

-ARAŞTIRMA MAKALESİ-

WHY DO DIGITAL TRANSFORMATION INITIATIVES FAIL? DIGITAL MINDSETS AS AN INVISIBLE STRATEGIC COMPONENT

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ABSTRACT

The question of why some organizations cannot achieve successful transformation despite having sufficient technological resources and infrastructure is multidimensional and complex. If we add to this question why some organizations cannot achieve digital innovation despite successfully implementing digital transformation into their business processes, we can conclude that an invisible element in organizations is used strategically incorrectly or erroneously. This study argues that this invisible strategic component is the digital mindset and examines it in terms of leaders, employees, and the collective mindset of the organization, culture.

In this conceptual research, digital leadership and culture have been taken as a domain and mindsets as a method to understand invisible components of success and/or failure. With this approach, two studies that have made significant contributions to digital mindset studies, Lankshear and Knobel's (2006) and Solberg et al. (2020), were taken as reference points and delved into. Digital mindsets have been examined in two different analyze level: business mindset and individual mindset at the organizational level. Firstly this study examines two primary digital mindsets (Lankshear and Knobel, 2006)—Mindset 1 and Mindset 2—offering contrasting views on social relations, value creation, production, expertise, and intelligence. Secondly, it examines the digital mindsets, which Solberg et al. (2020) divided into four (Fixed/Zero-Sum, Fixed/Expandable-Sum, Growth/Zero-Sum, and Growth/Expandable-Sum), as a strategic tool that operates with two different mechanisms, from culture to employee and from employee to culture, in order to create and implement a successful digital transformation strategy in organizations. Although the literature highlights some aspects of digital leadership, digital transformation and technology selection strategy, and digital organizational culture, there is not yet sufficient knowledge to see their relationship with digital mindset in a holistic way. Addressing this gap will provide insights into the interaction between leadership, culture, employee mindset and digital technology strategy success, ultimately contributing to more holistic and effective digital transformation practices.

This research contributes to the literature with two aspects of the model it proposes. First, it draws attention to the importance of the leader's mindset in terms of strategic horizon. Second, it provides a framework for the leader to develop different strategies, policies and practices according to the differences in the digital mindsets of the employees. It is aimed to develop a strategic perspective for the digital mindset, which is associated with different individual and organizational dimensions in the literature as an element of culture.

Key Words: Digital Transformation, Digital Leadership, Digital Organizational Culture, Digital Mindset, Digital Transformation Strategy

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DİJİTAL DÖNÜŞÜM GİRİŞİMLERİ NEDEN BAŞARISIZ OLUYOR? GÖRÜNMEZ BİR STRATEJİK BİLEŞEN OLARAK DİJİTAL ZİHNİYETLER

Öz

Bazı örgütlerin yeterli teknolojik kaynaklara ve altyapıya sahip olmalarına rağmen neden başarılı bir dönüşüm gerçekleştiremediği sorusu çok boyutlu ve karmaşıktır. Bu soruya, bazı örgütlerin dijital dönüşümü iş süreçlerine başarıyla uygulamalarına rağmen neden dijital inovasyon gerçekleştiremediğini eklersek, kuruluşlardaki görünmez bir unsurun stratejik olarak yanlış veya hatalı kullanıldığı sonucuna varabiliriz. Bu çalışma, bu görünmez stratejik bileşenin dijital zihniyet olduğunu savunuyor ve bunu liderler, çalışanlar ve kuruluşun kolektif zihniyeti, kültür açısından inceliyor.

Bu kavramsal çalışmada, dijital liderlik ve kültür alan teorisi ve zihniyetler başarının ve/veya başarısızlığın görünmez bileşenlerini anlamak için bir yöntem olarak ele alınmıştır. Bu yaklaşımla, dijital zihniyet çalışmalarına önemli katkılarda bulunan iki çalışma, Lankshear ve Knobel (2006)'ın ve Solberg ve ark. (2020)'nin referans noktaları olarak alınmış ve derinlemesine incelenmiştir. Dijital zihniyetler iki farklı analiz düzeyinde incelenmiştir: kurumsal düzeyde iş zihniyeti ve bireysel zihniyet. Bu çalışma ilk olarak iki temel dijital Zihniyet 1 ve Zihniyet 2 (Lankshear ve Knobel, 2006)'yi liderin stratejik ufku görmesi ve yorumlaması açısından önemli bir etken olarak inceliyor. Bu zihniyetler, sosyal ilişkiler, değer yaratma, üretim, uzmanlık ve zekâ üzerine zıt görüşler sunuyor. İkinci olarak örgütlerde başarılı dijital dönüşüm stratejisi oluşturmak ve uygulamak için Solberg ve ark. (2020)'nin dörde ayırdığı dijital zihniyetleri kültürden çalışana ve çalışandan kültüre doğru iki farklı mekanizma ile işleyen bir stratejik araç olarak inceliyor. Literatürde dijital liderliğin, dijital dönüşümün ve teknoloji seçim stratejisinin, dijital örgüt kültürünün bazı yönleri vurgulansa da bunların dijital zihniyetle ilişkisinde bütünü görmek için henüz yeterli bilgi birikimi oluşmamıştır. Bu boşluğu ele almak, liderlik, kültür, çalışan zihniyeti ve dijital teknoloji stratejisi başarısı arasındaki etkileşime dair değerli içgörüler sağlayarak daha bütünsel ve etkili dijital dönüşüm uygulamalarına katkıda bulunacaktır.

Bu araştırma önerdiği modelin iki yönüyle literatüre katkı sağlamaktadır. Birincisi liderin zihniyetinin stratejik ufuk açısından önemine dikkat çekmektedir. İkincisi lidere çalışanların dijital zihniyetlerinin farklılıklarına göre farklı strateji, politika ve uygulama geliştirebilmeleri için bir çerçeve sunar. Literatürde farklı bireysel ve örgütsel boyutları ile kültürün bir parçası olarak ilişkilendirilmiş dijital zihniyet için stratejik bir bakış açısı geliştirmek amaçlanmıştır.

Anahtar Kelimeler: Dijital Dönüşüm, Dijital Liderlik, Dijital Örgüt Kültürü, Dijital Zihniyet, Dijital Dönüşüm Stratejisi

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“Bu çalışma Araştırma ve Yayın Etiğine uygun olarak hazırlanmıştır.”

1. INTRODUCTION

Why do many digital transformation initiatives fail? Although technological superiority is often considered a measure of success in digital transformation (Kane, et al., 2019), there are examples such as Kodak that show that it is neither necessary nor sufficient. Kodak's failure is a vivid example that investing in technology is not enough: Kodak was a leader in almost all of the relevant technologies required to

achieve leadership in the digital photography industry (as measured by patents, for example) and yet it failed (Gavetti et al., 2005). Another example; Nokia, which entered the mobile phone market in the early 1990s and had a high market share in the early 2000s but could not see the arrival of smartphones, sold its phone business to Microsoft in 2013 (Wang, 2022). Nokia can be cited as an example of strategic myopia. Unfortunately, the track record of many organizations' Information Technology (IT) investments is also not positive: Studies over the years reveal that the overall failure rate of IT projects is around 70%. The reasons why IT projects fail are often not because the technology is not functional (although this is the case from time to time), but because the necessary changes at the organizational and employee level are not managed effectively. Fundamentally, adding technology does not automatically deliver the expected benefits; the emergence of these benefits may be possible by making organizational changes (Edmonson, 2003; Peppard, 2016).

According to Gong and Ribiere (2021)'s unified definition; digital transformation (DT) is a fundamental change process, enabled by the innovative use of digital technologies accompanied by the strategic leverage of key resources and capabilities, aiming to radically improve an entity (an organization, a business network, an industry or society) and redefine its value proposition for its stakeholders. Therefore DT is a continuous process that requires agility and strategic renewal of an organization's business model, collaborative approach, and culture (Warner and Wäger, 2019). Proactive leadership and investment are critical factors that determine a company's potential to transition through digital transformation stages. Key factors essential for becoming a digital organization include a digital-first mindset, digitized practices, empowered talent, and access to data and collaboration tools (Kontic and Vidicki, 2018). Whether a company can successfully adapt to changes depends on the attitude of its employees, their willingness to change and learn, and their acceptance of new ideas. In order to transform new technologies into business models (Karimi and Walter, 2016) that can create competitive advantage (Yoo, 2010; Fitzgerald et al., 2013), it is necessary to question the current business model, assumptions, and competencies (Schallmo et al., 2017; Vey et al., 2017) with an open mind. Companies should encourage out-of-the-box thinking, and curiosity. Therefore, it is extremely important for employees to be open to change, to see digital innovations and business model innovations (Adama and Okeke, 2024) as opportunities rather than threats, and to be willing to learn and develop, in other words, to have a digital mindset.

While the existing literature provides a basic understanding of the critical role that digital leaders play in the formulation and implementation of digital technology and transformation strategies, there is a gap regarding the impact of employees' digital mindsets. In the corporate context, factors that shape the digital mindset play a crucial role in supporting successful digital transformation initiatives. Research (Zhen et al.,

2021; Velyeko and Musa, 2023; Grover et al., 2022, Ghafoori et al., 2024) underline the necessity of developing a digital organizational culture to develop a mindset that embraces digital innovation and change. At the center of this culture are qualities that are vital to supporting digital transformation, such as fault tolerance, innovation, digital skills, and an agile mindset (Mordi and Schoop, 2020; Kocak, 2023). Organizations aiming to develop digital mindsets should focus on factors such as technology adoption, perceptions of technological change, skills development, workplace flexibility, and individual well-being (Trenerry et al., 2021). Additionally, creating an agile environment that encourages process owners to develop digital capabilities and continually address change is crucial for effective digital transformation (Ding, 2022; Leeuw and Joseph, 2023). Moreover, organizations should empower employees by encouraging growth mindset, collaborative planning, shared leadership, and open communication to achieve organizational-level results (Han and Stieha, 2020).

