Navigating Continuous Digital Transformation Through Intrapersonal Transformation: Exploring the Role of Contexts and Technology

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“Nur wer die Vergangenheit kennt, kann die Gegenwart verstehen und die Zukunft gestalten.”

(August Bebel)

Copyright Statement

The following sections are partly comprised of content taken from research articles included in this thesis. To improve the readability of the text, I omit the standard labeling of citations at these points.

Abstract

Digital transformation represents an ongoing challenge and opportunity for organizations across sectors, requiring not only technological reconfiguration but also profound individual adaptation. While considerable attention has been paid to organizational strategies and technological infrastructures, the human side of digital transformation - specifically how individuals continuously evolve in terms of skills and mindset to support this transformation - remains underexplored. This dissertation addresses this gap by conceptualizing intrapersonal transformation, defined as the development of skills and mindsets that enables individuals to navigate and drive digital transformation. It builds on the view that digital transformation is not a discrete, one-time shift, but a continuous, human-centered process that depends on the alignment between individual growth and organizational adaptability.

This research is guided by two overarching goals. First, it explores how intrapersonal transformation contributes to organizational adaptability across diverse contexts, such as public institutions and small and medium-sized enterprises. The dissertation contributes to context-sensitive theorizing by examining how institutional norms, resource limitations, and collaboration for innovation influence digital transformation. These studies show that although individuals can serve as enablers of digital transformation, their impact is dependent on supportive organizational structures, shared understanding, and alignment with institutional values and strategic goals.

Second, the dissertation explores how digital technologies - specifically generative artificial intelligence and digital learning and support assistants - mediate intrapersonal transformation in higher education settings. It analyzes how tools based on generative artificial intelligence can enable scalable and personalized learning, foster literacy in the use of artificial intelligence, promote critical thinking, and support adaptive engagement. These studies demonstrate that such technologies can help future knowledge workers become co-creators of knowledge and better prepared for technology-augmented professional environments. Furthermore, the dissertation includes a detailed analysis of digital learning and support assistants, showing how these sociotechnical tools can foster learners' self-organization, time management, and autonomy. Taken together, the studies provide insight into how digital technologies can act as catalysts for continuous personal development, aligned with the demands of lifelong learning and preparation for the future of work.

From a practical perspective, the findings call on organizations to actively promote continuous learning, entrepreneurial thinking within the workplace, and digital literacy. Digital transformation must be approached as a continuous learning journey rather than a linear implementation process. This requires investing in people and creating supportive environments in which intrapersonal transformation can flourish. Ultimately, successful digital transformation is not merely about adopting new technologies, but about enabling individuals to transform themselves in tandem with their organizations.

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List of Abbreviations

AI	Artificial Intelligence
AISeL	Association for Information Systems electronic Library
CIO	Chief Information Officer
CT	Conceptual Theme
DT	Digital Transformation
DSA	Digital Study Assistant
GenAI	Generative Artificial Intelligence
ICT	Information and Communication Technology
IS	Information Systems
IT	Information Technology
SRL	Self-regulated Learning
SME	Small and Medium Sized Enterprises
SMO	Small and Medium Sized Organizations
TML	Technology Mediated Learning
VHB	Verband der Hochschullehrer für Betriebswirtschaft e.V.

1. Introduction

"*For the most part, change is viewed as benevolent, positive – it equates with progress."*
– Christiane Demers - HEC Montréal, 2007

1.1 Motivation

Over the past two decades, organizations across various sectors have increasingly prioritized the integration of digital technologies into their structures and operations (Hanelt et al., 2021; Verhoef et al., 2021). This process, widely referred to as digital transformation (DT), represents a strategic and continuous reconfiguration toward a different organizational state enabled by digital technologies (Noesgaard et al., 2023; Verhoef et al., 2021; Vial, 2019). Moreover, building competitive advantage increasingly relies on the successful integration of digital technologies (Soluk and Kammerlander, 2021; Vial, 2019), since successful DT enables both the improvement of existing business models (i.e., exploitation) and the development of new value creation paths (i.e., exploration) (Jöhnk et al., 2022). Despite its strategic promise, failure rates for DT initiatives remain high, with over 70% of projects falling short of expectations (Tabrizi et al., 2019; Sebastian et al., 2017; Karimi and Walter, 2015; Matt et al., 2015). Consequently, these statistics indicate a high number of DT projects that fail to deliver the intended results (Bonnet, 2022), leaving companies at a competitive disadvantage and employees exhausted by the ongoing, yet unsuccessful, transformation (Polites and Karahanna, 2012).

A key challenge is the overemphasis on technology as the driver of DT, while DT does not succeed merely through the acquisition of digital technologies. Often overlooked is the critical role of individuals as enablers of DT (Kane et al., 2015), serving as a key organizational capability (Baiyere et al., 2020; Eden et al., 2019; Nambisan et al., 2017). As Westerman, (2018, p.116) noted, "when it comes to digital transformation, *digital* is not the answer. *Transformation* is." While the macro-level of DT has received considerable attention in the past, significantly less focus has been placed on the individual level of DT (e.g., Bridger, 2022). Only recently has research begun to emphasize human-driven DT (e.g., Braojos et al., 2024), while our understanding remains vague or "undertheorized" on how employees can be enabled to support successful DT (Wessel et al., 2025). Nevertheless change – and thus transformation – is an "inescapable phenomenon" (Lind and Sulek, 1994, p.375) for most organizations as well as for individuals within their professional endeavors (Al Haji and Vongas, 2025).

