# IT Governance Mechanisms, Employees' Digital Mindset, and Behavioral Outcomes

Nikola Finze
*Neu-Ulm University of Applied Sciences*, nikola@finze.eu

Luise Büscher
*XITASO*, luise.buescher@xitaso.com

Heinz-Theo Wagner
*Neu-Ulm University of Applied Sciences*, heinz-theo.wagner@hnu.de

Heiko Gewald
*Neu-Ulm University of Applied Sciences*, heiko.gewald@hnu.de

Follow this and additional works at: https://aisel.aisnet.org/pacis2023

# IT Governance Mechanisms, Employees' Digital Mindset, and Behavioral Outcomes

*Completed Research Paper*

**Nikola Finze**
Neu-Ulm University
of Applied Sciences
Wileystraße 1, 89231 Neu-Ulm
nikola.finze@hnu.de

**Marie-Luise Büscher**
XITASO GmbH
Austraße 35, 86153 Augsburg
luise.buescher@xitaso.com

**Heinz-Theo Wagner**
Neu-Ulm University
of Applied Sciences
Wileystraße 1, 89231 Neu-Ulm
heinz-theo.wagner@hnu.de

**Heiko Gewald**
Neu-Ulm University
of Applied Sciences
Wileystraße 1, 89231 Neu-Ulm
heiko.gewald@hnu.de

## Abstract

*The disruptive nature of digitalization and the complexity and ambiguity of their technical properties require many new skills from employees today. Recent research emphasizes that the employees' digital mindset plays an essential role in digital transformation by leveraging employee engagement. This paper aims to advance the understanding of how the behavioral outcomes of digital mindset, which encompasses interpersonal interaction, focus of attention, enthusiasm for development, perspective on setbacks, and construal of effort, can be positively influenced during digital initiatives. We develop a novel research model integrating two literature streams: information technology and mindset. We conceptually link back to the behavioral outcomes of digital mindset by looking at the influence of IT governance mechanisms as potential antecedents. Our model explains how IT governance mechanisms influence the behavioral outcomes of digital mindset and helps future researchers by providing propositions on the impact of IT governance mechanisms toward more employee engagement.*

**Keywords:** Digital Mindset, Digital Transformation, IT Governance Mechanisms

## Introduction

A digital mindset consists of different thinking patterns that influence how individuals use digital technologies and cope with changes due to digital initiatives (Hildebrandt & Beimborn, 2022). Employees' digital mindset significantly influences engagement during digital innovation and transformation initiatives (Forsythe & Rafoth, 2022). Originating in psychology, "mindsets are a mental framework that guide how people think, feel, and act in achievement contexts" (Keating & Heslin, 2015, p. 331), which includes assumptions of individuals about their incorporated abilities (Dweck, 2006). Employees' mindsets

can lead to increased work engagement through interpersonal interactions (Chiu et al., 1997), focus of attention (Mangels et al., 2006; Plaks et al., 2001), enthusiasm for development (Dweck, 1999), perspective on setbacks (Nussbaum & Dweck, 2008), and construal of effort (Blackwell et al., 2007) which are critical behavioral outcomes that pave the way toward more employee engagement and, thus, dedicated and vigorous working.

How employees engage in digital initiatives is particularly important since digital transformation activities go beyond digital technology to leverage existing business value by enabling an organization to redefine its whole value-creation process (Wessel et al., 2021). Further, digital transformation is associated with major changes related to digital technology that regularly cause disruption and a range of tensions (Smith & Beretta, 2021). Since digital technology and related tasks continuously change, individuals require a certain digital mindset to deal with this transformation (van der Meulen et al., 2020). Depending on how convinced an individual is that they can or cannot learn the skills necessary for digitization strongly influences their behavior in digital initiatives. People who believe their digital skills are inferior have a negative attitude and commitment toward new digital technologies (Dweck, 2006; Solberg et al., 2020). North et al. (2019) and Imran and Gregor (2019) describe the positive influence of a digital mindset by illustrating the effect on the increased willingness and intention to explore and use new technologies. Solberg et al. (2020) further address that the influence on engagement and commitment leads digital transformations to success and not primarily the use of digital technologies per se.

However, developing a digital mindset is not solely the individual employee's responsibility. Digital transformation initiatives are not only about technology but rely on several factors like strategic business-information technology (IT) alignment and increased self-awareness and communication (Edmondson, 2003), making it a "top management priority" (van der Meulen et al., 2020, p. 165). In particular, organizational leaders shape and control digital transformation and influence employees' general beliefs about technological change (Solberg et al., 2020). Hence, the importance for organizational leaders to comprehend how employees adapt to digital technology to cultivate a digital mindset and, thus, promote digital transformation is more critical than ever before (Neeley & Leonardi, 2022).

Managerial actions, which refer to, for instance, the acknowledgment of leaders toward their employees (Keating & Heslin, 2015), and their influence on employees' mindsets are particularly important. The investigation of this relationship promises theoretical contribution, for instance, regarding the kind of actions that might render positive or negative effects on employee behavior during digital transformation. While researchers have started to elaborate on the concept and impact of digital mindset, the question of what antecedents impact digital mindset and their behavioral outcomes for employees in organizations facing digital initiatives remains unclear. Due to the great impact of digital mindset on digital initiatives (Solberg et al., 2020; Wong et al., 2022), it is necessary to look at antecedents that can emphasize an employee's digital mindset leading to more engagement with digital technologies. At the same time, it is also relevant for practice to identify potentially beneficial or harmful managerial actions related to employees' digital mindset. As current insights on antecedents for digital mindset within information system (IS) literature are at a rather abstract level, we formulate the research question:

> *RQ: What managerial actions influence the behavioral outcomes of a digital mindset?*

To develop a novel research model from two separate literature streams of IT and mindset, we link back to the concept of digital mindset and examine literature relevant to IT governance mechanisms' influence factors. We argue that managerial actions in the context of digital initiatives can be concretized as IT governance mechanisms since they comprise "leadership and organizational structures and processes" (Haes & van Grembergen, 2009, p. 123) and are necessary and powerful means that shape employee's feelings, thoughts, and actions (McNatt, 2000; Van Grembergen, 2002). First, we briefly describe mindset with a particular focus on the context of IT. Afterward, we present several novel propositions on how IT governance mechanisms influence different dimensions of behavioral outcomes of digital mindset that we uncovered in several expert interviews. Our research contributes to the extant IS literature in the domain of digital transformation and mindset. It establishes a novel research model that gives a better explanation and empirical support of what IT governance mechanisms affect the behavioral outcomes of digital mindset. We conclude this paper by describing the implications for organizations facing digital transformation initiatives.

# Theoretical Background

To establish a vigorous theoretical foundation, the forthcoming sections will delve into the existing body of research on both mindset and digital mindset, while also introducing the concept of IT governance.

## *The Concept of Mindset*

Initially, the term mindset was introduced by Külpe in 1904 after neurological experiments and defined as a "sum total of activated cognitive procedures" (Gollwitzer & Bayer, 1999, p. 405) as a reaction to a given exercise (Boring, 1950; Külpe, 1904). Later the mindset construct was conceptualized in three major theoretical streams – cognitive psychology (Dweck, 2006; Külpe, 1904; Watt, 1905), social and organizational psychology (Gupta & Govindarajan, 2002; Rhinesmith, 1992), and positive psychology (French, 2016; Gollwitzer & Bayer, 1999). Mindset is increasingly considered indispensable for organizational and individual success in different literature contexts (Gagne & Lydon, 2001; Gupta & Govindarajan, 2002; Issa & Pick, 2010; Kane et al., 2018; Kennedy et al., 2013). These studies demonstrate an understanding of mindsets as a personal, individual characteristic and imply that it takes effort to rethink and change the cherished way of thinking. Furthermore, we found different types of mindsets in literature, like fixed and growth mindsets (Dweck, 2006), agile mindset (Hofert, 2018), global mindset (Gupta & Govindarajan, 2002), gaming mindset (Lee et al., 2012), experimentation mindset (Kane et al., 2017), productive and defensive mindset (Argyris, 2004), platform mindset (van der Meulen et al., 2020), IT mindset (Imran & Gregor, 2019), and digital mindset (Goldmann et al., 2022; Hildebrandt & Beimborn, 2022; Solberg et al., 2020). By looking at the different perspectives of mindset, we identified additional structuring. Some literature deals with mindset as an individual character trait (Imran & Gregor, 2019); others see mindset in the context of organizational culture as a collective phenomenon that is influenced and shaped by environment and culture (Gupta & Govindarajan, 2002).