In this conceptual research, digital leadership has been taken as a domain theory and mindsets as a method theory to understand invisible components of success and/or failure. With this approach, two studies that have made significant contributions to digital mindset studies, Lankshear and Knobel's (2006:33) and Solberg et al. (2020:112), were taken as reference points and delved into. Digital mindsets have been examined in two different analyze level: business mindset and individual mindset at the organizational level. Firstly this study examines two primary digital mindsets (Lankshear and Knobel, 2006)—Mindset 1 and Mindset 2—offering contrasting views on social relations, value creation, production, expertise, and intelligence. Mindset 1 perceives the world as fundamentally unchanged but technologically advanced, emphasizing physical-industrial interpretations and individual expertise. Conversely, Mindset 2 views the world as transformed by digital technologies, valuing dispersed production, collective intelligence, and dynamic social relations within a digital media space. Since Mindsets 1 and 2 provide a general view of technological change from a distance, these mindsets can actually help us understand what top management and leaders see when they look at the strategic horizon. Secondly, the analysis extends to four specific digital mindsets (Solberg et al., 2020) within organizations—Fixed/Zero-Sum, Fixed/Expandable-Sum, Growth/Zero-Sum, and Growth/Expandable-Sum—highlighting their influence on individuals' interactions with technology and responses to digital transformation initiatives. These mindsets range from competitive resistance to collaborative adaptation, each presenting unique challenges and opportunities for organizational leaders.

This research aims to contribute to the literature by proposing an integrated model that can provide insight into the strategic decisions of leaders by trying to understand the role of the digital mindsets in the success and/or failure of organizations in digital transformation. Specifically, the study aims to understand how employees believe the extent to which their technological capabilities are fixed or malleable (fixed or growth mindsets) and the extent to which situational resources are limited or expandable (zero-sum or expandable). These beliefs are crucial to making sense of and responding to highly complex and uncertain digital transformation initiatives. Additionally, the research aims to examine how these digital mindsets influence employees' perceptions of digital transformation initiatives as opportunities for professional development and resource acquisition or threats to their competencies and job resources. For these purposes, the research began with understanding the concept of digital mindset, which reflects the general beliefs of employees in the context of technological change, and the relationships and roles of organizational factors such as digital transformation, organizational culture and leadership, which require a change in mindset in organizations. As a result, this study offers a unified model for digital leadership and practical suggestions for both employees and managers to better understand and benefit from the digital mindset in technological change initiatives. At the end of the sections, there are discussions regarding the investigations and a conclusion section where a general evaluation is made at the end of the research. In the practical applications part of the research, recommendations were given to managers and leaders to create a digital mindset.

Literature Review

There are studies in the literature that focus on leadership in order to achieve successful digitalization. These studies include conceptual frameworks of digital leadership in the digitalized world (Cortellazzo et al., 2019; Hensellek, 2023), leadership characteristics (Profirio et al., 2021), adaptability (Kane et al., 2019), agility (Jäckli & Meier; 2020), capabilities (Sawy et al., 2016; Mihardjo et al., 2019c; Nasution et al., 2020; Benitez et al., 2022), collaboration and strategic alliances (Gerth & Peppard, 2016; Mihardjo et al., 2019a; Elidjen et al.; 2019), culture (Saputra & Saputra, 2020), innovation (Sasmoko et al., 2019; Mihardjo et al., 2019b; Richardson et al.; 2020), psychological well-being (Zeike et al., 2019), online communication (Narbona, 2016), and transparency (Gierlich-Joas et al., 2019).

In the literature, another important element for successful digital transformation, culture, has been examined in various dimensions in the context of technology. Harshak (2013) discusses the focus of digital culture on technology and widely applied management tools and emphasizes the importance of technological integration in cultural change. Firican (2022) states that, unlike national and personal cultures,

organizational culture can be changed, emphasizing its flexibility and potential for adaptation. Hartl (2019) emphasizes the importance of evaluating organizational culture at the beginning of digital transformation. By developing a framework for categorizing cultures, Hartl and Hess (2017) offer a method for organizations to identify and develop cultural attributes that support digital transformation, such as high flexibility and both internal and external orientations.

In recent years, with the deeper examination of the failures of digital transformations, the concepts of mindset and digital mindset have begun to attract attention. However, studies in the literature have been investigated in a limited area such as behavioral outcomes of digital mindsets (Solberg et al. 2020; Leonardi & Neeley, 2022; Finze et al., 2023), developing a digital mindset (Neeley & Leonardi, 2022), IT mindset (Imran & Gregor, 2019), reducing technostress (Valta et al., 2024), and fixed digital mindset (Wong et al., 2022). Although certain aspects of digital leadership, digital transformation and technology selection strategy, digital organizational culture and their relationship with digital mindset are emphasized in these studies, there is not yet enough knowledge accumulation in this field to see the whole. Addressing this gap will provide valuable insights into the interplay between leadership, culture, employee mindset, and digital technology strategy success, and ultimately contribute to more holistic and effective digital transformation practices.

Theoretical Background of Mindsets

Lankshear and Knobel (2006) distinguish between two types of mindsets to explain how people engage with digital technologies: the "industrial mindset/newcomers" and the "post-industrial mindset/insiders." The former assumes that the contemporary world remains fundamentally similar to the modern industrial period, albeit with increased technological integration. In contrast, the latter recognizes that the development of new networked technologies has led to new ways of doing and being. While these categories help identify differences among individuals, they are too narrow to provide nuanced insights into the diverse ways digital technologies are utilized.

Another distinction has been made by Solberg et al. (2020). According to Solberg et al. (2020), the digital mindset is based on two fundamental beliefs that are individually adopted. The first is the individual's perception of whether their ability to learn and use new technologies is fixed or can improve over time. This is a self-oriented belief. The second is the perception of whether technological change is limited by the limited resources that require competition or expandable resources (Liu et al., 2011) that

provide opportunities for mutual gains between the parties. This is a situation-oriented belief. Social cognition theory shows that individuals often rely on these broad, inclusive beliefs when making judgments or decisions (Kahneman, 2003; Kahneman & Frederick, 2002). Since digital transformation is inherently complex and uncertain, it becomes difficult for employees to predict and evaluate the consequences of this transformation. As a result, employees' general beliefs about personal abilities and situational resources are crucial in shaping their perception, evaluation, adaptation, and responses to digital change.

2. UNDERSTANDING “WHY” OF FAILURE

According to a survey conducted by Wipro Digital in the US in 2017, 50% of senior executive respondents revealed that their firms are failing in their DT processes. That is, the executives believe in the benefits of DT adoption but are disappointed with the progress of DT and their firms are not getting the results. Conceptually, DT provides benefits (Parviainen et al., 2017) to a firm such as lower cost, better operating efficiency or improved innovation success. In practice, DT implementation is complex due to the huge cost, learning curve and adjustment involved (Zhai et al., 2022). The success of digital transformation depends not only on the technology itself but also on the cultivation and adoption of a digital mindset among employees. Digital transformation necessitates strategic thinking, innovative approaches, and the development of a digital mindset across all stakeholders (Pratiwi and Justi, 2022).

Managers and business leaders play a critical role in the selection and implementation of digital tools. Their involvement is essential for defining new roles and routines, as well as for effectively reshaping organizational culture and objectives. Initially, leaders identify which local activities align most effectively with broader organizational goals. This identification process will guide the selection of appropriate digital tools and shape the overall direction of the digital transformation. By doing so, leaders ensure that the transformation is strategically aligned and supports the long-term objectives of the organization (Neeley and Leonardi, 2022).

Culture is the ‘mind of the organization’ (Mintzberg et al., 1998); it provides a system of accepted meanings through which employees interpret a strategy, a situation, and the associated actions required to execute the strategy (Chatman and Cha, 2003). In today’s disruptive digital age, strategic renewal supported by organizational culture is vital (Volberda et al., 2021; Warner and Wager, 2019). The “what,” “who,” “why,” and “how” of organizational work have shifted as advances in digital technology have altered the relationship between our virtual and physical realities (Sony and Naik,

2020; Teguh et al., 2022). Although most organizations have similar digital transformation strategies (Gartner, 2020), the strong culture that exists in traditional organizations often makes it difficult to implement technology-driven strategy (Mumford, 2006).

Digital transformation is increasingly recognized as a crucial aspect of modern organizational development, with culture playing a central role in its success or failure. Zaoui and Souissi (2020) emphasize the importance of culture in digital transformation, highlighting that 9 out of 32 studies recognize it as a significant factor. This underscores the critical need for organizations to consider cultural aspects in their transformation processes. Hartl and Hess (2017) argue that many digital transformation initiatives fail due to cultural barriers. They point out that organizational cultures can often act as obstacles, preventing successful implementation of new digital strategies. Similarly, Workurka et al. (2017) note that while a strong culture is generally linked to high performance, it can also hinder change, acting as a double-edged sword in the context of digital transformation. Survey results presented by Buvat et al. (2017) reveal that 62% of respondents view culture as the top hurdle in digital transformation, a significant increase compared to previous years. Goran et al. (2017) also identify cultural and behavioral challenges as the most frequently reported barriers to achieving digital effectiveness, emphasizing the widespread recognition of culture as a critical challenge.