To address this gap, this dissertation is anchored in the concept of intrapersonal transformation – a term combining skill-based and mindset-based dimensions of individual change in the context of DT. Skill-based transformation involves developing digital literacy and digital intelligence, equipping individuals to effectively interact with evolving digital technologies (Cordes and Rosemann, 2020; Ashrafi et al., 2025). Mindset-based transformation, on the other hand, involves cultivating adaptability and proactivity as intrapreneurial qualities that empower individuals to act as *transformation agents* (Bitzer

et al., 2024; Rabl et al., 2023). Together, these dimensions allow employees to navigate technological change, overcome resistance, and continuously learn as part of transformation.

This becomes particularly important when considering the diverse organizational contexts in which individuals operate, as these contexts offer various sets of resources and organizational approaches toward DT (Fischer et al., 2020). In public institutions, for example, legal certainty and rigid structures dominate actions making intrapersonal transformation efforts challenging (Andersen et al., 2020; Benavides, 2020). In small- and medium-sized enterprises (SMEs), transformation is heavily dependent on key individuals, as there may be no dedicated roles like Chief Information Officers (CIOs) to pursue DT (Drechsler et al., 2022). Meanwhile, in startups, the success of transformation is often tightly linked to a small group of individuals, whose flexibility and proactive efforts drive continuous change and reduce inertia (Walker et al., 1997). These varying contexts highlight the significance of individuals in shaping DT, especially in environments where formalized structures and roles are absent, or where organizational culture naturally resists change (Polakova-Kersten et al., 2023).

Despite the recognized importance of individuals in DT, many employees lack either the capabilities required to transform toward digital savviness or the opportunity to do so (Cordes and Rosemann, 2020; Forth et al., 2020). These conditions – whether due to uncertainty, lack of clarity, or unwillingness to adapt – represent a major source of inertia, inhibiting progress (Haskamp et al., 2021; Wessel et al., 2021), often linked directly to the failure of DT projects within organizations (Polites and Karahanna, 2012; Rumelt, 1995). This challenge is further intensified by the continuous nature of DT (Haskamp et al., 2021). Or likewise, as Besson and Rowe (2012, p.117) state, “organizational transformation is a process”. Unlike one-time changes, DT represents a state of perpetual transformation, requiring constant adaptation from employees (Bitzer et al., 2021; Hanelt et al., 2021). This permanent transformation required by employees can reinforce inertia or even induce resistance to change (Haskamp et al., 2021).

Key to overcoming these challenges is cultivating an environment fostering intrapersonal change and lifelong learning among employees (Neeley and Leonardi, 2022; Van de Wiele, 2010). Organizations must encourage changes in individual work practices and enable employees to engage with transformation proactively (Andersen et al., 2020). Furthermore, organizations must foster a shift in workforce mindset – a shift toward enabling intrapersonal transformation through learning and experience (Andersen et al., 2020). More specifically, a mindset that fosters proactivity, adaptability, and a willingness to embrace – or even initiate change – is vital for transformation (Rabl et al., 2023). This mindset serves as a foundation to proactively engage in change and take it as an opportunity to transform (Bitzer et al., 2024). In addition, acquiring digital literacy and digital intelligence as part of a skill-based shift is also essential for navigating and leveraging digital technologies effectively (Ashrafi et al., 2025; Baiyere et al., 2020). Organizations must provide support to leverage continuous learning and make individual transformation a key dynamic capability within their organizational agility.

Therefore, organizations should leverage emerging technologies, such as generative artificial intelligence (GenAI) and supportive digital tools like study assistants, which offer opportunities to personalize learning and reduce resistance by empowering employees with tailored support and new ways of engaging in intrapersonal transformation (Fleischmann et al., 2024). These technologies help organizations cultivate digitally literate and self-directed employees, who also embody intrapreneurial characteristics – employees who can understand and navigate the DT journey (Mueller and Renken, 2017). Still, to bridge the gap between those driving change and those resisting it, organizations must actively align individual transformation with broader organizational transformation efforts (Eden et al., 2019; Kim, 1993). Without this alignment, the divide between digitally savvy employees and those adhering to traditional practices will deepen, creating yet another form of structural barrier to DT (Haffke et al., 2017).

In line of this argumentation, this dissertation builds on a layered understanding of DT – beginning with the external environment's dynamic pressures, moving through organizational support structures, and culminating in the intrapersonal transformation of individuals as a key to unlocking sustainable change. Given the critical role of individuals in shaping DT efforts across diverse organizational contexts, this dissertation seeks to answer the following overarching research question: *How does intrapersonal transformation unfold across diverse organizational contexts, and how can digital technologies mediate and support this transformation to enable sustained digital transformation?*

1.2 Dissertation Structure

This thesis is divided into two main parts (Figure 1). Part A presents the research summary, beginning with an introduction, followed by the conceptual and theoretical background, problematization and research goals, research approach, and a summary of the research article results. The findings of this thesis are then discussed.