Looking at the three major research streams in more detail, we found central differences. Within the research stream of cognitive psychology, mindset is conceptualized as "the sum total of the activated cognitive procedures" (Gollwitzer & Bayer, 1999, p. 405) to solve a particular task (French, 2016). An intensive engagement with the solution of a task activates the cognitive processes that help solve a task (French, 2016; Gollwitzer & Bayer, 1999). The most relevant mindset theory of the cognitive psychology stream, Gollwitzer's mindset theory of action phases, builds on this understanding. Their model seeks to answer the questions regarding "how people choose action goals, plan and enact their execution, and evaluate their efforts" (French, 2016, p. 53), resulting in the establishment of different phases (pre-decisional, pre-actional, actional, and post-actional) of action leading to different cognitive attunements to achieve the goal of the respective phase. For example, a deliberative mindset is used in the pre-decisional phase to evaluate a particular goal's "feasibility and desirability" (French, 2016, p. 7). A deliberative mindset is therefore believed to be more accurate in assessing the feasibility of a goal as it enables an effective way for unbiased processing of available information and stimuli (Gollwitzer, 1990).

While the conceptualization of cognitive psychology understands a specific cognitive operation, the defining feature of the concept of mindsets in social and organizational psychology is a specific cognitive filter used by an individual's or organization's cognition to assimilate relevant information (French, 2016; Gupta & Govindarajan, 2002). According to Gupta and Govindarajan (2002), an individual's ability to process information is limited. Especially in overwhelming information situations, for instance, within digital transformation processes, it would be necessary for an individual to filter information. Accordingly, past experiences influence the mindset and can change over time. The "mindset filter" influences the reception and interpretation of information and thus influences the behavior of individuals. In the field of social and organizational psychology, numerous theoretical studies deal with this understanding of mindset: The studies deal with culture-as-situated-cognition (e.g., Oyserman et al., 2009), relational processing (e.g., Kray et al., 2006), decision-making (e.g., Benson & Dresdow, 2003) and global versus local processing (e.g., Gupta & Govindarajan, 2002).

The stream of positive psychology provides the third central perspective on the construct mindset. Similar to social and organizational psychology, it is a broader conceptualization as it goes beyond cognitive processes as the reduction to influencing cognitive processes is omitted (Dweck, 2006). Within this stream, the characterization of mindsets focuses on individual or organizational beliefs in both conceptual and experimental research and, thus, characterizes mindset as individual or collective beliefs. Among others,

the major scope of studies within the positive psychology stream includes education (Brooks et al., 2012; Hochanadel & Finamore, 2015), motivation (Dweck, 1999), and engagement (Heslin, 2010), which is influenced by the beliefs whether human characteristics or abilities can grow or not (nature, talent) (Dweck, 2006).

Mindset theory distinguishes an individual's belief about their abilities as either malleable or not (Han & Stieha, 2020). Those who believe that skills or properties are malleable are called "incremental" theorists, and those who believe that properties are unchangeable are called "entity theorists" (Chiu et al., 1997). Later, when early psychological laboratory-based research was discussed in more popular scientific terms, Dweck described implicit theories of human traits and referred to incremental and entity theories as "growth and fixed mindsets" (Han & Stieha, 2020). A fixed mindset is based on the individual's belief that qualities, including general abilities like intelligence, cannot be changed. In contrast, a growth mindset refers to the belief that individuals can develop and improve their qualities by making efforts (Dweck, 2006).

According to Dweck (2006), the belief in one view or the other leads to fundamentally different judgments and reaction patterns. People with fixed mindsets justify or confirm their existing competencies or skills. For example, an individual who does not believe one can become more intelligent wants to prove that he or she is "naturally" blessed with much intelligence. Accordingly, individuals with a fixed mindset find it difficult to master tasks or challenges that demand skills from them that they do not perceive to have. Persons with a fixed mindset see failures or mistakes as defeats, try to look for excuses if necessary, and are prone to see no benefit in making an effort.

In contrast, people with a growth mindset think they can still learn everything they cannot do now. They see their abilities as malleable and therefore have a perspective of "not yet". Therefore, they see mistakes and regressions as an opportunity to expand their intelligence in the future and accordingly prefer to accept challenges as a possibility to learn something (Dweck, 2006). Further, mindsets are unstable but can develop and change over time (Dweck, 2006). Experiences shape individual mindsets, and change involves rethinking cherished beliefs. The conviction that mindset can be changed is an important prerequisite and assumption of this thesis, as this paper explores what factors influence the behavioral outcomes of mindset in the context of digital initiatives.

### *Mindset Model*

In the search for a holistic model that specifies and includes all behavioral outcomes of the growth vs. fixed mindset construct of Dweck (2006), the model of Keating and Heslin (2015) was selected. The model includes managerial mechanisms as antecedents of mindset leading to five dimensions of behavioral outcomes suitable for digital initiatives. Keating and Heslin (2015) created a model that specifies the behavioral outcomes and includes factors of growth vs. fixed mindset construct of Dweck (2006), which are also suitable for digitalization initiatives. It distinguishes between the dimensions of interpersonal interactions (i.e., dealing in a helpful, open, and respectful manner with others), focus of attention (i.e., the vigilance to new information and openness for corrective feedback), enthusiasm for development (i.e., the active engagement in challenging developmental opportunities), perspective on setbacks (i.e., the perception of failure as an integral part of the learning process and the opportunity to improve), and construal of effort (i.e., the belief that perseverance is crucial to learn and develop in a digital transformation process). In their study, Keating and Heslin (2015) explain the influence of an employee's mindset on employee engagement and, thus also, on company performance. As shown in Figure 1, the antecedents of mindset include organizational culture, managerial actions, and self-development.