While studies emphasize the importance of leaders who can align digital transformation strategies with the external environment (Westerman et al., 2014), there is a lack of research investigating how digital leaders can effectively assess and leverage the digital mindsets of their employees to enhance strategic outcomes. Understanding employees' attitudes towards digital technologies, innovation, and the ambiguity brought about by digitalization is crucial for tailoring strategies that can foster proactive participation, mitigate resistance, and ensure successful implementation. This includes examining specific methods, tools, and frameworks that can be employed by leaders to assess digital mindsets and adapt new digital technology accordingly.

Culture as Mindset of Organizations

As a collective cognition, culture provides a shared sense of why and how work tasks can follow the organization's purpose (Coyle, 2018). It is culture that complements or constrains business strategy implementation, and for successful implementation, business strategies and culture must be more closely aligned (Barney, 1986; Chatman

and Cha, 2003). Individuals who share a common culture formulate, learn, and communicate their ‘symbols, languages, beliefs, visions, ideologies, rituals, and myths’ in terms of organizational actions and strategies. Thus, culture brings about a collectively learned response to work challenges and the integration of work values as people perform daily work tasks (Schein, 1990). These learned responses, encoded in individuals’ minds (Hofstede et al., 2010), adjust individual interpretations of the work environment and internal and external events around them.

Organizational culture can be defined as a system of ideas, behavioral models, traditions, symbols, procedures and habits that ensure the effective functioning and realization of the collective and individual goals of all members within an organization (Šoško et al., 2014). Organizational culture covers the basic assumptions about the world and the values that guide life in organizations (Schneider et al., 2013). It also includes a set of basic assumptions that a particular group develops to manage cohesion and integration issues and is passed on to new members as an appropriate way of thinking, feeling and acting (Bitsani, 2013). Organizational culture can also be viewed as a collection of assumptions, adopted by organizational members, consisting of guiding principles that direct people's attitudes and actions (Rita, 2022).

Organizational digital culture and capabilities are crucial for achieving organizational readiness for new business models (Velyako and Musa, 2023, Ly and Huong, 2024). While these constructs are essential for guiding digital transformation, they alone are insufficient for directly improving digital transformation. Studies indicate that various factors resulting from organizational digital culture (Zhen et al. 2021) and capabilities (Shin et al., 2023) positively influence digital transformation. One significant outcome is organizational readiness, which subsequently affects digital transformation. Organizational readiness refers to a firm's ability to adjust resources effectively for adopting, exploiting, and assimilating digital technologies to support innovative activities. Both organizational digital culture and digital capabilities facilitate this adjustment, ultimately enhancing digital transformation (Liu et al., 2024; Kane et al., 2015).

In conclusion, the literature consistently points to the pivotal role of culture in digital transformation. While it can be a significant barrier, it also holds the potential to be a powerful enabler. Organizations must strategically manage (Butt et al., 2024) cultural aspects to ensure successful digital transformation, leveraging supportive cultural traits and addressing barriers effectively.

2.1. Leaders and Managers Role of Creating Digital Culture

Digital transformation represents a rapidly evolving and unpredictable process in today's VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) environment (Bennett & Lemoine, 2014). A study by the Economist Intelligence Unit shows that 90% of organizations see digital transformation as essential for success. Another important finding of the research is that almost 79% agree that failure to further pursue digital transformation will put them at a competitive disadvantage within three years (The Economist, 2024). According to Harvard Business Review's 2019 survey data, 70% of DT projects failed to meet expected targets, with losses reaching up to \$900 billion (Tabrizi et al., 2019). The successful execution of digital transformation within organizations depends on digital leaders who can accurately interpret the environment at industry, organizational, and individual levels, and then identify and implement the most suitable digital technology and transformation strategy (Westerman et al., 2014). Digitally successful companies have developed strong leadership capabilities to anticipate and drive transformation (Zeike et al., 2019). Driving digital transformation requires new skills and leadership competencies to improve processes, mobilize talent and innovate new business models. Leaders are also effective in realizing the value of digitalization by retaining talent, engaging employees, and nurturing digital culture (Kane et al, 2015; Rogers, 2016). Leaders must skillfully balance long-term and short-term perspectives, make quick decisions in imperfect circumstances, and foster a culture that embraces digital innovation. Additionally, leaders are responsible for addressing emerging ethical concerns arising from the dark aspects of digital transformation, such as unethical data practices (Cortellazzo et al, 2019).

A digital mindset is essential for fostering an environment conducive to digital transformation. This mindset begins with communicating the benefits of digital transformation to key stakeholders. Leaders must then exemplify this mindset and introduce incentives to motivate digital change (Kontic and Vidicki, 2018). In summary, the role of leadership in generating a digital mindset and empowering talent is indispensable. Effective leadership guides organizations through the stages of digital transformation by fostering a digital-first mindset, exemplifying desired behaviors, and incentivizing change. Additionally, developing and empowering talent with necessary digital skills ensures that the organization is equipped to thrive in a digital environment.

2.2. Mindsets

The concept of mindset was first defined by Külpe in 1904, following neurological experiments, as "the sum of cognitive procedures activated" in response to a specific exercise (Gollwitzer and Bayer, 1999). Mindsets refer to the implicit theories or

assumptions individuals have about the malleability of their abilities. According to Dweck (2006), a fixed mindset, or entity implicit theory, assumes that abilities are static and unchangeable, as illustrated by phrases like “You can't really teach an old dog new tricks.” Conversely, a growth mindset, or incremental implicit theory, posits that abilities can be developed through effort, exemplified by statements such as “Talents are developed, not discovered” and “Things are almost always hard before they are easy.” Another description of mindsets are the implicit theories or assumptions that people hold about the plasticity of their abilities (Keating and Hesling, 2015). A digital mindset can be described as cognitive frameworks that shape individuals' behaviors in relation to digitalization and digital technologies as a specialization of mindset (Nambisan et al., 2017).

The concept of a digital mindset encompasses the new modes of thinking necessitated by pervasive digitalization and the impact of digital technologies on the workforce (Vial, 2019). It refers to individuals' accumulated experiences, knowledge, and fundamental beliefs regarding digital technologies, which serve as cognitive filters influencing their interpretation of situations within digital contexts (Cited by: Valta et al., 2024). Given the evolving nature of mindsets and the unique context of information technology (IT), the digital mindset can be viewed as a dynamic attribute specific to IT environments. It is characterized by its adaptability to IT specifications and its capacity for ongoing development (Leonardi and Neeley, 2022).

Saputra and Saputra (2020) emphasize the importance of a digital-first mindset, digitized applications, advanced capabilities, and data (Samadi-Parviznejad, 2022) accessibility in transforming to a digital organization. By aligning these factors with organizational systems thinking and communication, firms can improve systems thinking capabilities and close gaps in systemic perspectives (Karlsson et al., 2020). Joukhadaret et al. (2023) showed, as a result of their qualitative study, that the absence of a digital mindset increases the perception of complexity and uncertainty of digital technologies, and both of these cause technostress. There are also views that digital mindset affects individuals' behavior when interacting with digital technologies. Wong et al. (2022) revealed that individuals with a digital mindset feel less helpless when interacting in virtual environments. According to the research of Valta et al. (2024) digital mindset patterns include exponential thinking, generative thinking, combinatorial thinking, and disruptive thinking.

Digital mindsets are patterns of attitudes and behaviors that enable employees and organizations to anticipate and adapt to emerging opportunities. Developing such a mindset is essential for effectively navigating the complexities of the digital environment. Organizations that foster a digital mindset are better positioned to

achieve sustainable success in a rapidly digitalizing world by enhancing their adaptability, innovation, and overall strategic agility (Pratiwi and Justi, 2022).

2.3. Digital Mindsets Analyze Level 1: Business Environment

Mindset is considered indispensable for individual and organizational success in different literature contexts. While some studies consider mindset as an individual character trait, focusing on the fact that mindset is understood as a personal, individual characteristic and that rethinking and changing the way of thinking is a process that requires effort (Imran and Gregor, 2019), others examine mindset in the context of corporate culture, environment and sees it as a collective phenomenon influenced and shaped by culture (Gupta and Govindarajan, 2002).

A more comprehensive definition of mindsets offers greater potential for understanding why individuals use—or do not use—technologies in specific ways. By conceptualizing mindsets as “sets of assumptions, beliefs, values, and ways of doing things that orient us toward what we experience and incline us to understand and respond in some ways more than others” (Lankshear and Knobel, 2006), organizations can better examine what individuals value in their interactions with digital technologies. This perspective also helps identify the underlying assumptions that guide individuals towards adopting new digital literacy practices.

Table 1: Dimensions of Digital Mindsets of Business Environment

Dimension	Mindset 1	Mindset 2
Worldview	The world is much the same as before, only more technologized or in more sophisticated ways.	The world is very different from before, largely due to the emergence and uptake of digital electronic internetworked technologies.
Interpretation and Response	The world is interpreted, understood, and responded to in broadly physical-industrial terms.	The world cannot be adequately interpreted, understood, and responded to in physical-industrial terms.
Value Concept	Value is a function of scarcity.	Value is a function of dispersion.
Production View	Industrial: products as material artefacts, focus on infrastructure and production units (e.g., a firm or company), tools for producing.	Post-industrial: products as enabling services, focus on leverage and non-finite participation, tools for mediating and relating.