Part A begins with Chapter I, which introduces the motivation and outlines the structure of the thesis. Chapter II provides the conceptual and theoretical foundation of the thesis and introduces a conceptual framework that connects three layers of influence relevant to DT in the thesis' context. Section 2.1 outlines this conceptual framework. Section 2.2 addresses the outer layer by exploring DT as a major change phenomenon in organizations and discusses its core characteristics as found in the literature. Section 2.3 turns to the middle layer, illustrating how individuals serve as dynamic capabilities within organizations and how different organizational contexts and support structures shape intrapersonal transformation. Section 2.4 focuses on the inner layer by developing an understanding of intrapersonal transformation as a central driver of DT. This section emphasizes the dual importance of skill-based and mindset-based development, outlines related terms, and highlights the increasing need for adaptive mindsets in technology-infused work environments. Both the middle and inner layers are presented through conceptual outlines and grounded in related theoretical perspectives in structured subsections.

Chapter III details the research goals and research design of this thesis. It specifies two overarching research goals: first, to explore the organizational impact of individual transformation across different contexts, and second, to examine how digital technologies can enable intrapersonal transformation. This chapter links each of the seven research articles to these goals and outlines the research questions that emerge from the research articles. Additionally, this chapter elaborates on the research design by describing the overarching methodological approaches as well as the design decisions made for each article. These include justification for method choice, data selection strategies, data collection procedures, and approaches to data analysis.

Chapter IV reports the results of this thesis. Section 4.1 provides an overview of the key contributions of the research articles in the form of extended abstracts, related to the first research goal of the thesis. Section 4.2 provides an overview of the key contributions of the research articles in the form of extended abstracts related to the second research goal. The extended abstracts summarize the research objectives, problem statements, results, and contributions of each research article.

Chapter V engages in a critical discussion of the overall research results. It begins in Section 5.1, situating the articles' contributions within the proposed research goals. Section 5.2 outlines the theoretical contributions of the thesis, followed by Section 5.3, which highlights its practical implications. Section 5.4 reflects the limitations of the work and offers an outlook on promising avenues for future research. The dissertation concludes with Section 5.5.

Part B completes this thesis by including a supporting appendix. This appendix contains an index of the research articles, a declaration of my contributions to each article, and the extended abstracts or publication details of all research articles as part of this dissertation.