**Figure 1. Antecedents of Mindset and Paths to Employee Engagement (Own illustration based on Keating and Heslin (2015))**
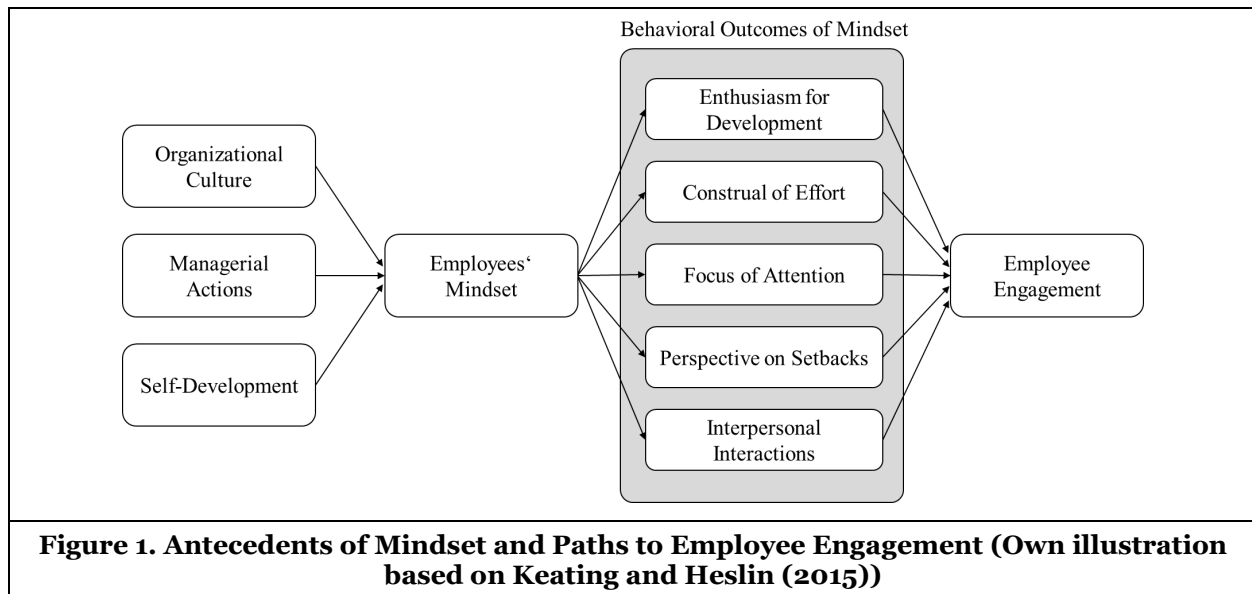
The model elaborates on the tactics through which the mindset works, thus enabling insights into influencing an employee's mindset (Keating & Heslin, 2015). McNatt (2000) found that managers majorly influence employees' feelings, thoughts, and actions, thus, leadership skills and organizational structures (Van Grembergen et al., 2004). Elaborating on the topic of managerial actions further, IT governance which "consists of the leadership and organizational structures and processes" (Haes & van Grembergen, 2009, p. 123), encompasses managerial actions as defined by Keating and Heslin (2015). We aim to identify potentially beneficial or harmful managerial actions in the context of digital initiatives that directly influence employees' behavioral outcomes of digital mindset. Therefore, we use the model and relate how individuals use digital technologies to cope with changes in the digital environment by looking at the direct effects of managerial actions on the behavioral outcomes of mindset in the context of digitalization.

## *Digital Mindset*

The term digital mindset is increasingly used as a buzzword in popular science and is presented as a 'must-have' for digitization without really getting to the root of the definition (Kamath, 2019). Overall, 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 first conceptualization approaches have been initiated by Hildebrandt and Beimborn (2022), encompassing 11 thinking patterns across the categories of generative capacity, personal innovativeness with IT, and data literacy that influence an individual's behavior when confronted with digital technologies. Valta et al. (2022) build upon this concept to better understand the role of a digital mindset in technostress. They found a digital mindset to buffer technostress which impacts job performance, job satisfaction, and turnover intention. Goldmann et al. (2022) chose a grounded theory approach to develop the buzzword digital mindset into theory. Their qualitative study identified digital consciousness, expertise, and entrepreneurship as the three indicators of a digital mindset (Goldmann et al., 2022). Initial studies about digital mindsets, like that of Tour (2015), found that teachers' beliefs about their abilities in digital technologies influence how they teach new technologies. As a result, a lack of belief in their digital abilities leads to greater challenges in teaching new technologies (Tour, 2015). Out of the need to adequately prepare students for digital change, Allen (2020) examines the necessity for a digital mindset in business management education to reframe how individuals conduct business. Similarly, Stewart and Khan (2021) researched how university educators can rethink learning and teaching programs to develop cognitive growth in students by emphasizing the student's digital mindset.

In contrast to the notion of digital mindset as a personal, individual construct, in literature, the term digital mindset is sometimes embedded in a model on the way to a successful digital transformation (Kollmann, 2020; North et al., 2019). One example of this procedure is North et al. (2019), who put a digital mindset in context on the way to digitally enabled growth. His model highlights that digitalization is more than only

dealing with technology adoption but "requires a change in mindset and leadership practices" (North et al., 2019, p. 252). Within this context, a digital mindset is understood as "the attitudes and behaviors that support the generation and use of market insights, proactive innovation, and openness to new ideas" (Quinton et al., 2017, p. 4).

Especially when facing digital disruption, which often leads to a struggle for survival, companies are highly dependent on employees' commitment (Goodwin, 2018). Solberg et al. (2020) state that an employee's individual beliefs can influence how employees process information and react to the introduction of new technologies. Further, they emphasize focusing on a more person-centric approach to increase the understanding of employees and managers during digital transformation initiatives (Solberg et al., 2020). Building on the work of Dweck (2006), they found that individuals with a growth-oriented digital mindset see new technology as a chance for learning and development and will therefore be more open to learning and interacting with new technology. In contrast, individuals with a fixed digital mindset see the need to master a new technology as a threat to validating their skills. Therefore, they will be more inclined to avoid these technologies (Solberg et al., 2020). They add a second dimension including the situational "beliefs about the availability of situational resources" (Solberg et al., 2020, p. 1), i.e., the extent to which resources are extensible or finite in the context of technological change (Solberg et al., 2020). In an article, Neeley and Leonardi (2022) mention the dimensions of employee's buy-in (i.e., whether digital transformation matters) and capacity to learn (i.e., whether an employee believes in their capability to learn the appropriate skills) as important when implementing digital initiatives and recommend managers to put particular emphasis on understanding their employees' and their digital mindset to leverage engagement in digital initiatives.

Summing up, all concepts agree on the influence of a digital mindset on the behavior of employees. In addition, neither researcher sees mindset as a characteristic one possesses or not but an expression that can take on different strengths. Hence, it is necessary to look at the antecedents of how a digital mindset can be influenced by elaborating on which behavioral outcomes can be achieved.

## *The Concept of IT Governance*

Since companies depend on the successful use of IT due to its significant role in sustainable business growth (Law & Ngai, 2005), IT governance is an increasingly relevant and complex phenomenon constantly evolving (Peterson et al., 2000). In order to achieve business value, the connection between business and IT is one crucial intention of IT governance (Van Grembergen et al., 2004). In addition, IT governance involves organization-related issues of differentiation and distribution of responsibilities and integration within IT decision-making (Haes & van Grembergen, 2009; Peterson, 2004). IT governance is also a key responsibility of the management. The accountability to determine proper mechanisms is complex, as it depends on many internal and external factors (Van Grembergen et al., 2004). The distinction between IT governance and IT management in this context is crucial (Van Grembergen et al., 2004). While IT management comprises the adequate provision of IT services and products and the operational control of IT operations, IT governance is much broader and more comprehensive: It includes the dual requirement of supporting current operations, on the one hand, and transforming IT on the long term to meet future challenges, on the other hand (Peterson, 2004). Therefore, to encompass the whole spectrum of managerial actions in the context of IT, we will draw on IT governance mechanisms.

One of the central challenges of IT governance is to drive the simultaneous operation and transformation of IT on a strategic level in a company (Peterson, 2004). The positive influence of digital transformation through the control of IT governance mechanisms has been revised in the literature. Mature IT governance helps to launch and master digital transformation initiatives as it prepares the company by better connecting and influencing the organizational culture toward more experimentation with technology solutions and risk-taking (Spremic, 2017). Furthermore, Weill (2004) found that IT governance mechanisms can influence an organization's mission, strategy, values, norms, and culture. Still, there has yet to be research available on the impact of IT governance mechanisms on the digital mindset of employees. However, because IT governance mechanisms can have a positive impact on alignment and encourage behaviors that are beneficial to the success of digital transformations (Spremic, 2017; Weill, 2004), it is promising to take the literature on IT governance mechanisms (Van Grembergen et al., 2004) and apply it for this purpose.