Dimension	Mindset 1	Mindset 2
Intelligence Focus	Individual intelligence.	Collective intelligence.
Expertise and Authority	Located in individuals and institutions.	Distributed and collective; hybrid experts.
Space Concept	Enclosed and purpose-specific.	Open, continuous, and fluid.
Social Relations	'Bookspace'; a stable 'textual order'.	Emerging 'digital media space'; texts in change.

Source: This table is generated by author from the study of Lankshear and Knobel (2006).

Digital mindsets as Mindset 1 and Mindset 2 present contrasting views on how the world and technologies are perceived and utilized. Mindset 1 is characterized by a perception of the world as fundamentally unchanged, but with advanced technological integration. It emphasizes physical-industrial interpretations, values scarcity, and views production in terms of material artefacts and infrastructure. Intelligence and expertise are seen as individual attributes, with enclosed and purpose-specific spaces. Social relations are stable and based on a 'bookspace' textual order. Mindset 2, in contrast, sees the world as transformed by digital technologies. It rejects physical-industrial interpretations, values dispersion, and views production as enabling services with a focus on non-finite participation. It emphasizes collective intelligence, distributed expertise, and fluid, open spaces. Social relations are dynamic, rooted in the emerging 'digital media space' where texts are constantly evolving.

Mindset 1 holds that the world remains fundamentally the same, merely technologized in more sophisticated ways. This perspective sees digital advancements as incremental improvements on pre-existing physical-industrial frameworks. In contrast, Mindset 2 posits that the world is fundamentally different due to the pervasive influence of digital electronic internetnetworked technologies. This mindset acknowledges a paradigm shift brought about by the digital revolution.

2.4. Digital Mindsets Analyze Level 2: Individuals at the Organizational Level

Individual and organizational characteristics that are effective in the formation of a digital mindset can be summarized as follows:

Belief in Learning and Adaptability: Beliefs that one's personal ability to learn and use new technologies is fixed or malleable. This belief directly affects an individual's attitude and participation in digital transformation.

Table 2: Fixed and Growth Mindset Features

Attributes	Fixed Mindset	Growth Mindset
General Belief about Personal Resources	Belief that personal resources (such as intelligence and talent) are fixed and cannot be significantly improved or changed.	Belief that personal resources can be developed and improved with sufficient effort and effective learning strategies.
Belief about Intelligence and Talent	View that intelligence, talent, and other basic qualities cannot be significantly enhanced over time.	View that intelligence, talent, and other basic qualities can be enhanced and developed over time.
Attitude towards Tasks and Situations	Seeks ways to validate their competence, avoids challenging situations.	Looks for opportunities to learn new skills and grow, actively seeks learning and development opportunities.
Response to Challenges and Obstacles	Reduces effort or withdraws when facing obstacles, predicts poor outcomes if challenges are outside their comfort zone.	Continues effort and perseverance when facing obstacles, gains confidence through challenges and adversity.
Help Seeking and Acceptance	More likely to reject help, less likely to proactively seek assistance due to fear of appearing incompetent.	Seeks and accepts help and feedback, views it as useful information to achieve learning goals.
Response to Digital Transformation	Resists technological changes, believes their abilities are fixed and cannot adapt to new technologies.	Adapts to technological changes, believes in their ability to develop and improve skills related to new technologies.

Source: This table is generated by author from the study of Solberg et al. (2020).

Managers significantly impact their employees' cognitive, emotional, and behavioral patterns (McNatt, 2000). When managers attribute good performance to inherent intelligence or talent rather than effort and diligence, they foster a fixed mindset. Conversely, leaders who credit success to the processes that facilitate learning and performance enhancement—such as hard work, seeking feedback, and systematic approaches—promote growth mindsets (Mueller and Dweck, 1998). Although this finding is yet to be extensively validated in workplace settings, it underscores the

potential risk of managers inadvertently fostering fixed mindsets by labeling subordinates as "star performers," "gifted," or "superstars" (Michaels, Handfield-Jones, and Axelrod, 2001). These labels may lead high performers to develop a fixed mindset, causing them to become risk-averse and disengage from challenging tasks to protect their self-image and reputation.

Murphy and Dweck (2010) identified "cultures of genius" as environments where shared assumptions and cultural artifacts—such as newsletters, executive speeches, selection and promotion criteria, and award ceremonies—reinforce the fixed mindset notion that certain individuals are inherently gifted. In contrast, "cultures of growth" are characterized by shared beliefs and artifacts, such as training and development initiatives, that signal the malleability and expandability of abilities.

Situation-Focused Beliefs: Beliefs that the context of technological change consists of limited resources that must be competed against expandable resources. These beliefs shape individuals' perceptions and reactions to digital transformation.

Table 3: Zero-Sum and Expandable-Sum Beliefs' Attributes

Attributes	Zero-Sum Belief	Expandable-Sum Belief
General Beliefs about Situational Resources	Belief that resources are limited and fixed	Belief that resources can be increased and expanded
Resource Structure Belief	Gains by one party correspond to losses for others	Opportunities for gains for all parties involved
Attitude towards Situations	Competitive and protective attitude	Cooperative and supportive attitude
Behavioral Tendencies	Competitive behaviors and avoidance of cooperation	Cooperative behaviors and pursuit of joint outcomes
Helping Behavior	Less likely to help others	More likely to help others
Attitude towards Digital Transformation	Resistance to technological changes and perception of threat	Adaptation to technological changes and viewing them as opportunities

Source: This table is generated by author from the study of Solberg et al. (2020). Individuals encountering digital transformation in their organizations or industries vary in their engagement levels with these change initiatives, influenced by their

beliefs about personal and situational resources in the context of technological change. The combination of these beliefs reflects four types of digital mindsets, associated with different roles individuals adopt when facing digital transformation, as shown in the table.

Table 4: Digital Mindsets’ Behavioral Features and Attitudes of Employees

Digital Mindsets	Behavioral Features	Attitudes
Fixed/Zero-Sum	Competitive tactics, avoidance of technology. Sees technological abilities and organizational resources as fixed and limited. Likely to deny the legitimacy of digital transformation initiatives.	Avoidance of new technologies and withdrawal from digital transformation initiatives. Undermining initiatives that threaten their current status and competencies.
Fixed/Expandable-Sum	Collaborative use of skills, liberation of technology. Sees technological abilities as fixed but organizational opportunities as expandable. May reorganize tasks to minimize direct interaction with new technologies while working with others.	Minimizing direct interaction with new technologies while leveraging the opportunities by collaborating with skilled colleagues.
Growth/Zero-Sum	Competitive skill discovery, mastery of technology. Believes in their ability to learn and master new technologies but sees resources as limited. Focuses on securing a competitive advantage and might be reluctant to share knowledge.	Learning everything about new technologies and processes introduced by digital transformation initiatives. Focusing on securing competitive advantages.
Growth/Expandable-Sum	Collaborative skill exploration, socialization of technology. Believes in their ability to learn and master new technologies. Sees resources as expandable and promotes a collaborative approach to digital transformation, sharing knowledge and problem-solving.	Promoting a collaborative approach to digital transformation. Turning it into a social experience involving knowledge sharing and problem-solving.

Source: This table is generated by author from the study of Solberg et al. (2020).

According to Kahneman (2003) and, Kahneman and Frederick (2002) people tend to rely on general beliefs when making judgments and taking action in particular situations. In this context, employees' general beliefs about personal and situational resources are important for information processing and change reactions during the digital transformation process. The presence of a strong, shared mindset in the formation of a digital mindset is important to align employee behavior with the organization's digital transformation vision and goals. At the same time, the contribution of different approaches and individual beliefs to the digital transformation process should also be taken into account.

An Integrated Model Proposal

In order for organizations to gain competitive advantage and make it sustainable, digitalization is inevitable. The way organizations perceive and interact with the

business environment is generally shaped by Mindset 1 and Mindset 2. These mindsets offer different perspectives on social relations, value creation, production, expertise and intelligence, and are an important determinant especially for the strategic horizon. For example, it is quite possible for a leader with Mindset 1 to use existing technology to capture the gaps in the market and make a digital innovation. Even if the organization gains a short-term advantage with this approach, firstly, these technologies and innovations are easy and fast to imitate, so the competitive advantage is not sustainable. Secondly, rival organizations may bring a radical innovation that will render the old technology or business model obsolete.

For those with Mindset 1, the world is interpreted and understood through a physical-industrial lens. Responses to change are rooted in traditional, tangible frameworks. In contrast, Mindset 2 suggests that the world cannot be adequately understood in physical-industrial terms alone. This mindset requires new interpretive frameworks that encompass the complexities and nuances of a digitally interconnected world. Understanding these dimensions of digital mindsets is crucial to navigating the contemporary digital landscape. Leaders with Mindset 1 may struggle to adapt to the rapid changes and dispersed value creation of the digital age. Therefore, in this study, Mindset 1 and Mindset 2 were positioned at the top of the pyramid (Fig.1) as the mindsets that determine the strategic horizons of leaders. Since understanding these different perspectives provides a critical framework for leaders to develop successful strategies, they were positioned at the center as strategy producers and implementers in the integrated model (Fig.2).