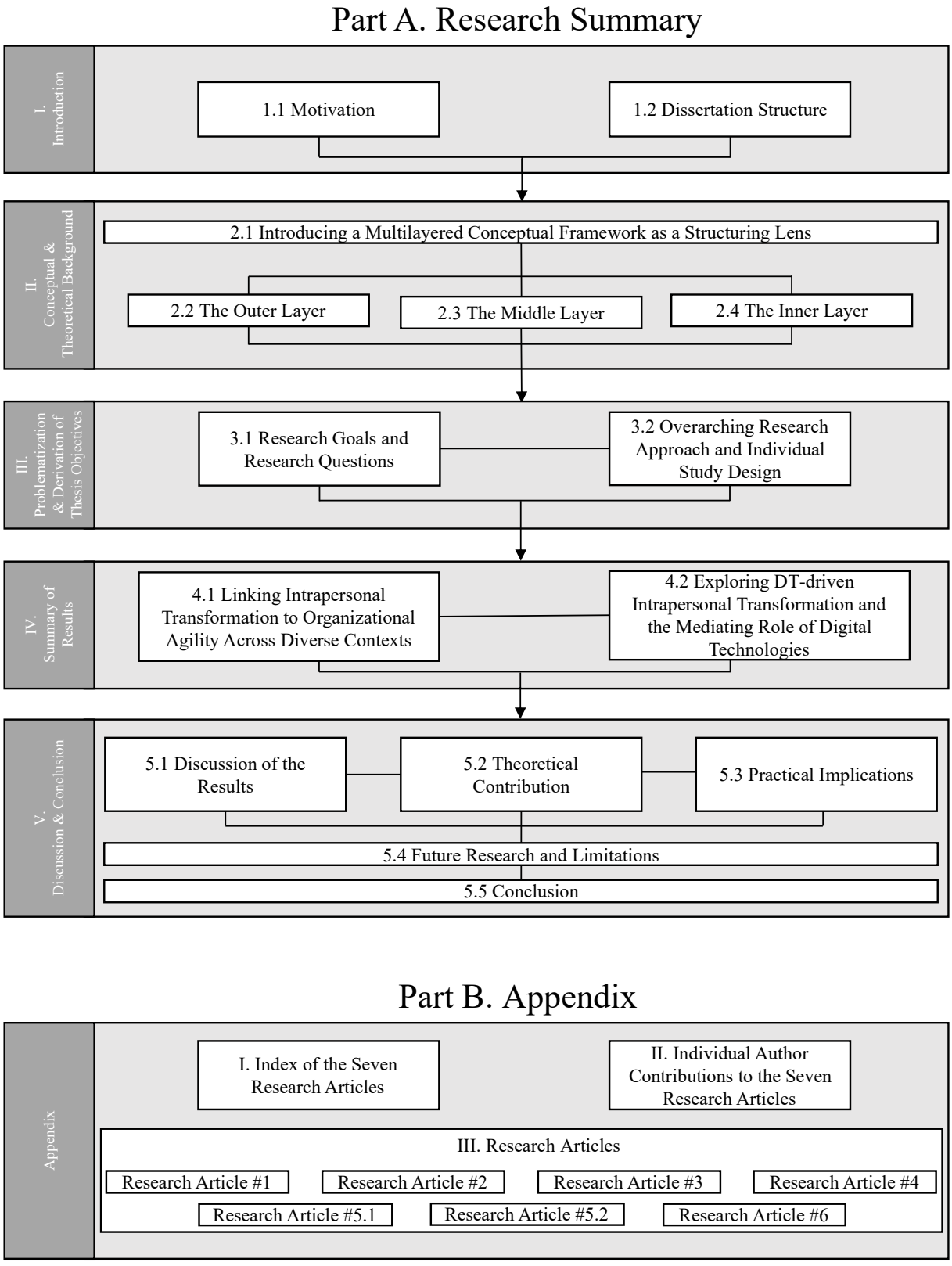

Figure 1. Dissertation Structure

2. Conceptual & Theoretical Background

2.1 Introducing a Multilayered Conceptual Framework as a Structuring Lens

As outlined in the motivation, the continuously changing environment of DT, referred to here as *the outer layer*, does not translate seamlessly into organizational and individual DT-infused transformation. This discrepancy will be explored by examining different organizational contexts in which individuals transform, i.e., *the middle layer*, and the individual transformation processes focused on a skill- and mindset-based shift, i.e., the *inner layer*. To understand the mechanisms driving DT at both the organizational and individual layers, and how intrapersonal transformation unfolds and influences organizations while being supported by them, this section introduces a conceptual framework. The framework integrates the conceptual and theoretical foundations presented in the subsequent sections of this chapter and is visually represented in a multilayered structure (Figure 2).

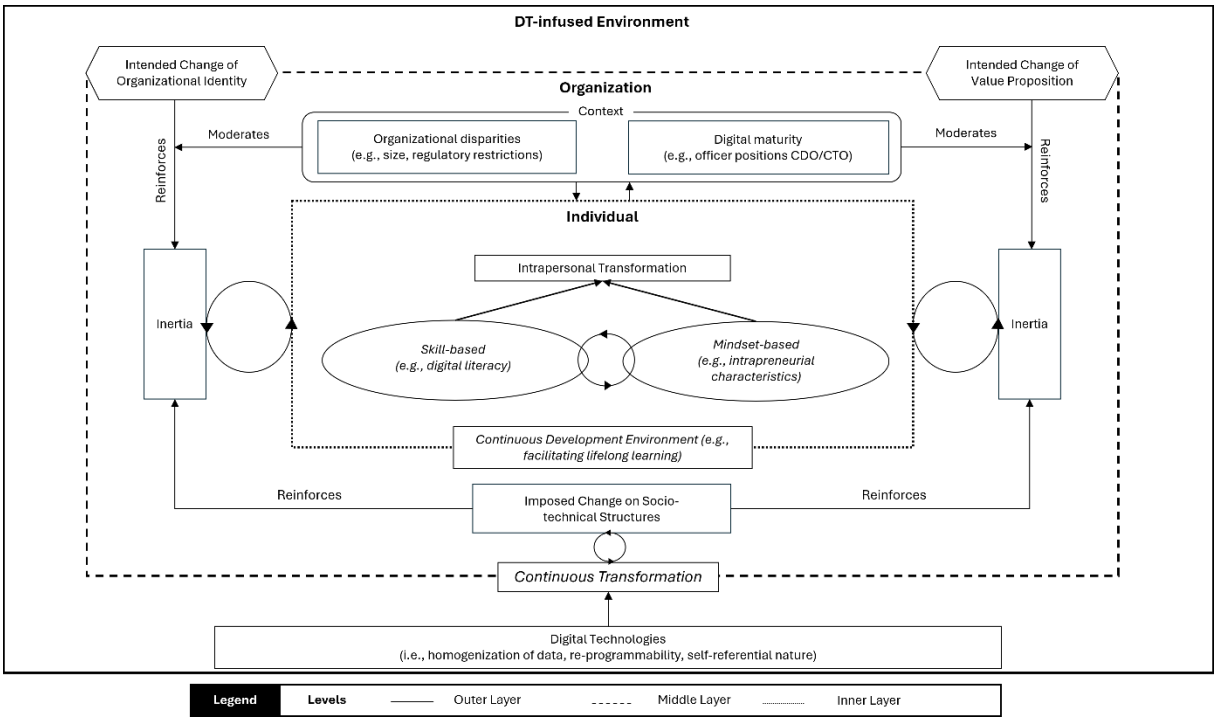

Figure 2. Conceptual Framework

Therein, the *outer layer* captures DT as a continuous change phenomenon. It reflects the persistent, dynamic pressure faced by organizations due to evolving digital technologies and shifting market demands. The layer frames DT as a context of complexity and constancy. The *middle layer* focuses on how individuals within organizations shape those organizations and are supported by the organizational structures in which they operate. Emphasis is placed on contextual conditions and organizational support mechanisms that influence the extent to which employees can engage in intrapersonal transformation, as well as the inertia as an inhibiting force of transformation. The *inner layer* addresses the core, i.e.,

intrapersonal transformation of individuals within organizations. It explores the combination of skill-based and mindset-based development and is concerned with how individuals develop the capacity to navigate and engage with DT, particularly through building digital literacy, digital intelligence, and intrapreneurial qualities, within a process of lifelong learning and technology-mediated growth.

Together, these layers provide a conceptual roadmap for understanding DT as a multilevel, human-centered phenomenon. Each subsequent section elaborates on one of the layers, building conceptual and theoretical grounding and preparing the foundation for the following research articles.