Early on, Brown (1997) started researching different forms of IT governance, while Sambamurthy and Zmud (1999) elaborated on different contingencies for IT governance. Building on their work, the research investigated different governance mechanisms influencing the overall IT governance within an organization (Ali & Green, 2012; Bowen et al., 2007; Haes & van Grembergen, 2009; Huang et al., 2010; Prasad et al., 2012). Before digging deeper into IT governance as a foundation for our research model, it is crucial to have a working definition. Therefore, we rely on Van Grembergen (2002, p. 1), who defines IT governance as "the organizational capacity exercised by the board, executive management and IT management to control the formulation and implementation of IT strategy and ensure the fusion of business and IT". To ensure that IT supports corporate strategy and objectives, Haes and van Grembergen (2009) employed a research framework encompassing the structural, processual, and relational dimensions when implementing IT governance in line with the key elements of Van Grembergen (2004), Peterson (2004), and Weill (2004). This framework provides the three main dimensions for examining the antecedents of the individual's mindset on different organizational layers. An overview of the three dimensions can be found in the following Table 1.

| Category | Definition | Tactics |
|---|---|---|
| Structural Dimension | Structural (formal) mechanisms to connect and enable horizontal contacts or links between business and IT management (decision-making, shifting of responsibility) (Haes and van Grembergen, 2009). | - IT Executives & Accounts<br>- Committees & Councils |
| Processual Dimension | Coordination or cooperation between organizational units (for instance, formalization or institutionalization of workflows or decision-making processes (Haes and van Grembergen, 2009). | - Strategic IT decision-making<br>- Strategic IT Monitoring |
| Relational Dimension | Efforts that help different entities within the organization develop a mutual understanding (The active involvement of and collaboration between business leaders, IT management, and senior management) (Haes and van Grembergen, 2009). | - Stakeholder Participation<br>- Business-IT Partnerships<br>- Shared Understanding |
| **Table 1. Structural, Processual, and Relational Mechanisms for IT Governance (based on Van Grembergen et al. (2004, p. 22)** | | |

## Methodology

In this paper, we aim to detail and thereby better understand the antecedents of mindset mentioned in the literature in the context of digitalization initiatives. Since research regarding antecedents on the behavioral outcomes of employees' digital mindset is still in the early stage, we will follow the theories-in-use (TIU) approach by Zeithaml et al. (2020). TIU is especially helpful within nascent research areas and is an approach that develops theory by mapping phenomena to constructs (Parasuraman et al., 1985; Van Heerde et al., 2021). Zeithaml et al. (2020) emphasize identifying and defining emerging concepts in the respective domains, allowing the creation of entirely new theories that lead to organic contributions within a discipline. TIU aims at constructing novel if-then propositions and is considered especially interesting for researchers who want to construct theories on emerging phenomena unique to a discipline (Zeithaml et al., 2020). This approach works especially well in our case since digital mindset literature is still in its infancy, and when examining literature, no antecedent of an individual's digital mindset was found. Following TIU, we want to elaborate on antecedents of digital mindset, specifically how IT governance mechanisms influence the behavioral outcomes of employees' digital mindsets.

Benbasat et al. (1987) suggest that for researching phenomena at the organizational level, a selection should be made based on the characteristics of the companies, like industry, company size, or organizational structure. We chose the financial sector since IT is vital in setting banks apart from the competition and achieving customer intimacy and operational excellence (Tallon, 2010). In addition, the established banking industry is increasingly under pressure from young digital competitors, such as small financial service providers (FinTechs) (Thakor, 2020). This increases the pressure to accelerate the digital transformation of the industry (Sebastiani & Kazi, 2020). Therefore, we chose a highly specialized

consumer credit bank which we will refer to as CrediBank whose goal is to aggregate the diversified sales channels and leverage digital technology to provide an improved customer journey. As this is not only about the use of technology itself but also the ability to use it in a targeted way, this also concerns the behavioral outcomes of digital mindset of the employees of CrediBank.

Zeithaml et al. (2020) state that the study participants are theory holders that researchers must reveal by identifying links between constructs to establish relevant propositions within expert interviews or focus groups. Therefore, we conduct in-depth expert interviews with six employees of CrediBank. Almost exclusively (5 out of 6) employees from the management level were interviewed, particularly three of the interviewees from the board level. This is important because IT governance is the responsibility of the board and its management team. Semi-structured interviews allowed us to be responsive to the participants and still follow the interview guide (Yin, 2013). An overview of the participants is included in Table 1. Due to the prevailing pandemic situation in Germany in 2021, the interviews were held online through face-to-face video tools. Besides general questions on CrediBank and the executed roles and responsibilities, we followed our interview guide and included questions about the mechanisms they applied in CrediBank, what changes resulted, and whether or not they influenced the behavioral outcomes of their employees' digital mindset. Afterward, we transcribed and analyzed the interviews to identify relevant connections. By applying a qualitative approach, we found explanations for the phenomena and initial propositions addressing our research question (Walsham, 1995).

| ID | Role | Responsibilities | Interview Length |
|---|---|---|---|
| I1 | Chief Executive Officer (CEO) | Originally trained as a banker, I1 is now responsible 620 employees and topics like risk management, audit, human resources, and organizational strategy. | 54min |
| I2 | Innovation Manager | I2 is responsible for both IT and business and focuses on topics like customer experience management and market innovation. | 1h 1min |
| I3 | Chief Digital Officer (CDO) | I3 is responsible for planning and controlling strategic digital transformation initiatives for business development. | 1h 12min |
| I4 | Chief Information Officer (CIO) | I4 drives the implementation of computer systems and IT in alignment with the strategic goals of CrediBank. | 53min |
| I5 | Head of Development | I5 is in charge of IT development, technical infrastructure, business analysis, and business process optimization. | 58min |
| I6 | Chief Commercial Officer (CCO) | I6 is responsible for the commercial strategy of CrediBank, which includes different kinds of customer services, marketing, and sales. | 26min |

**Table 2. Interview Overview**

For the data analysis, the expert interviews were transcribed, whereby a selective transcript protocol was established that contained only those parts relevant to the research (Howitt & Cramer, 2010). For the analysis of the interview data, we followed a qualitative content analysis (Mayring, 2010). We deductively coded the interviews according to IT governance mechanisms (structural, processual, and relational mechanisms) and behavioral outcomes (interpersonal interactions, focus of attention, enthusiasm for development, perspective on setbacks, and construal of effort). A total of 90 codes were derived for IT governance mechanisms and 35 for behavioral outcomes. Results will be included in the following sections.

## Model Development

To establish novel if-then propositions (Zeithaml et al., 2020), we link the research model to the concept of IT governance by analyzing the interview data and establishing novel propositions included in a research model afterward.

### IT Governance Mechanisms' Influence on the Behavioral Outcomes of Employees' Digital Mindset within CrediBank

Since Solberg et al. (2020) describe employee engagement as crucial for digital transformation initiatives and see a growth mindset as the most important prerequisite for a high-level digital mindset, it makes sense to elaborate further on the antecedents of the behavioral outcomes dimensions of digital mindset. In the course of further driving digital transformation at CrediBank, different IT governance mechanisms were applied over the past years, for instance, establishing cross-functional teams and agile ways of working that aim at closing ranks between business and IT. To change the employee's behavior within digital transformation initiatives, they must first incorporate a digital mindset. They can be perceived as successful only if IT governance mechanisms change the behavioral outcomes of the employee's mindset, which leads to immediate actions and engagement within digital initiatives.

