connectivity: What inherent connectivity capabilities exist for customers, community, and partners?
- Automation: To what extent are business processes automated? What is currently possible and what may be possible in the future?
- Content: What content resources does the organization possess? What capabilities does it have for creating them?
- Data/Analytics: To what extent is the organization capable of analyzing performance and relevant metrics? What information is available, and can the organization use it for insights?
- Customer Experience: How sophisticated is the understanding of customer experience and the ability to deliver it? And how robust are the feedback loops that can help fine-tune adjustments?
- Technology: What technological capabilities does the organization possess? What investments have been made, and in what ways do these assets deliver value?

4. Organization and Talent

- Structure: How is the organization structured to make the most of its talent resources?
- Processes: What processes and flows exist between resources? What value do they provide?
- People: What core talents do employees and partners possess? How do they deliver value?

Given the digital nature, the framework can help an organization focus. This focus is on digital opportunities, providing criteria for achieving digital maturity, and offering a structured method for relating digital opportunities to strategy. This framework can also help in developing a roadmap for improving organizations' digital competency and growth (Reiling, 2023).

Conclusion

In today's information society, with the advancement of the Fourth Industrial Revolution and the entry into the Fifth Industrial Revolution, and the increasing connection of lives to emerging technologies, societies need to be equipped with organizational digital intelligence skills for their health and flourishing. The guidelines provided within the Digital Intelligence Standard framework, for digital-related risks and opportunities, which have been developed based on the Digital-ESG framework, is a practical tool for investors and other capital market participants to provide information about the risks and opportunities associated with digitization and digital transformation of organizations and help them make informed decisions. These organizations base their principles and approaches around four key elements: governance, strategy, risk management, and oversight, to assess their performance. The scope of these skills must be comprehensive enough to enable individuals to maximize the benefits of digital technology with new career opportunities available in the digital economy, while minimizing risks to help overcome the challenges of the digital world.

Organizational digital intelligence is essential for the success of organizations in the current era. This intelligence includes opportunities for assessment and feedback within the organization. Assessment tools must be comprehensive and consistent. In this way, they can evaluate not only hard skills and professional techniques, but also digital soft skills. Such assessments can provide them with a better understanding of the organization's advantages and disadvantages. Improving digital intelligence significantly helps reduce resistance to new changes and protect privacy. Finally, it should be emphasized that moving towards digital intelligence is essential for all organizations, and competition coupled with cooperation calls for this new level of organizational intelligence.

References

- Habibi, Arash. (2015). Digital Transformation. Pars Modir Marketing Quarterly, 1(1), 102-207.
- Samiei, Mitra (2022). The Role of Digital Quotient in Children and Adolescents' Reading Habits. Lecture.
- Moghaddam, Sara (2018). What is Digital Quotient ? Retrieved from <https://sayarnews.ir>

How to Cite: Samiei, M. (2023). Digital Quotient (DQ): A Framework for Information and Digital Literacy in Confronting Cyberspace Opportunities and Threats, International Journal of Digital Content Management (IJDCM), 4(7), Editor-in-chief's Note.

DOI: 10.22054/dcm.2026.95723.1320



International Journal of Digital Content Management (IJDCM) is licensed under a Creative Commons Attribution 4.0 International License.