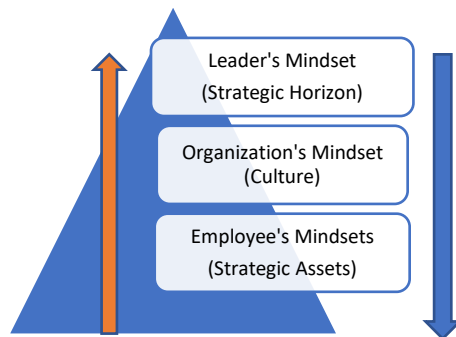


Figure 1: Mindset Pyramid of Organizations

Digital transformation is a significant aspect of modern organizational development, and understanding the varying digital mindsets within an organization is crucial for its success. Different digital mindsets influence how individuals interact with

technology and respond to digital transformation initiatives. Employees may develop barriers (Vogelsang et al, 2019; Volberda et al., 2021) towards digital transformation due to the fear of losing control (Magruk, 2016), uncertainties in job security (Frey et al., 2017), changes in firms structure and activities (Birkinshaw, 2018), changes in routines (Rossi et al., 2020; Almatrodi and Skoumpopoulou, 2023), role and task definitions, and electronic performance monitoring (Albu & Flyverbom, 2019) that come with digital transformation. Lack of sufficient information and transparent communication (Gierlich-Joas et al., 2019) about the digital transformation process may also create insecurity. In addition, the fear of not being able to adapt to changes that require new skills and abilities (Kane et al., 2015; Pinzone et al., 2017) and the lack of sufficient support in this process and create anxiety in employees (Ford et al., 2008). The possibility of disruption of habits and loss of current status (Gardner et al., 2010) or power (Kirkland, 2014) may also be an additional reason for resistance. When these elements come together, resistance to new digital technologies may become inevitable. Employees with different mindsets have different resistance attitudes. Therefore, in order to implement a successful digital transformation, it is necessary to develop different approaches and practices to overcome resistance according to the digital mindsets of employees. Yet, the literature still lacks adequate exploration in this area.

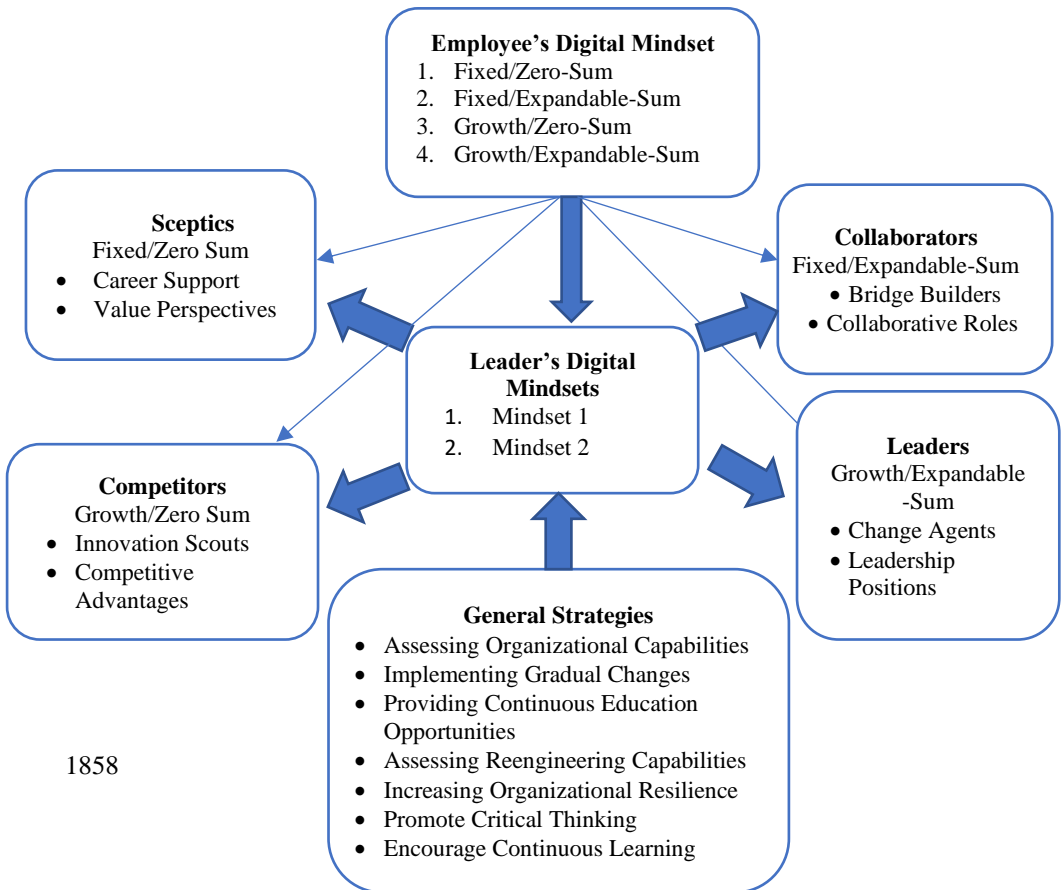


Figure 2: A unified model for locating different mindsets as strategic agents

To effectively manage and transition employees with different digital mindsets during digital transformation, leadership strategies need to be tailored to accommodate the diverse beliefs and attitudes towards digital technologies within the organization. Solberg et al. (2020) emphasize the importance of recognizing and leveraging individual digital mindsets, highlighting the need for leaders to understand and work with the varying perspectives present in their workforce. This involves embracing a "digital leadership" approach that integrates specific skills and abilities required for navigating the challenges of the digital era. Understanding these diverse digital mindsets within an organization is essential for leaders aiming to implement successful digital transformation strategies. Each mindset presents unique challenges and opportunities:

- *Fixed/Zero-Sum*: Individuals with a Fixed/Zero-Sum mindset perceive technological abilities and organizational resources as fixed and limited. This mindset is characterized by competitive tactics and an avoidance of technology. Such individuals are likely to deny the legitimacy of digital transformation initiatives, fearing these changes threaten their current status and competencies. Their behavioral approach often involves avoiding new technologies and withdrawing from digital transformation efforts, potentially undermining initiatives that disrupt their established roles. Leaders should address resistance by providing clear communication about the benefits of digital transformation and offering support to ease the transition.
- *Fixed/Expandable-Sum*: The Fixed/Expandable-Sum mindset combines a belief in fixed technological abilities with a view that organizational opportunities are expandable. People with this mindset employ collaborative use of skills while liberating technology. They may reorganize tasks to minimize direct interaction with new technologies, instead leveraging opportunities by collaborating with colleagues who possess the necessary skills. This approach allows them to contribute to digital transformation without fully engaging with the technological aspects, thereby reducing resistance to change. Encouraging collaboration and creating an environment where skills are shared can mitigate resistance and leverage the strengths of this mindset.
- *Growth/Zero-Sum*: Those with a Growth/Zero-Sum mindset believe in their ability to learn and master new technologies but see resources as limited. This mindset drives competitive skill discovery and a focus on mastering technology. Providing opportunities for skill development while fostering a

culture of knowledge sharing can help balance competitive tendencies with organizational goals.

- *Growth/Expandable-Sum:* The Growth/Expandable-Sum mindset is characterized by a belief in the ability to learn and master new technologies while viewing resources as expandable. This mindset promotes collaborative skill exploration and socialization of technology. Leveraging this mindset's collaborative nature can drive innovation and enhance the overall success of digital transformation initiatives.

Conclusions

This research contributes to the literature in two ways. First, it draws attention to the importance of the leader's mindset in terms of the strategic horizon. Second, it provides a framework for the leader to develop different strategies, policies and practices according to the differences in the digital mindsets of the employees. The aim was to develop a different perspective for the digital mindset, which is associated with different individual and organizational dimensions in the literature as an output of culture.

Digital mindsets fulfill two important functions for leaders: First, mindset is the leader's tool for processing, interpreting information, and making sense of it. Leaders make predictions that will determine the direction, movement, and speed of the organization by looking at the strategic horizon from the top of the organization. Nokia, which entered the mobile phone market in the early 1990s and had a high market share in the early 2000s but could not see the arrival of smartphones, sold its phone business to Microsoft in 2013 (Wang, 2022). Nokia can be cited as an example of this strategic myopia. Therefore, what the leader sees on the strategic horizon and how he interprets it will determine the fate of the organization's success. Therefore, whether the leader has a digital mindset and how he evaluates the digital world is extremely important. Second, leaders use mindsets as digital innovation agents when producing strategies; and as a strategic tool when implementing them.

The mindset at both the organizational and employee level operates through a two-way mechanism in digital transformation. First, the mindset of employees is the smallest building block that forms the collective mindset of the organization, so change can start from there. In other words, the change spreads from the employee to the organization. Second, the leader can influence the mindset they want to develop according to the digital transformation strategy through the organizational culture. Here, the change occurs from the culture to the individual. For these two mechanisms to work effectively, the leader must first be aware of the various mindsets and develop different approaches for each. For example, it is difficult, time-consuming, and

sometimes even impossible for employees with a fixed-zero-sum mindset to adopt a digital mindset. Therefore, if the leader does not have the option to dismiss these employees due to reasons such as their large numbers, experience, social and emotional capital, in such case leader should determine the technology selection and digital transformation strategy based on these employees' capacity and potential to adopt and use the technology.

Different mindsets present various challenges and opportunities for leaders in the digital transformation process. For example, individuals with a Fixed/Zero-Sum mindset see technological capabilities and organizational resources as limited, and therefore may perceive digital transformation initiatives as threats. Individuals with a Fixed/Extensible-Sum mindset contribute to digital transformation by collaborating with others rather than using technology directly. Those with a Growth/Zero-Sum mindset believe in the ability to learn new technologies but think that resources are limited. Finally, a Growth/Extensible-Sum mindset encourages developing innovative solutions through learning and collaboration. Understanding this diversity is critical for leaders to develop successful digital transformation practices and to identify and embed new cultural characteristics.