#### Structural Mechanisms

Structural mechanisms, such as committees, which organize the allocation of responsibilities so that IT and business share responsibilities or consult each other, promote regular exchange, and thus lead to better mutual understanding (Van Grembergen et al., 2004). CrediBank established cross-functional teams connecting business and IT as a structural mechanism to establish shared decision-making and a shift of responsibilities. Especially in statements like "*The cross-functional teams have improved collaboration and the business feels they have more influence because they decide about prioritization.*" (I4) that lead to "*The personal level is the key, [...] we also sometimes have conversations in pairs if you notice that someone is getting disgruntled or call if you notice that something is upsetting someone*" (I2) or "*For a few years, I have been noticing that we increased great mutual support and strong team spirit*" (I1) structural mechanisms like implementing cross-functional teams have proven to establish links between business and IT that lead to greater helpfulness, openness, and respect. This results in the first proposition that structural mechanisms directly promote interpersonal interactions:

> **Proposition 1a**: Structural mechanisms are positively related to interpersonal interactions.

Further, structural mechanisms build the framework for exchange and consequently build the basis for conversation and discussion (Peterson, 2004). While due to the structural changes toward cross-functionality, also roles changed, I2 mentions: "*You take everyone on board, everyone is responsible for their part.*" (I2). In turn, this lead to "*Employees [...] taking responsibility and are empowered, which has been an insane leap*" (I1), as well as a "*massive change in focus, [employees] deal with heavily current issues, look at what's going on in the market [...]*" (I4). Due to these changes in roles and responsibilities, CrediBank established a greater focus of attention on the employees, leading to:

> **Proposition 1b**: Structural mechanisms are positively related to the focus of attention.

Employees assigned a role and given responsibility are more likely to accept challenges (Rich et al., 2010). To drive digital transformation, CrediBank hired new staff and offered a wide variety of training formats: "*To hire 30 % new people [...] allowed us such a change [...]. We now have a good grouping, people have been with us for a long time, who already brought a good mindset with them.*" (I5). He further perceives that, consequently, "*the employees are enthusiastic and want to drive this [digital transformation] forward*" (I5). I1 further finds that "*today, there is more competition to see who gets the budget to advance digitalization. [...] most of the initiatives came from the people themselves*" (I1). However, since the 30% mainly consisted of younger employees, I1 also raised the point that due to "*difference between generations [...] some have a fear of contact and don't want to embarrass themselves.*" This sometimes leads to "*the younger ones are rather frustrated*" (I1). Interestingly, after looking at the literature, we expected that a positive relationship would arise because structural mechanisms clearly assign roles and responsibilities, motivating people to engage in challenges actively. Instead, structural mechanisms tend to positively influence enthusiasm for development by sharing responsibilities and working and deciding together as a team, thus sharing the risks. Also, the fact that a momentum of its own has arisen in the cross-functional teams in CrediBank, which has led to employees seeing that others like new methods or technologies and want to try them out, shows that such structural mechanisms help to accept and overcome challenging opportunities and foster enthusiasm for development.

> **Proposition 1c**: Structural mechanisms are positively related to the enthusiasm for development.

**Processual Mechanisms**

Processual mechanisms empowering business and IT to make decisions together and simultaneously have a high level of integration (Teo & King, 1999) are particularly likely to stimulate an individual's digital mindset. Allowing discussion and dialogue directly contributes to the characteristics of interpersonal interactions as being open and more willing to help, which was mentioned in the interviews. CrediBank implemented formal processual mechanisms, including regular exchange and coordination between organizational units through agile working in sprints, leading to daily and weekly coordination meetings. According to I2, in addition to the personal relationship, this formal process framework for communication is necessary because: *"Communication doesn't just happen [...] Actually, you think they communicate closely because they need it, but that's not always the case, and saying that you take an hour a week for discussion and exchange of opinions is very important"* (I2). Following I2, this leads to the situation that "*today it just works better in teams*" (I2) where "*people help each other a lot*" (I5) and, thus, to the proposition:

**Proposition 2a**: Processual mechanisms are positively related to interpersonal interactions.

Process mechanisms can facilitate the definition of goals by promoting a common language and mutual understanding through institutionalized decision-making processes (Van Der Zee & De Jong, 1999). These processes were implemented in CrediBank through agile workflows that enable shared decision-making across teams, providing the opportunity for IT and business employees to form a shared vision. This sharing of responsibility and making decisions based on greater information where all stakeholders are involved lead to: *"Today [the employees] take more responsibility and are no longer afraid"* (I1), as well as "*Colleagues are enthusiastic and still say where I can make the process better*" (I2) which makes it more likely that employees engage and take on challenges, which leads us to the proposition that processual mechanisms influence an individual's enthusiasm for development.

**Proposition 2b**: Processual mechanisms are positively related to enthusiasm for development.

CrediBank focused on measuring development and success to know if their effort has an impact: "*We have also measured everything strongly with supervisor evaluations, employee surveys, always strongly measured: Does this affect what we do and is this measurable? Do I get a quality improvement?*" (I1). They argue that by documenting their successes and personal development within the company, employees are encouraged to improve continuously and increasingly point out that CrediBank does not rely on natural talent. Therefore, we also found information on the positive relationship between processual mechanisms and the construal of effort:

**Proposition 2c**: Processual mechanisms are positively related to the construal of effort.

**Relational Mechanisms**

Because relational mechanisms such as job rotation or colocation offer the opportunity to build up communication between stakeholders regardless of their hierarchical level, they help develop relationships, especially between business and IT (Luftman & Brier, 1999; Peterson, 2004). By mixing up employees and developing a better mutual understanding of each other's challenges, relational mechanisms directly contribute to being open, respectful, and more willing to help each other, which was particularly mentioned by the head of development of CrediBank: "*Our communication is much more transparent today. [...] The basis was primarily to emphasize on the establishment of a common understanding*" (I4). Furthermore, the CEO of CrediBank describes excellent behavioral outcomes through another mechanism of having lunches together, which encourages the teams to come together during lunch breaks. In line with the existing literature and the arguments, one reason for this connection is that relational mechanisms offer the possibility to build communication between stakeholders regardless of their hierarchical level and thus help to increase interpersonal interaction. Therefore, we propose:

**Proposition 3a**: Relational mechanisms are positively related to interpersonal interaction.

By enabling the exchange of a wide range of views and generating rich conversation and communication around these perspectives (Peterson, 2004), relational mechanisms provide a direct way to absorb new information and reflect it with one's views. In this course, the CEO of CrediBank states that "*Offensive and direct interaction is important: I have to make sense of urgency clear, why am I doing this?*" (I1) and

throughout the interviews, it was said that "*[The CEO] created the understanding in the management team that we have to do this and then worked out the common goal together with the management team*" (I4). In addition, I6 states that an essential relational mechanism to leverage the focus of attention of employees was to "*permanently communicate the goals from top to down to all employees*" (I6). Hence, "*when employees realize that digitalization is an important building block in the overall picture, they embrace it because they see the purpose of it all*" (I6). Therefore, relational mechanisms lead to more vigilance toward new information because they enable informal communication and exchange and thus enable the absorption of new information (strategic dialogue).

**Proposition 3b**: Relational mechanisms are positively related to the focus of attention.

By promoting shared influence among different stakeholders, regardless of formal position, relational mechanisms foster a sense of cooperation and a common vision with shared risks and benefits (Peterson, 2004). Within CrediBank, relational mechanisms are characterized by trust and understanding. "*It is important to motivate the employees to do things themselves*" (I3) or "*The important thing is to let the employee gain experience themselves. Employees need to see that it works*" (I3) are good examples of how the leaders help their employees to grow and develop a curiosity for digital technologies. Further, to increase employee enthusiasm for development, talking about this trust and living it, even in difficult moments is essential. That way, employees gain their own experience, an essential factor, as the following statement underlines: "*[They have] learned that it is much easier than being in the role of the bogeyman or the blocker*" (I2). Therefore, we propose the influence of relational mechanisms on enthusiasm for development.