2.2 The Outer Layer: Digital Transformation as a Continuous Change Phenomenon

"If the organization were perfectly fluid and plastic, the question of transformation would not surface. It is inertia that makes organizational transformation an important theoretical and practical problem." – Besson and Rowe (2012, p.105)

Impacts of Digital Transformation on Value and Identity

DT has fundamentally reshaped how organizations conceptualize value creation and organizational identity (Wessel et al., 2021). As digital technologies continue to evolve rapidly, organizations face the challenge of adapting their value proposition and key activities (Nambisan et al., 2017; Vial, 2019; Verhoef et al., 2021). This transformation extends beyond the adoption of new digital technologies and encompasses broader alignments of structural (Verhoef et al., 2021), procedural (Vial, 2019), and cultural dimensions (Hanelt et al., 2021) within organizations.

DT has distinct characteristics that differentiate it from prior types of transformational change (Noesgaard et al., 2023). Most importantly, as digital technologies (re-)define value propositions, they fuel the emergence of new organizational identities (Wessel et al., 2021). Thus, DT drives "identity-related dynamics" (Wessel et al., 2021, p.118) that change an organization's self-perception (Corley and Gioia, 2004; Gioia et al., 2012; Nag et al., 2007) and how employees understand their roles and work (Ravasi and Schultz, 2006). While transformed value creation and organizational identity are widely considered to be a core outcome of DT (Wessel et al., 2021; Yoo et al., 2010), it remains a complex and demanding process – one in which organizational actors gradually cope with deep structural changes and new work practices (Baiyere et al., 2020).

Building on widely acknowledged contributions in IS research, this thesis adopts Vial's (2019, p.3) definition of DT as "a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies." Beyond this primarily technological perspective, this thesis extends the underlying understanding of DT by framing it as a process triggered by changes in the external and internal environment of an organization – incorporating a new identity claim, digital strategizing, and transformation activities (Wessel et al., 2021).

Crucially, these value and identity shifts initiated by DT rarely occur in isolation. They are embedded within a broader dynamic of continuous change, driven by the ongoing nature of DT. Understanding this continuity is essential to fully grasp the complexity of DT and its organizational consequences.

Digital Transformation as a Continuous Change Process

One of the defining characteristics of DT is its departure from traditional, episodic models of organizational change. Rather than occurring as a discrete change phenomenon, DT is increasingly recognized as a catalyst for significant and ongoing changes within organizations (Hanelt et al. 2021; Wessel et al. 2021). It represents a continuous and complex adaptation process that does not settle into long-term equilibrium (Matt et al., 2015; Vial, 2019). Although DT includes episodic phases of change with varying intensity (Hanelt et al., 2020), it is often characterized as a continuous process kept alive by the dynamic environment of digital technologies and their relevance for business models and society (Rogers, 2023).

Yet, existing models only partially acknowledge this continuity, focusing instead on discrete episodes of change (e.g., Lyytinen and Newman, 2008) or outlining multi-stage organizational development processes (e.g., Burke, 2018). Nevertheless, the nature of digital technologies – the homogenization of data, re-programmability, and self-referential nature – necessitates constant adaptation to avoid outdatedness in increasingly digitalized environments (Besson and Rowe, 2012; Yoo et al., 2010). As a result, DT continuously challenges existing socio-technical structures, requiring both structural and behavioral shifts across multiple levels of the organization (Haskamp et al., 2021).

Inertia in Digital Transformation

Despite the ongoing and transformative potential of DT, many organizations struggle to maintain alignment with its pace and demands. The process of continuous adaptation as part of DT is reinforced by – and regularly hampered by – inertia at different organizational levels (Haskamp et al, 2021; Schmid, 2019; Vial, 2019). Inertia reflects the complexity of modifying entrenched routines, legacy systems, and value understandings that have long sustained organizational functioning (Miller and Friesen, 1980; Rumelt, 1995; Gilbert, 2005).

At its core, inertia relates to an organization or a system being slow to respond, inflexible, and resistant to embracing new approaches or modifications, while persisting in established patterns (Miller and Friesen, 1980; Rumelt, 1995; Gilbert, 2005; Polites and Karahanna, 2012). Organizational routines as conducted by employees, including standard operating procedures, are commonly seen as essential to preserving an organization's memory and acting as a repository for its accumulated knowledge. Yet, some argue that these routines can pose risks, as they may become so deeply embedded that they inhibit timely adaptation and hinder the search for innovative processes – particularly in response to significant shifts in the environment (Kim, 1993).

This often leads to the failure of DT projects – the most common form of how organizations operationalize their DT (Barthel and Hess, 2019; Correani et al., 2020). The nature of DT – constantly reshaping culture, values, and beliefs – places organizations and their employees in a constant state of adaptation (Vial, 2019), which is often identified as a root cause of inertia (Hanelt et al., 2021; Schmid et al., 2019). To enable successful DT, inertia must be recognized as a key problematic issue in IS-enabled organizational transformation (Besson and Rowe, 2012). Specifically, since it is not inertia per se that leads to failure of DT, but rather its poor management (Besson and Rowe, 2012). Given the importance of DT for business survival, dealing with the complexity of successfully transforming organizations and individuals can be called a grand challenge of today's modern society – affecting organizations across industries (Hanelt et al., 2021), individuals' jobs across age and regional disparity, and the future of work (Curtis et al., 2022).

2.3 The Middle Layer: The Influence of Intrapersonal Transformation on Organizations

"Organizational leaders know that digital transformation and workforce transformation are intertwined […]." – Eden et al. (2019, p.1)

Conceptual Outline

Contextual Conditions for Intrapersonal Transformation

The transformation of individuals driven by DT profoundly influences organizational success. While organizations provide the structure, strategy, and resources for DT, individuals serve as the drivers of transformation, bridging the gap between technological advancements and their practical application within organizational processes (Eden et al., 2019). Thus, employees act as the primary adopters of digital tools, but also as facilitators of knowledge-sharing and catalysts of transformation within their work environments. Their ability to integrate emerging technologies into daily workflows, challenge outdated processes, and foster collaboration across departments is essential for the realization of DT within organizations – aligning individual growth with organizational goals (Crossan et al., 1999).