The distinction between these mindsets is also important in determining the organization's technology selection and digital transformation strategy. Because if the majority of employees are not sufficiently equipped and are indispensable, especially in terms of their social and emotional capital, work experiences and networks, technologies similar to the technology used for digital transformation but more functional may be preferred. Although the preference for similar technologies may be beneficial for competition in the short term, since technology develops very quickly, it may become dysfunctional after a while. Therefore, it is important to use cultural rituals and tools that will instill a growth mindset in current employees in the organization and to have a growth mindset as a particularly sought-after criterion in new recruitments. The opposite may also be true: For example, if employees with a growth and expandable sum mindset are predominant in the organization, the demands of these employees will also differ due to their qualification. Therefore, even if they are drawn to the organization, it may not be easy to gain their loyalty and the employee turnover rate may increase. In conclusion, the purpose of this study is not to examine which mindset is superior to the other, but to understand the elements of these mindsets that can create advantages or disadvantages in order to realize successful digital transformation. Within the framework of situational management, each mindset may differ. The mindset that is considered superior in one situation may be dysfunctional in another. What is important is to determine the strategies for digital transformation and innovation of these mindsets.

Practical Implications and Suggestions

To advance the adoption and effective utilization of digital technologies within organizations, it is essential to consider employees' everyday digital practices and mindsets. Professional development should address staff members' personal experiences with technology, offering opportunities to critically reflect on and challenge their digital mindsets and dominant assumptions. Such reflective practices can help employees extend their understanding of the affordances of ICT in creative and innovative ways, thereby rethinking approaches to their work and organizational processes.

Understanding and addressing the differences in digital mindsets among employees is crucial for leaders to create a supportive and inclusive work environment. Leaders should engage with employees to identify their views on technological ability and organizational resources, and work towards shifting these beliefs from being fixed to malleable. This can be achieved by promoting the idea that challenges are opportunities for learning and development, and emphasizing that technology can create or free up resources rather than limit them. Providing employees with resources and training to enhance their control over work outcomes are essential steps. By fostering a growth mindset and reducing feelings of helplessness, leaders can positively influence employees' adaptability and overall well-being.

Human resource managers can implement several strategies to transition from a culture of genius to a culture of growth. They can introduce growth mindset interventions for both managers and employees, training managers to adopt a strategic approach to selection and promotion by considering candidates whose performance capabilities could be enhanced through challenging new roles. Leaders can demonstrate the value placed on employee development by publicly recognizing significant skill acquisition or improvement at all organizational levels. Moreover, investing in developmental human resource management (HRM) practices—such as comprehensive socialization, peer mentoring, multisource feedback, performance coaching, sponsored continuing education, study leave, job shadowing, and job rotation programs—can emphasize and enhance employees' growth potential.

GENİŞLETİLMİŞ TÜRKÇE ÖZET GİRİŞ

Neden birçok dijital dönüşüm girişimi başarısız oluyor? Teknolojik üstünlük genellikle dijital dönüşümde başarının bir ölçüsü olarak kabul edilse de (Kane, vd., 2019), bunun ne gerekli ne de yeterli olmadığını gösteren Kodak gibi örnekler var. Kodak'ın başarısızlığı, teknolojiye yatırım yapmanın yeterli olmadığını açık bir

örneğidir: Kodak, dijital fotoğrafçılık sektöründe liderliğe ulaşmak için gereken hemen hemen tüm ilgili teknolojilerde liderdi (örneğin patentlerle ölçüldüğü gibi) ve yine de başarısız oldu (Gavetti vd., 2005). Başka bir örnek; 1990'ların başında cep telefonu pazarına giren ve 2000'lerin başında yüksek bir pazar payına sahip olan ancak akıllı telefonların gelişini göremeyen Nokia, 2013 yılında telefon işini Microsoft'a sattı (Wang, 2022). Nokia, stratejik miyopluğun bir örneği olarak gösterilebilir. Ne yazık ki, birçok kuruluşun Bilgi Teknolojisi (BT) yatırımlarının geçmiş performansı da olumlu değil: Yıllar içinde yapılan çalışmalar, BT projelerinin genel başarısızlık oranının yaklaşık %70 olduğunu ortaya koyuyor. BT projelerinin başarısız olmasının nedenleri genellikle teknolojinin işlevsel olmaması değil (bu durum zaman zaman yaşansa da), organizasyon ve çalışan düzeyinde gerekli değişikliklerin etkili bir şekilde yönetilmemesidir. Temel olarak, teknoloji eklemek beklenen faydaları otomatik olarak sağlamaz (Edmonson, 2003; Peppard, 2016).

Wipro Dijital tarafından 2017 yılında ABD'de yapılan bir ankete göre, üst düzey yöneticilerin %50'si şirketlerinin DT süreçlerinde başarısız olduğunu ortaya koydu. Yani, yöneticiler DT benimsemenin faydalarına inanıyor ancak DT'nin ilerlemesinden hayal kırıklığına uğruyor ve örgütler sonuç alamıyor. Kavramsal olarak, DT bir örgüte daha düşük maliyet, daha iyi işletme verimliliği veya gelişmiş inovasyon başarısı gibi faydalar sağlar (Parviainen vd., 2017). Uygulamada, DT uygulaması büyük maliyet, öğrenme eğrisi ve adaptasyon süreci nedeniyle karmaşıktır (Zhai vd., 2022). Dijital dönüşümün başarısı yalnızca teknolojinin kendisine değil, aynı zamanda çalışanlar arasında dijital bir zihniyetin geliştirilmesine ve benimsenmesine de bağlıdır. Dijital dönüşüm, stratejik düşünmeyi, yenilikçi yaklaşımları ve tüm paydaşlar arasında dijital bir zihniyetin geliştirilmesini gerektirir (Pratiwi ve Justi, 2022).

Son yıllarda dijital dönüşümlerin başarısızlıklarının daha derinlemesine incelenmesiyle birlikte zihniyet ve dijital zihniyet kavramları dikkat çekmeye başlamıştır. Ancak literatürde dijital zihniyetlerin davranışsal çıktıları (Solberg vd. 2020; Leonardi ve Neeley, 2022; Finze vd., 2023), dijital zihniyet geliştirme (Neeley ve Leonardi, 2022), BT zihniyeti (Imran ve Gregor, 2019), teknostresi azaltma (Valta vd., 2024) ve sabit dijital zihniyet (Wong vd., 2022) gibi sınırlı bir alanda araştırılan çalışmalar bulunmaktadır. Dijital dönüşüm, modern organizasyonların gelişiminde önemli bir unsurdur ve organizasyon içerisindeki farklı dijital zihniyetleri anlamak, bu dönüşümün başarısı için kritik öneme sahiptir. Çalışanlar, dijital dönüşüme karşı çeşitli bariyerler geliştirebilir (Vogelsang et al., 2019; Volberda et al., 2021) çünkü kontrolü kaybetme korkusu (Magruk, 2016), iş güvencesine dair belirsizlikler (Frey et al., 2017), firma yapısı ve aktivitelerindeki değişiklikler (Birkinshaw, 2018), rutinlerdeki değişiklikler (Rossi et al., 2020), rol ve görev tanımları ve elektronik performans izleme (Albu & Flyverbom, 2019) bu dönüşümle birlikte gelebilir. Dijital dönüşüm süreci hakkında yeterli bilgi ve şeffaf iletişimin olmaması (Gierlich-Joas et al., 2019) güvensizlik yaratabilir. Ayrıca, yeni beceriler gerektiren değişikliklere uyum sağlayamama korkusu (Kane et al., 2015; Pinzone et al., 2017) ve bu süreçte yeterli desteğin eksikliği çalışanlarda kaygıya neden olabilir (Ford et al., 2008). Alışkanlıkların bozulması, mevcut statünün (Gardner et al., 2010) veya gücün (Kirkland, 2014) kaybı korkusu da direnç sebeplerindedir. Tüm bu unsurlar bir araya

geldiğinde, yeni dijital teknolojilere direnç kaçınılmaz hale gelebilir. Çalışanlar farklı zihniyetlere sahip olduklarından, direnç tutumları da farklılık gösterir. Başarılı bir dijital dönüşüm için, çalışanların dijital zihniyetlerine göre direnci aşacak farklı yaklaşımlar geliştirilmelidir. Ancak, bu alan henüz yeterince araştırılmamıştır. Literatürde dijital liderlik, dijital dönüşüm ve teknoloji seçim stratejisi, dijital örgüt kültürü gibi belirli yönler vurgulansa da ve bunların dijital zihniyetle ilişkisinde bütünü görebilmek için henüz yeterli bilgi birikimi oluşmamıştır. Bu boşluğun kapatılması, liderlik, kültür, çalışan zihniyeti ve dijital teknoloji stratejisi başarısı arasındaki etkileşime dair kavramsal bir çerçeve sağlayacak ve nihayetinde daha bütünsel ve etkili dijital dönüşüm uygulamalarına katkıda bulunacaktır.