**Proposition 3c:** Relational mechanisms are positively related to the enthusiasm for development.

"*It is important to me that if you have a problem, you address it in time and do not avoid it or cover it up. Mistakes will happen, but it is important that we learn about it together quickly and take countermeasures*" (I1). This quote by the CEO of CrediBank shows how important relational mechanisms are to have the proper perspective on setbacks as an employee. Instead of avoiding mistakes, CreditBank's implementation of relational mechanisms promotes active conflict resolution. On the one hand, employees are encouraged to deal openly with their own mistakes and regressions; on the other hand, they learn how other employees deal with such things. Relational mechanisms promote mistakes as learning opportunities by focusing on learning from each other. However, it has also been mentioned: "*It is important to go not too fast into empowerment, not simply flip the switch, that's something we did wrong. I think change was too fast, too little framework conditions given. […] in the beginning, first, give more instructions, more help, but decide even more, more hierarchically first and then gradually reduce the hierarchy*" (I5), which shows that such mechanisms cannot be instantiated from one day to another and most always need time to have the desired behavioral outcomes. Interestingly, the process of the employee's empowerment as part of the relational mechanisms did not run smoothly, as the quote above shows. However, mistakes during the induction process were reflected upon, and strategies were improved, which underlines the incorporated learning culture at all levels.

**Proposition 3d:** Relational mechanisms are positively related to the perspective on setbacks.

## *Development of Research Model*

Organizations like CrediBank continuously look for ways to emphasize digital transformation initiatives across all departments. Following our results, we argue that digital transformation starts with people and their digital mindset as a crucial success factor of digital initiatives. Therefore, it is necessary to look deeper into what drives employees toward an adequate digital mindset, leading to increased engagement within digital initiatives. Based on the findings that managerial actions influence the behavioral outcome of mindset (Keating & Heslin, 2015), our research delved into these interdependencies, specifically examining the role of IT governance mechanisms. These mechanisms serve as influential factors in shaping employee behaviors during digital transformation initiatives.

We propose a research model that postulates the link between IT governance mechanisms and the behavioral outcomes of employees' digital mindset, as depicted in Figure 2. Our model proposes that relational and structural mechanisms are antecedents for interpersonal interactions, focus of attention, and enthusiasm for development. In addition, relational mechanisms also influence perspective on setbacks.

Further, we found that processual mechanisms can influence interpersonal interactions, enthusiasm for development, and construal of effort.



**Figure 2. Impact of IT Governance Mechanisms on the Behavioral Outcomes of Digital Mindset**
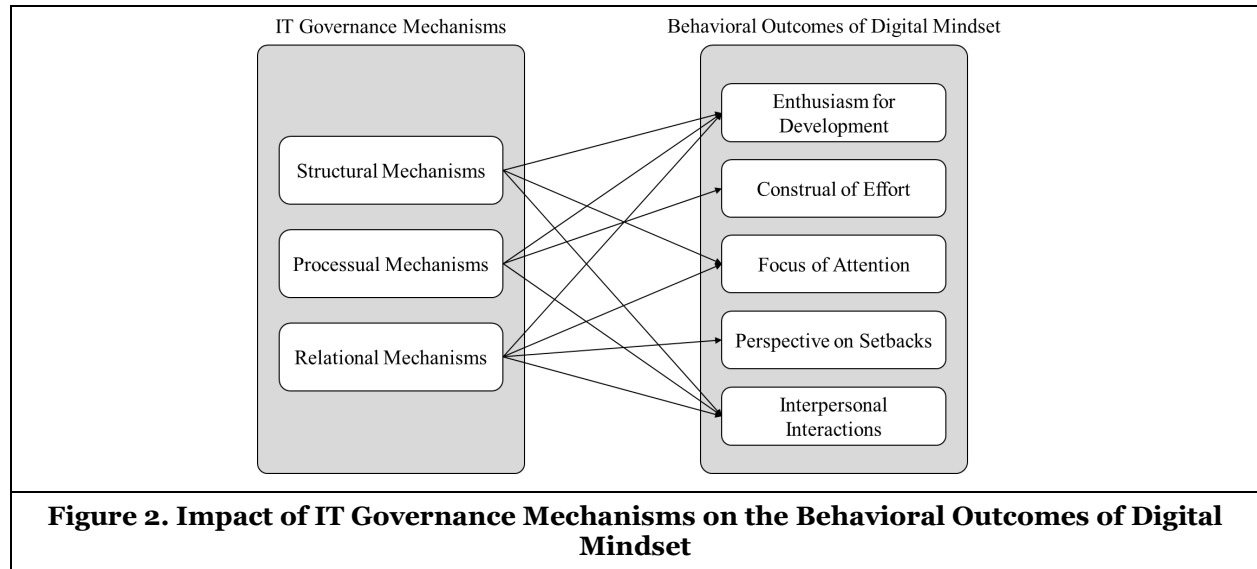
Our propositions provide a framework for organizations to understand better what behavioral outcomes of digital mindset can be influenced by enriching an established research model with IS literature. We thereby argue that IT governance mechanisms can be used as managerial actions which were found to impact employee mindsets, resulting in increased employee engagement.

# Discussion

## *Implications*

This paper contributes to theory and practice in several ways by extending theory through encountering the two formerly separate research streams of IT governance and digital mindset and giving further insights into impact factors on digital mindset within digitalization initiatives. We thereby used TIU to link the IT governance mechanisms to the behavioral outcomes of digital mindset.

First, we give more detail to the theoretically established antecedent of managerial actions through IT governance mechanisms since it fits the mindset in the context of digital initiatives. Within Keating and Heslin (2015), managerial actions are rather seen as a vague concept that is not further specified, especially not within the context of digital initiatives. Hence, we concretize managerial actions in the context of digital initiatives through a well-defined concept in IT governance.

Second, we show that the three dimensions of IT governance mechanisms affect the behavioral outcomes of digital mindset differently. Informal relational mechanisms were found to have the most influence on the behavioral outcomes of an adequate digital mindset. In addition, we found that the rather formal mechanisms (structural and processual mechanisms) indirectly influenced the behavioral outcomes of digital mindset since they lay the foundation for unfolding the relational mechanisms, as they support the framework and conditions in the way of decision-making and integration. In fact, the tactics offered by relational IT governance mechanisms (stakeholder participation, business IT partnership, strategic dialogue, and shared learning) are very well suited for analyzing the individual effects of measures to promote the level of digital mindset among employees.

Third, we highlight a new dependent variable for IT governance mechanisms. Extant literature typically relates IT governance to IT alignment (Wu et al., 2015), while we point out employees' digital mindset as a new dependent variable. By understanding the different behavioral outcomes of digital mindset, on the one hand, and demonstrating how IT governance mechanisms influence the behavioral outcomes of digital mindset, on the other hand, our review highlights the opportunities for IT governance mechanisms in the context of digitalization initiatives.

### *Limitations and Future Research*

Our research has some limitations.

First, a conceptual limitation relates to the concept of mindset. As mentioned, the five behavioral outcomes of mindset were linked to increased employee engagement (Keating & Heslin, 2015). However, an important limitation in this context is an exception, where this connection is not the case. In jobs with little room for skill development of one's skills or performance (e.g., in assembly line work), people with a fixed mindset will probably be more committed than individuals with a growth mindset. Hence, even though driving employees' digital mindset is critical to a company's success, leaders must carefully differentiate which roles to emphasize since employees with a digital mindset may become frustrated if they cannot perform or increase their performance capabilities.