However, the impact of individual transformation on organizations varies significantly depending on the organizational context. Intrapreneurial activity – characterized as self-initiated and proactive engagement in transformation – largely depends on environmental conditions that either enable or constrain such behavior (Rabl et al., 2023). Public institutions, for instance, often face systemic rigidity, regulatory preplanning, and risk-averse cultures that limit the ability of employees to experiment and innovate (Vassilakopoulou and Grisot, 2020; Mergel et al., 2019). As such, public-sector employees have fewer incentives for engaging in intrapreneurial activities and digital literacy building, as hierarchical structures often prioritize stability over change. Further, strict regulatory frameworks and slow decision-making processes limit the ability of employees to experiment with digital solutions or propose process innovations (Poláková-Kersten et al., 2023). As a result, bureaucratic hierarchies and a focus on procedural consistency inhibit intrapreneurial behavior and the cultivation of digital mindsets,

often leading to incremental rather than radical transformation (Benbunan-Fich et al., 2020; Andersen and Kraemer, 1995).

Regarding SMEs, while navigating resource constraints, such as limited financial capital and skilled personnel (Bouncken et al., 2015), their size also allows for greater agility and flexibility in adopting new practices (Carrier, 1994). Nevertheless, these organizations often struggle to compete with larger enterprises in attracting digitally skilled talent and implementing cutting-edge technologies (Becker and Dietz, 2004). In such environments, intrapreneurship, digital vision, and external collaborations become critical for driving innovation. SMEs that engage in digital partnerships, leverage external knowledge networks (Buck et al., 2022), or participate in collaborative ecosystems can enhance their digital capabilities despite financial and human capital limitations (Hönigsberg, 2020). Encouraging employees to take ownership of digital initiatives and explore external partnerships enables SMEs to remain competitive in evolving digital markets (Bitzer et al., 2024).

Startups, characterized by their agility and reliance on a small number of key individuals, often excel at fostering individual transformation but remain vulnerable to disruptions if critical employees leave the organization (Rabl et al., 2023). The success of small businesses frequently hinges on the expertise and vision of a core team, meaning that employee transformation is directly linked to organizational performance (Tschoppe et al., 2023). In these environments, employees are expected to take on multiple roles (Drechsler and Weißschädel, 2018), experiment with new technologies, and drive digital innovation with minimal formal guidance. However, this also poses risks – particularly when the departure of key employees can disrupt DT, requiring startups to establish knowledge-sharing mechanisms and team-wide digital capabilities to ensure long-term resilience. Startups that invest in training, cross-functional collaboration, and institutionalizing digital expertise can mitigate the risks associated with dependency on a small group of innovators.

Across different organizational contexts individuals can benefit from the organizational setup but also be limited. Thereby, the skills and mindset needed to successfully transform can be strongly influenced by the organizational environment in which the individual employee operates, and can even differentiate within organizations (e.g., traditional business lines vs. agile spin-offs). Recognizing these contextual differences is essential for tailoring organizational support strategies to specific organizational settings (Becker and Dietz, 2004; Rabl et al., 2023). By addressing these contextual dynamics, organizations can create conditions that enable individuals to thrive and contribute meaningfully to DT efforts.

Organizational Support for Intrapersonal Transformation

DT requires intrapersonal transformation among employees, which largely depends on organizations actively supporting this process (Eden et al., 2019). The willingness and ability of individuals to adapt require continuous cultivation, and without employee adoption, even the most sophisticated technologies will fail to deliver transformational outcomes (Haskamp et al., 2021). Therefore,

organizations must enable employees through their structures and resources by fostering adaptability, supporting continuous learning, and leveraging individual capabilities to achieve collective goals and realize their full potential (Hanelt et al., 2021; Vial, 2019).

A foundational step is creating an organizational climate that enables transformation, while actively addressing cultural and structural barriers that inhibit change (Rabl et al., 2023). Leadership support plays a crucial role in establishing a culture that values innovation, risk-taking, and learning from failures (Mueller and Renken, 2017). Thus, creating an environment where employees feel empowered to contribute to transformation efforts is crucial (Haskamp et al., 2021). Transformative environments are those in which intrapreneurial behaviors – such as initiative-taking, digital experimentation, and cross-boundary collaboration – are expected and rewarded (Hornsby et al., 1993), as they characterize a positive and absorptive view towards change (Hornsby et al., 2002). This includes formal support mechanisms like recognition schemes, dedicated innovation time, and career development pathways for digital roles (Pinchot and Soltanifar, 2001).

Hiring externally for digitally literate or intrapreneurial employees may offer short-term benefits, but sustainable transformation depends on creating an internal ecosystem in which such qualities can thrive (Pinchot and Soltanifar, 2021). Employees must feel psychologically safe to challenge the status quo and propose new digital practices. Supportive structures, such as access to resources, flat decision-making hierarchies, and transparent communication channels, are critical to allowing intrapreneurs to navigate organizational constraints (Mueller and Renken, 2017).