Analiz Düzeyi 1: İş Dünyası

Organizasyonların rekabet avantajı elde edebilmesi ve bunu sürdürülebilir kılabilmesi için dijitalleşme kaçınılmazdır. Organizasyonların iş ortamını algılama ve onunla etkileşim kurma biçimleri genellikle Zihniyet 1 ve Zihniyet 2 tarafından şekillendirilir. Bu zihniyetler sosyal ilişkiler, değer yaratma, üretim, uzmanlık ve zekâ konusunda farklı bakış açıları sunar ve özellikle stratejik ufuk için önemli bir belirleyicidir. Örneğin, Zihniyet 1'e sahip bir liderin pazardaki boşlukları yakalamak ve dijital bir inovasyon yapmak için mevcut teknolojiyi kullanması oldukça olasıdır. Ancak, organizasyon bu yaklaşımla kısa vadeli bir avantaj elde etse bile, birincisi, bu teknolojilerin ve inovasyonun taklit edilmesi kolay ve hızlıdır, bu nedenle rekabet avantajı sürdürülebilir değildir. İkincisi, rakip organizasyonlar eski teknolojiyi veya iş modelini geçersiz kılacak radikal bir inovasyon getirebilir. (Nokia örneği: Wang, 2022) Bu nedenle Zihniyet 2 Pazar boşluklarını yakalamak ve faydalı dönüşümü gerekli kılacak dijital inovasyon yapmak için daha elverişli bir bilgi toplama, işleme ve özellikle yorumlama (çünkü yenilikler özellikle bu farklı yorumlamalardan ortaya çıkar) tabanı sağlar.

Lankshear ve Knobel (2006), insanların dijital teknolojilerle nasıl etkileşime girdiğini açıklamak için iki tür zihniyet arasında ayrım yapar: "endüstriyel zihniyet/yeni gelenler" ve "endüstri sonrası zihniyet/içeridekiler". İlki, çağdaş dünyanın, artan teknolojik entegrasyona rağmen, temelde modern endüstriyel döneme benzer kaldığını varsayar. Buna karşılık, ikincisi, yeni ağ teknolojilerinin geliştirilmesinin yeni yapma ve olma biçimlerine yol açtığını kabul eder.

Tablo 1: İş Dünyasını algılama biçimi olarak Dijital Zihniyet 1 ve Zihniyet 2

Boyut	Zihniyet 1	Zihniyet 2
Dünya Görüşü	Dünya eskisi gibi, sadece daha teknolojik veya daha karmaşık	Dünya artık eskisinden çok farklı, bunun en büyük nedeni de dijital elektronik internet bağlantılı teknolojilerin ortaya çıkması ve benimsenmesi.
Yorumlama ve Cevap verme	Dünya, genel olarak fiziksel-endüstriyel terimlerle yorumlanıyor, anlaşılıyor ve tepki veriliyor.	Dünyayı fiziksel-endüstriyel terimlerle yeterince yorumlamak, anlamak ve yanıtlamak mümkün değildir.
Değer Kavramı	Değer kıtlığının bir fonksiyonudur.	Değer dağılımının bir fonksiyonudur.
Üretim Odağı	Endüstriyel: İnsan yapımı olarak ürünler, altyapı ve üretim birimlerine (örneğin bir firma veya şirket) odaklanma, üretim araçları.	Post-endüstriyel: Ürünlerin etkinleştirici hizmetler olarak kullanılması, kaldıraç ve sınırsız katılıma odaklanma, aracılık ve ilişki kurma araçları.
Zekâ Odağı	Bireysel Zekâ	Kollektif Zekâ
Uzmanlık ve Otorite	Bireylerde ve Kurumlarda bulunan	Dağıtılmış ve kollektif, Hibrit Uzmanlık
Uzay Kavramı	Kapalı ve amaç odaklı	Açık, Sürekli ve Akışkan
Sosyal İlişkiler	İstikrarlı bir yazılı düzen	Ortaya çıkan 'dijital medya alanı'; değişim düzeni

Kaynak: Bu tablo yazar tarafından Lankshear ve Knobel (2006) çalışmasından üretilmiştir.

Analiz Düzeyi 2: Örgüt Düzeyinde Bireysel Dijital Zihniyetler

Başka bir zihniyet sınıflandırması da Solberg ve diğerleri (2020) tarafından yapılmıştır. Solberg ve diğerlerine (2020) göre, dijital zihniyet bireysel olarak benimsenen iki temel inançta dayanmaktadır. Birincisi, bireyin yeni teknolojileri öğrenme ve kullanma becerisinin sabit olup olmadığı veya zamanla iyileşebileceği algısıdır. Bu, ben odaklı bir inançtır. İkincisi, teknolojik değişimin rekabeti gerektiren sınırlı kaynaklarla mı yoksa taraflar arasında karşılıklı kazanımlar için fırsatlar sağlayan genişletilebilir kaynaklarla mı (Liu vd., 2011) sınırlı olduğu algısıdır. Bu durum odaklı bir inançtır. Sosyal biliş teorisi, bireylerin yargılarda bulunurken veya karar verirken genellikle bu geniş, kapsayıcı inançlara güvendiğini göstermektedir (Kahneman, 2003; Kahneman ve Frederick, 2002). Dijital dönüşüm doğası gereği karmaşık ve belirsiz olduğundan, çalışanların bu dönüşümün sonuçlarını tahmin etmesi ve değerlendirmesi zorlaşmaktadır. Sonuç olarak, çalışanların kişisel yetenekler ve durumsal kaynaklar hakkındaki genel inançları, dijital değişime yönelik

algılarını, değerlendirmelerini, uyumlarını ve tepkilerini şekillendirmede çok önemlidir.

Kuruluşlarında veya sektörlerinde dijital dönüşümle karşılaşan bireyler, teknolojik değişim bağlamında kişisel ve durumsal kaynaklar hakkındaki inançlarından etkilenerek bu değişim girişimleriyle etkileşim düzeylerinde farklılık gösterir. Bu inançların birleşimi, tabloda gösterildiği gibi, bireylerin dijital dönüşümle karşı karşıya kaldıklarında benimsedikleri farklı rollerle ilişkili dört tür dijital zihniyeti yansıtır. Başarılı bir dijital dönüşüm gerçekleştirmek ve yeniliği besleyen bir kültür oluşturabilmek için bu zihniyetleri anlamak ve her birinin ihtiyacına göre bir strateji ve politika üretmek gerekir.

Tablo 2: Dijital Zihniyetlerin Davranışsal Özellikleri ve Tutumları

Dijital Zihniyetler	Davranışsal Özellikler	Tutumlar
Sabit/Sıfır Toplamlı	Rekabetçi taktikler, teknolojiden kaçınma. Teknolojik yetenekleri ve organizasyonel kaynakları sabit ve sınırlı olarak görür. Dijital dönüşüm girişimlerinin meşruiyetini reddetme olasılığı yüksektir.	Yeni teknolojilerden kaçınma ve dijital dönüşüm girişimlerinden çekilme. Mevcut durumlarını ve yeterliliklerini tehdit eden girişimleri baltalama.
Sabit/Genişletilebilir Toplamlı	Becerilerin işbirlikçi kullanımı, teknolojinin özgürleştirilmesi. Teknolojik yetenekleri sabit, ancak organizasyonel fırsatları genişletilebilir olarak görür. Başkalarıyla çalışırken yeni teknolojilerle doğrudan etkileşimi en aza indirmek için görevleri yeniden düzenleyebilir.	Yetenekli meslektaşlarla işbirliği yaparak fırsatları değerlendirirken yeni teknolojilerle doğrudan etkileşimi en aza indirmek.
Büyüme/Sıfır Toplamlı	Rekabetçi beceri keşfi, teknolojide ustalık. Öğrenme ve yeni teknolojilerde ustalaşma yeteneklerine inanır ancak kaynakları sınırlı görür. Rekabet avantajı elde etmeye odaklanır ve bilgi paylaşma konusunda isteksiz olabilir.	Dijital dönüşüm girişimlerinin getirdiği yeni teknolojiler ve süreçler hakkında her şeyi öğrenmek. Rekabet avantajlarını güvence altına almaya odaklanmak.
Büyüme/Genişletilebilir Toplamlı	İşbirlikçi beceri keşfi, teknolojinin sosyalleşmesi.	Dijital dönüşüme işbirlikçi bir yaklaşımın

Dijital Zihniyetler	Davranışsal Özellikler	Tutumlar
	Yeni teknolojileri öğrenme ve ustalaşma yeteneklerine inanır. Kaynakları genişletilebilir olarak görür ve dijital dönüşüme, bilgi paylaşımına ve sorun çözmeye yönelik işbirlikçi bir yaklaşımı teşvik eder.	teşvik edilmesi. Bunu bilgi paylaşımı ve problem çözmeyi içeren sosyal bir deneyime dönüştürmek.

Kaynak: Bu tablo yazar tarafından Solberg vd., (2020) çalışmasından üretilmiştir.

SONUÇ

Bu araştırma iki yönüyle literatüre katkı sağlamaktadır. Birincisi liderin zihniyetinin stratejik ufuk açısından önemine dikkat çekmektedir. İkincisi lidere çalışanların dijital zihniyetlerinin farklılıklarına göre farklı strateji, politika ve uygulama geliştirebilmeleri için bir çerçeve sunar. Literatürde farklı bireysel ve örgütsel boyutları ile kültürün bir çıktısı olarak ilişkilendirilmiş dijital zihniyet için farklı bir bakış açısı geliştirmek amaçlanmıştır.