Second, even though a lot of positive impacts of IT governance mechanisms were found, they can also have a negative impact (e.g., task and responsibility overload). Indications for those are especially important for structural and processual mechanisms since it is easier to circumvent relational mechanisms due to their mostly informal nature.

With regard to future research, we offer the following avenues.

First, an important finding is the intertwining of the behavioral outcomes dimensions of digital mindset since they also reinforce each other. Specifically, it can be assumed that employees with behavior being evident as interpersonal interaction (helpful, open, respectful) also improves enthusiasm for development since, for instance, better interpersonal relationships counteract the fear of embarrassing oneself when taking on risky challenges. Hence, by promoting interpersonal interactions, relational mechanisms also promote enthusiasm for development. It would be interesting to find out what further interrelations can be found in the behavior of employees toward digital initiatives.

Second, future studies could make a finer categorization for this and explicitly subdivide the relational mechanisms even further. Peterson (2004) already differentiates between structure and process within the relational integration mechanisms, bringing up two other categories. In principle, other categorizations are also conceivable in this context, which refers to other perspectives, for instance, relational mechanisms that act on the collective vs. the individual level. Such a detailed distinction could be interesting, considering the previous studies of Dweck (2006), which described the impact of interventions that influenced the mindset of an individual. However, studies mainly focus on the educational context and barely consider the digital mindset. In this context, it would be interesting to see how the concept of business-IT alignment as such, since it is one of the main goals of IT governance, affects a digital mindset to work out more overlaps besides the categorization.

## Conclusion

Out of the need to look deeper into the concept of mindset in the context of digital initiatives, we developed a novel research model from two formerly separate literature streams. We conceptually linked back to the mindset concept and examined IT governance mechanisms regarding their influence on the behavioral outcomes of digital mindset. Our paper shows that organizations can use IT governance mechanisms to leverage their employee's mindsets toward appropriateness in digital initiatives. Our research contributes to the extant literature in the domain of digital transformation and mindset and establishes a more holistic picture of mindset within digitalization initiatives by highlighting the crucial role of individual mindsets and influencing antecedents from IT governance literature.

## References

Ali, S., & Green, P. (2012). Effective information technology (IT) governance mechanisms: An IT outsourcing perspective. *Information Systems Frontiers*, *14*(2), 179-193.
Allen, S. J. (2020). On the cutting edge or the chopping block? Fostering a digital mindset and tech literacy in business management education. *Journal of Management Education*, *44*(3), 362-393.
Argyris, C. (2004). Reflection and beyond in research on organizational learning. *Management Learning*, *35*(4), 507-509.

Benbasat, I., Goldstein, D. K., & Mead, M. (1987). The case research strategy in studies of information systems. *MIS quarterly*, 369-386.

Benson, J., & Dresdow, S. (2003). Discovery mindset: a decision-making model for discovery and collaboration. *Management Decision*.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child development*, *78*(1), 246-263.

Boring, E. (1950). German psychology before 1850: Kant, Herbart, and Lotze. *A history of experimental psychology (2nd ed.). New York: Appleton-Century-Crofts.*

Bowen, P. L., Cheung, M.-Y. D., & Rohde, F. H. (2007). Enhancing IT governance practices: A model and case study of an organization's efforts. *international Journal of Accounting information Systems*, *8*(3), 191-221.

Brooks, R., Brooks, S., & Goldstein, S. (2012). The power of mindsets: Nurturing engagement, motivation, and resilience in students. In *Handbook of research on student engagement* (pp. 541-562). Springer.

Brown, C. V. (1997). Examining the emergence of hybrid IS governance solutions: Evidence from a single case site. *Information Systems Research*, *8*(1), 69-94.

Chiu, C.-y., Dweck, C. S., Tong, J. Y.-y., & Fu, J. H.-y. (1997). Implicit theories and conceptions of morality. *Journal of personality and social psychology*, *73*(5), 923.

Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Psychology press.

Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House.

Edmondson, A. C. (2003). Framing for learning: Lessons in successful technology implementation. *California Management Review*, *45*(2), 34-54.

Forsythe, J., & Rafoth, J. (2022). Being Digital: Why Addressing Culture and Creating a Digital Mindset are Critical to Successful Transformation. *INSIGHT*, *25*(1), 25-28.

French, R. P. I. (2016). The fuzziness of mindsets: Divergent conceptualizations and characterizations of mindset theory and praxis. *International Journal of Organizational Analysis*, *24*(4), 673-691.

Gagne, F. M., & Lydon, J. E. (2001). Mind-set and close relationships: When bias leads to (in) accurate predictions. *Journal of personality and social psychology*, *81*(1), 85.

Goldmann, P., Altendorfer, C., & Schäfer, B. (2022). From Buzzword to Theory-Defining Digital Mindset. Academy of Management Proceedings,

Gollwitzer, P. M. (1990). Action phases and mind-sets. *Handbook of motivation and cognition: Foundations of social behavior*, *2*, 53-92.

Gollwitzer, P. M., & Bayer, U. C. (1999). Deliberative versus implemental mindsets in the control of action. In.

Goodwin, T. (2018). *Digital Darwinism: Survival of the fittest in the age of business disruption*. Kogan Page Publishers.

Gupta, A. K., & Govindarajan, V. (2002). Cultivating a global mindset. *Academy of Management Perspectives*, *16*(1), 116-126.

Haes, S. d., & van Grembergen, W. (2009). An Exploratory Study into IT Governance Implementations and its Impact on Business/IT Alignment. *Information Systems Management*, *26*(2), 123–137.

Han, S. J., & Stieha, V. (2020). Growth mindset for human resource development: A scoping review of the literature with recommended interventions. *Human Resource Development Review*, *19*(3), 309-331.

Heslin, P. A. (2010). Mindsets and employee engagement: Theoretical linkages and practical interventions. In *Handbook of employee engagement*. Edward Elgar Publishing.

Hildebrandt, Y., & Beimborn, D. (2022). A Cognitive Conveyor for Digital Innovation-Definition and Conceptualization of the Digital Mindset. *Wirtschaftsinformatik 2022 Proceedings*, *12*.

Hochanadel, A., & Finamore, D. (2015). Fixed and growth mindset in education and how grit helps students persist in the face of adversity. *Journal of International Education Research (JIER)*, *11*(1), 47-50.

Hofert, S. (2018). *Das agile mindset*. Springer.

Howitt, D., & Cramer, D. (2010). Introduction to qualitative methods in psychology.

Huang, R., Zmud, R. W., & Price, R. L. (2010). Influencing the effectiveness of IT governance practices through steering committees and communication policies. *European Journal of Information Systems*, *19*(3), 288-302.

Imran, A., & Gregor, S. (2019). Conceptualising an IT mindset and its relationship to IT knowledge and intention to explore IT in the workplace. *Information Technology & People*.

Issa, T., & Pick, D. (2010). Ethical mindsets: an Australian study. *Journal of business ethics*, *96*(4), 613-629.

Kamath, S. (2019). What is a digital mindset and why is it important. *Retrieved August*, *19*, 2020.

Kane, G., Palmer, D., Phillips, A., Kiron, D., & Buckley, N. (2017). "Achieving Digital Maturity" MIT Sloan Management Review and Deloitte University Press. 1-30.

Kane, G. C., Palmer, D., Phillips, A.-N., Kiron, D., & Buckley, N. (2018). Coming of age digitally. *MIT Sloan Management Review and Deloitte Insights*, *59*(5), 3-33.

Keating, L. A., & Heslin, P. A. (2015). The potential role of mindsets in unleashing employee engagement. *Human resource management review*, *25*(4), 329-341.

Kennedy, F., Carroll, B., & Francoeur, J. (2013). Mindset not skill set: Evaluating in new paradigms of leadership development. *Advances in Developing Human Resources*, *15*(1), 10-26.