In today's digital landscape, organizations rely on a strong foundation of digital knowledge to thrive. A significant part of this expertise comes from employees who possess advanced digital competencies (Pinchot and Soltanifar, 2021). Thus, skill development also plays a central role in DT (Warner and Wägner, 2019; Malhotra, 2021). These initiatives embed digital capabilities within organizations, reducing reliance on external experts and enhancing adaptability in response to emerging technologies (Bitzer et al., 2024). Importantly, skill development should be personalized and continuous, recognizing the diverse starting points and learning paces of individuals (Pätzmann et al., 2022).

In conclusion, DT is a deeply human process, where the alignment between individuals and organizations shapes the trajectory of change. By fostering a culture of continuous learning, embracing intrapreneurship, and leveraging digital technologies, organizations can empower individuals to become transformation agents and adapt to the demands of the digital age. While organizations provide technological infrastructure and strategic direction for DT, employees bring the necessary creativity, adaptability, and drive to operationalize these changes within intrapersonal transformation. Organizations that successfully bridge the gap between technological advancements and workforce transformation will not only remain competitive but also foster workplaces where employees thrive, innovate, and drive sustainable digital growth.

Leveraging Intrapersonal Transformation for Organizational Agility

When intrapersonal transformation is enabled and supported, it becomes a driver of organizational agility. Employees who engage with digital technologies develop new competencies that further reinforce organizational agility (Sambamurthy and Bharadwaj, 2003), e.g., raising intrapreneurial characteristics (Steininger, 2019). Furthermore, employees who develop digital literacy and intrapreneurial mindsets not only adapt themselves but also catalyze wider organizational change. These individuals serve as transformation agents, capable of identifying emerging opportunities and mobilizing resources to act on them. They challenge the status quo, propose creative solutions, and drive change aligned with strategic goals (Rigtering and Weitzel, 2013). By demonstrating initiative and a willingness to experiment with new technologies, intrapreneurs act as role models and contribute to a culture of adaptability and resilience.

Moreover, the use of digital technologies themselves can stimulate intrapreneurial action and thus promote DT holistically (Rabl et al., 2023). In this context, individual transformation is not merely a response to technological change but an active and ongoing process of adaptation and growth, enabling employees to thrive in increasingly digital environments. Recognizing and supporting this process is critical for organizations seeking to harness the full potential of their workforce in the digital age (Cordes and Rosemann, 2020). Past studies have shown, that with DT work styles in organizations in general are undergoing change (Skare and Soriano, 2021). The integration of digital technologies into organizational workflows not only enhances efficiency but also fosters a culture of continuous learning and innovation, creating an ongoing transformation and shapes organizational agility (e.g. Autio et al., 2018).

By leveraging technologies like artificial intelligence (AI), organizations can maximize the contributions of their workforce, bridging the gap between individual capabilities and collective agility (Fleischmann et al., 2024). The automation of repetitive tasks through AI-powered systems allows employees to focus on high-value work, fostering greater engagement and strategic thinking (Hönigsberg et al., 2024). Additionally, AI-driven insights enhance decision-making processes, enabling employees to interpret data more effectively and develop data-informed strategies for business growth (Bahn and Strobel, 2023). However, the effective use of GenAI requires not only technical proficiency but also critical reflection and ethical awareness, ensuring that its outputs align with organizational goals and values (Fleischmann et al., 2024; Ng et al., 2021). The development of GenAI literacy, therefore becomes a crucial element of individual transformation, fostering employees' ability to integrate AI into their workflows in meaningful ways.

Leveraging Continuous Learning through Technology Use

To ensure that intrapersonal transformation contributes to long-term organizational success, it must be embedded into sustained learning and digital practices (Eden et al., 2019). Upskilling initiatives –

whether through formal training, job-embedded learning, or peer-driven models – are central to building workforce readiness for technological change (Buvat et al., 2017; Pätzmann et al., 2022). These initiatives benefit individual employees but also enable the organization to reduce dependency on external resources, while fostering resilience in a rapidly shifting digital economy (Bitzer et al., 2024).

Lifelong learning enhances these efforts by promoting a culture of continuous improvement (Baskin, 2023). Unlike fixed-skill training, it encourages employees to redefine and adapt their competencies in alignment with emerging technologies and shifting market needs (Nilson and Zimmerman, 2013). Organizations that cultivate this mindset – supported by learning platforms, mentorship networks, and modular education programs – are more agile and competitive (Mukul and Büyüközkan, 2023). These mechanisms are particularly important in an age of continuous change, where digital technologies like GenAI redefine job roles and knowledge requirements at a rapid pace (Dwivedi et al., 2023).

Moreover, digital technologies themselves can serve as catalysts for learning. Adaptive learning systems, AI-supported feedback platforms, and GenAI tools allow organizations to personalize learning journeys and integrate them into everyday work (Gimpel et al., 2023). These tools facilitate knowledge retention, increase engagement, and ensure that new digital skills are translated into practice, while fostering an intrapreneurial mindset. At the same time, regulatory frameworks such as the European Union AI Act (2024) impose growing responsibilities on organizations to ensure that employees not only use digital technologies but also understand ethical implications.