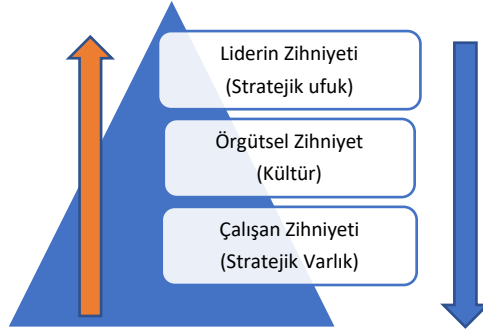
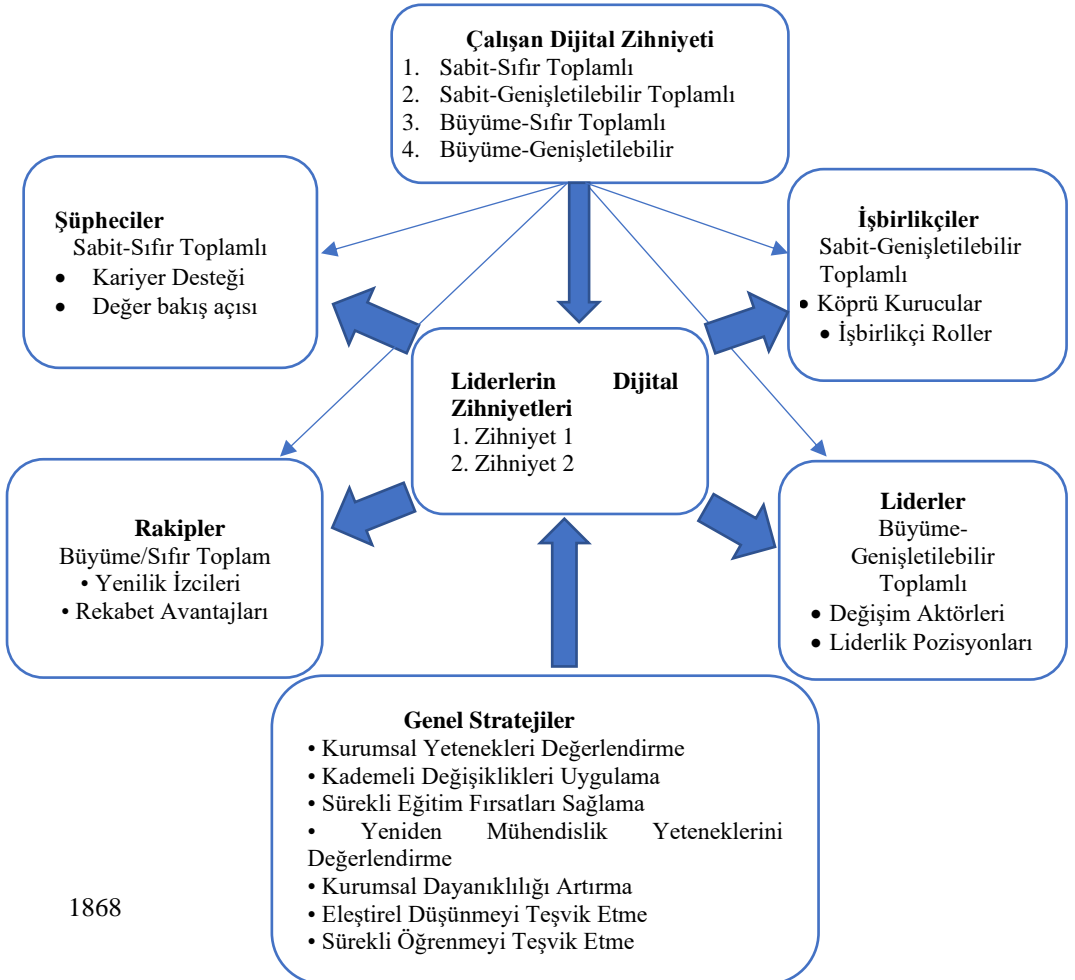


Figure 1: Mindset Pyramid of Organizations

Dijital zihniyetler liderler için iki önemli işlevi yerine getirir: Birincisi, zihniyet liderin bilgiyi işleme, yorumlama ve anlamlandırma aracıdır. Liderler, organizasyonun tepesinden stratejik ufka bakarak organizasyonun yönünü, hareketini ve hızını belirleyecek öngörülerde bulunurlar. Bu nedenle, liderin stratejik ufukta ne gördüğü ve bunu nasıl yorumladığı, organizasyonun başarısının kaderini belirleyecektir. 1990'ların başında cep telefonu piyasasına giren ve 2000'lerin başında yüksek bir Pazar payına sahip olmasına rağmen akıllı telefonların gelişini göremeyen Nokia, 2013'te telefon işini Microsoft'a satmıştır (Wang, 2022). Nokia bu stratejik miyopluga örnek gösterilebilir. Bu nedenle, liderin dijital bir zihniyete sahip olup olmadığı ve dijital dünyayı nasıl değerlendirdiği son derece önemlidir. İkincisi,

liderler stratejiler üretirken zihniyetleri dijital inovasyon aracı olarak; bunları uygularken ise stratejik bir araç olarak kullanırlar.

Hem organizasyonel hem de çalışan düzeyindeki zihniyet, dijital dönüşümde iki yönlü bir mekanizma aracılığıyla çalışır. Birincisi, çalışanların zihniyeti, organizasyonun kolektif zihniyetini (kültürü) oluşturan en küçük yapı taşıdır, bu nedenle değişim oradan başlayabilir. Başka bir deyişle, değişim çalışandan organizasyona yayılır. İkincisi, lider, dijital dönüşüm stratejisine göre geliştirmek istediği zihniyeti organizasyon kültürü aracılığıyla etkileyebilir. Burada değişim kültürden bireye doğru gerçekleşir. Bu iki mekanizmanın etkili bir şekilde çalışması için, liderin öncelikle çeşitli zihniyetlerin farkında olması ve her biri için farklı yaklaşımlar geliştirmesi gerekir. Örneğin, sabit sıfır toplamı zihniyete sahip çalışanların dijital zihniyeti benimsemesi zor, zaman alıcı ve hatta bazen imkânsızdır. Bu nedenle, liderin çalışanları sayıca çok olmaları, deneyimleri, sosyal ve duygusal sermayeleri gibi nedenlerle işten çıkarma seçeneği yoksa bu durumda lider, teknoloji seçimini ve dijital dönüşüm stratejisini bu çalışanların teknolojiyi benimseme ve kullanma kapasite ve potansiyeline göre belirlemelidir.



Şekil 2: Farklı zihniyetleri stratejik araçlar olarak konumlandırmak için birleşik bir model

Farklı zihin yapıları, dijital dönüşüm sürecinde liderler için çeşitli zorluklar ve fırsatlar sunar. Örneğin, Sabit/Sıfır-Toplamlı zihin yapısına sahip bireyler, teknolojik yetenekleri ve organizasyonel kaynakları sınırlı olarak görür, bu nedenle dijital dönüşüm girişimlerini tehdit olarak algılayabilirler. Sabit/Genişletilebilir-Toplamlı zihin yapısındaki kişiler, teknolojiyi doğrudan kullanmak yerine başkalarıyla iş birliği yaparak dijital dönüşüme katkıda bulunur. Büyüme/Sıfır-Toplamlı zihin yapısına sahip olanlar, yeni teknolojileri öğrenme yeteneğine inanırken kaynakların sınırlı olduğunu düşünür. Son olarak, Büyüme/Genişletilebilir-Toplamlı zihin yapısı, öğrenme ve iş birliği yoluyla yenilikçi çözümler geliştirmeyi teşvik eder. Bu çeşitliliği anlamak, liderlerin başarılı dijital dönüşüm uygulamaları geliştirmesinde ve yeni kültürel özelliklerin belirlenmesi ve yerleştirilmesinde kritik öneme sahiptir.

Bu zihniyetler arasındaki ayırım aynı zamanda örgütün teknoloji seçimi ve dijital dönüşüm stratejisinin belirlenmesinde de önem taşır. Çünkü çalışanların büyük bölümü donanım olarak yeterli değilse ve özellikle sosyal ve duygusal sermayesi, iş deneyimleri ve networkleri açısından vazgeçilmez statüde iseler dijital dönüşüm için kullanılan teknolojinin benzeri ancak daha işlevsel teknolojiler tercih edilebilir. Benzer teknolojilerin tercih edilmesinin kısa vadede rekabete faydası olsa da teknoloji çok hızlı geliştiği için bir süre sonra işlevsiz hale gelebilir. Bu nedenle örgütte büyüme zihniyetini eski çalışanlarda yerleştirecek kültürel ritüel ve araçlar kullanılması ve yeni işe alımlarda büyüme zihniyetinin özellikle aranan bir kriter olması önemlidir. Bunun tam aksi de geçerli olabilir: Örneğin örgütte büyüme ve genişletilebilir toplam zihniyete sahip çalışanlar ağırlıktaysa bu çalışanların donanımları gereği talepleri de farklılaşacaktır. Dolayısıyla örgüte çekilseler bile bağlılıklarını kazanmak kolay olmayabilir ve personel devir hızı yükselebilir. Son söz olarak bu çalışmanın amacı hangi zihniyetin diğerine üstün olduğunu incelemekten ziyade dijital dönüşüm gerçekleştirmek için bu zihniyetlerin avantaj yaratabilecek ya da dezavantaj oluşturabilecek unsurlarının anlaşılmasıdır. Durumsal yönetim çerçevesinde her zihniyet farklılaşabilir. Bir durumda üstünlük olarak kabul edilen zihniyet diğerinde işlevsiz kalabilir. Önemli olan bu zihniyetlerin dijital dönüşüm ve yenilik için strateji belirlenirken başarıya ulaşmak için önemli bir görünmez kritik faktör olarak farkında olunması ve dikkate alınmasıdır.

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