Kollmann, T. (2020). Die Digital Execution. In *Digital Leadership* (pp. 117-211). Springer.

Kray, L. J., Galinsky, A. D., & Wong, E. M. (2006). Thinking within the box: The relational processing style elicited by counterfactual mind-sets. *Journal of personality and social psychology*, *91*(1), 33-48.

Külpe, O. (1904). Versuche über Abstraktion. *Bericht über den 1. Kongress für experimentelle Psychologie*, 56-68.

Law, C. C., & Ngai, E. W. (2005). IT business value research: a critical review and research agenda. *International Journal of Enterprise Information Systems (IJEIS)*, *1*(3), 35-55.

Lee, Y.-H., Heeter, C., Magerko, B., & Medler, B. (2012). Gaming mindsets: Implicit theories in serious game learning. *Cyberpsychology, behavior, and social networking*, *15*(4), 190-194.

Luftman, J., & Brier, T. (1999). Achieving and sustaining business-IT alignment. *California Management Review*, *42*(1), 109-122.

Mangels, J. A., Butterfield, B., Lamb, J., Good, C., & Dweck, C. S. (2006). Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model. *Social cognitive and affective neuroscience*, *1*(2), 75-86.

Mayring, P. (2010). Qualitative Inhaltsanalyse. In G. Mey & K. Mruck (Eds.), *Handbuch Qualitative Forschung in der Psychologie* (pp. 601-613). VS Verlag für Sozialwissenschaften.

McNatt, D. B. (2000). Ancient Pygmalion joins contemporary management: A meta-analysis of the result. *Journal of Applied Psychology*, *85*(2), 314.

Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital Innovation Management: Reinventing innovation management research in a digital world. *MIS quarterly*, *41*(1).

Neeley, T., & Leonardi, P. (2022). Developing a Digital Mindset. *Harvard business review*, *100*(5-6), 50-55.

North, K., Aramburu, N., & Lorenzo, O. J. (2019). Promoting digitally enabled growth in SMEs: a framework proposal. *Journal of Enterprise Information Management*, *33*(1), 238-262.

Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin*, *34*(5), 599-612.

Oyserman, D., Sorensen, N., Reber, R., & Chen, S. X. (2009). Connecting and separating mind-sets: culture as situated cognition. *Journal of personality and social psychology*, *97*(2), 217-235.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41-50.

Peterson, R., Ribbers, P., & O'Callaghan, R. (2000). Information technology governance by design: Investigating hybrid configurations and integration mechanisms. 435-452.

Peterson, R. R. (2004). Integration Strategies and Ttactics for Information Technology Governance. In *Strategies for information technology governance* (pp. 37-80). Igi Global.

Plaks, J. E., Stroessner, S. J., Dweck, C. S., & Sherman, J. W. (2001). Person theories and attention allocation: preferences for stereotypic versus counterstereotypic information. *Journal of personality and social psychology*, *80*(6), 876-893.

Prasad, A., Green, P., & Heales, J. (2012). On IT governance structures and their effectiveness in collaborative organizational structures. *international Journal of Accounting information Systems*, *13*(3), 199-220.

Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2017). Conceptualising a digital orientation: antecedents of supporting SME performance in the digital economy. *Journal of Strategic Marketing*, *26*(5), 427-439.

Rhinesmith, S. H. (1992). Global mindsets for global managers. *Training & Development*, *46*(10), 63-69.

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, *53*(3), 617-635.

Sambamurthy, V., & Zmud, R. W. (1999). Arrangements for information technology governance: A theory of multiple contingencies. *MIS quarterly*, *23*(2), 261-290.

Sebastiani, S., & Kazi, M. S. (2020). *The Local Fintech Opportunity in a Post Covid-19 World*. Retrieved 04.11.2022 from

Smith, P., & Beretta, M. (2021). The gordian knot of practicing digital transformation: coping with emergent paradoxes in ambidextrous organizing structures. *Journal of product innovation management*, *38*(1), 166-191.

Solberg, E., Traavik, L. E. M., & Wong, S. I. (2020). Digital Mindsets: Recognizing and Leveraging Individual Beliefs for Digital Transformation. *California Management Review*, *62*(4), 105-124.

Spremic, M. (2017). Governing digital technology—how mature IT governance can help in digital transformation? *International Journal of Economics and Management Systems*, *2*, 214-223.

Stewart, C., & Khan, A. A. (2021). A strategy for using digital mindsets and knowledge technologies to move past pandemic conditions. *Accounting Research Journal*.

Tallon, P. P. (2010). A service science perspective on strategic choice, IT, and performance in US banking. *Journal of management information systems*, *26*(4), 219-252.

Teo, T., & King, W. (1999). An empirical study of the impacts of integrating business planning and information systems planning. *European Journal of Information Systems*, *8*(3), 200-210.

Thakor, A. V. (2020). Fintech and banking: What do we know? *Journal of Financial Intermediation*, *41*, 100833.

Tour, E. (2015). Digital mindsets: Teachers' technology use in personal life and teaching. *Language Learning & Technology*, *19*(3), 124-139.

Valta, M., Hildebrandt, Y., & Maier, C. (2022). Reducing Technostress: The Role of the Digital Mindset.

van der Meulen, N., Weill, P., & Woerner, S. L. (2020). Managing Organizational Explosions During Digital Business Transformations. *MIS Quarterly Executive*, *19*(3), 165-182.

Van Der Zee, J., & De Jong, B. (1999). Alignment is not enough: integrating business and information technology management with the balanced business scorecard. *Journal of management information systems*, *16*(2), 137-158.

Van Grembergen, W. (2002). Introduction to the Minitrack" IT Governance and Its Mechanisms". 2007 40th Annual Hawaii International Conference on System Sciences (HICSS'07),

Van Grembergen, W. (2004). *Strategies for information technology governance*. Idea Group Publishing.

Van Grembergen, W., De Haes, S., & Guldentops, E. (2004). Structures, processes and relational mechanisms for IT governance. In *Strategies for information technology governance* (pp. 1-36). Igi Global.

Van Heerde, H. J., Moorman, C., Moreau, C. P., & Palmatier, R. W. (2021). Reality check: Infusing ecological value into academic marketing research. In (Vol. 85, pp. 1-13): SAGE Publications Sage CA: Los Angeles, CA.

Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *European Journal of Information Systems*, *4*(2), 74–81.

Watt, H. J. (1905). Experimentelle beiträge zu einer theorie des denkens. *Archiv für die gesamte Psychologie*, *4*, 289-436.

Weill, P. (2004). Don't just lead, govern: How top-performing firms govern IT. *MIS Quarterly Executive*, *3*(1), 1-17.

Wessel, L., Baiyere, A., Ologeanu-Taddei, R., Cha, J., & Blegind Jensen, T. (2021). Unpacking the Difference Between Digital Transformation and IT-Enabled Organizational Transformation. *Journal of the Association for Information Systems*, *22*(1), 102–129.

Wong, S. I., Solberg, E., & Traavik, L. (2022). Individuals' fixed digital mindset, internal HRM alignment and feelings of helplessness in virtual teams. *Information Technology & People*.

Wu, S. P.-J., Straub, D. W., & Liang, T.-P. (2015). How information technology governance mechanisms and strategic alignment influence organizational performance. *MIS quarterly*, *39*(2), 497-518.

Yin, R. K. (2013). *Case study research: Design and methods* (4. ed. ed.). Sage.

Zeithaml, V. A., Jaworski, B. J., Kohli, A. K., Tuli, K. R., Ulaga, W., & Zaltman, G. (2020). A theories-in-use approach to building marketing theory. *Journal of Marketing*, *84*(1), 32-51.