Theoretical Grounding – Intrapersonal Transformation as an Organizational Dynamic Capability

Employees have been recognized as a rare resource and an integral part of organizational dynamic capabilities (Chatterjee et al., 2023). Those employees who develop contemporary skills through upskilling and lifelong learning contribute significantly to building organizational capabilities (Braojos et al., 2024). Dynamic capabilities provide a theoretical perspective for understanding how organizations sustain DT through continuous adaptation and renewal (Teece et al., 1997; Warner and Wägner, 2019). At the heart of this process lies the transformation of individuals, as employees act as the primary carriers of change, translating technological advancements into organizational outcomes (Eden et al., 2019). Thus, DT is not simply about acquiring new technologies but about embedding change in work practices and decision-making, which is inherently driven by the development of employees' skills and mindsets. This perspective situates intrapersonal transformation as a core mechanism through which organizations build and maintain dynamic capabilities. In this way, individuals serve as sensors and agents of innovation within their teams, capable of identifying emerging opportunities and mobilizing resources to seize them (Teece, 2007). Thus, organizations greatly benefit from intrapreneurial and digital competencies on the individual level, contributing to organizational capability development for successful DT (Blanka et al., 2022). To fully grasp the implications, one needs to understand the three

central mechanisms (i.e. sensing, seizing, transforming) of dynamic capabilities in the context of employee-enabled DT, as outlined in the following.

The sensing dimension of dynamic capabilities emphasizes the ability to identify digital opportunities and recognize skill gaps within the workforce (Teece, 2007). Organizations that effectively sense digital trends leverage employees' active engagement in digital experimentation and problem-solving (Blanka et al., 2022). Employees' cognitive flexibility and willingness to explore serve as a crucial enablers of organization's capacity to detect and react to transformation needs early (Alavi et al., 2024). However, the extent to which employees can engage in sensing activities depends on organizational structures – while large environments encourage digital exploration, rigid hierarchies may constrain employees' ability to undergo intrapersonal transformation (Mergel et al., 2019).

The seizing dimension involves mobilizing resources to act on identified opportunities (Teece, 2018). This includes investing in employee digital literacy, fostering intrapreneurial mindset, and creating structures that encourage the use of these capabilities (Cordes and Rosemann, 2020). Employees' ability to adapt to DT is shaped not only by access to training but also by cultural and structural enablers that support continuous learning (Fleischmann et al. 2024). Organizations that lack mechanisms for integrating employee transformation into their DT risk overlooking the building of a central strategic capability, as they risk inertia, where technological opportunities are recognized but remain unrealized due to resistance to change or a lack of internal expertise (Haskamp et al., 2021; Kaganer et al., 2023).

The transforming dimension ensures that digital competencies and behaviors become embedded in the organization, reinforcing long-term adaptability (Teece, 2018). Employees who internalize intrapersonal transformation consisting of skill-based and mindset-based development enable organizations to sustain transformation beyond isolated initiatives (Ng et al., 2021). However, the effectiveness of this process is influenced by the organizational context – startups may embed DT fluidly due to agile structures, whereas traditional firms may struggle with integrating individual learning into deeply rooted workflows (Rabl et al., 2023).

By linking dynamic capabilities to intrapersonal transformation, this perspective underscores that DT success is not solely a technological or structural issue but fundamentally a human-centered process. Organizations that effectively develop employees' adaptive capabilities, digital literacy, and intrapreneurial behaviors, build resilience in an era of continuous DT. Thus, intrapersonal transformation is not just an outcome of DT but a driving force behind the organization's ability to sense, seize, and transform in response to digital change.

2.4 The Inner Layer: DT-driven Intrapersonal Transformation of Individuals in Organizations

"Whether digital transformation becomes an opportunity, or a threat will be fundamentally determined by how individuals respond to the changes they are confronted with." – Rohwer et al. (2023, p.1)

Conceptual Outline

The Concept of Intrapersonal Transformation – The Skills

At the heart of DT lies the individual, whose role is broadly acknowledged as pivotal for the success of DT (e.g., Li et al. 2018; Mueller and Renken 2017). Their ability to adapt, learn, and evolve in response to new technological landscapes is critical for ensuring the success of DT, since the individual's response to DT not only shapes their own role within the organization but also determines how effectively the organization adapts (Blanka et al., 2022). The dynamism underlying DT thus positions the intrapersonal transformation of individuals as a cornerstone, highlighting the need to foster the necessary skills and mindsets to enable employees to thrive in a continuously changing digital environment (Cordes and Rosemann, 2020).

Intrapersonal transformation within DT can be described as acquiring the needed skills and adapting a mindset that, in light of DT, empowers employees to interact with and leverage digital technologies effectively and to continuously redevelop skills and strengthen the required mindset to do so. These qualities equip employees to navigate technological change, overcome inertia, and drive innovation within their organizations (Cordes and Rosemann, 2020; Blanka, 2019). Unlike traditional workplace training (e.g., safety training), intrapersonal transformation in the context of DT is dynamic and multifaceted (Braojos et al., 2024). It extends beyond content-wise professionalism and quality, and instead requires individuals to continuously acquire knowledge to foster adaptability, critical thinking, and resilience (Bitzer et al., 2024). Thereby, the relationship between humans and digital technologies has become increasingly complex with employees required to understand, evaluate, and apply digital tools to address contemporary organizational challenges (Kerpedzhiev et al., 2016).

Central to this relationship is the concept of *digital literacy*, which equips individuals with the ability to engage with digital technologies and navigate their use. Thus, digital literacy not only refers to equipping individuals with skills needed to use digital technologies but also to understand its implications. The term was introduced when information and communication technologies, commonly known as ICT, fueled work environments (Gilster, 1997). At heart, digital literacy improves interaction with a complex and evolving digital environment (Li, 2024). However, digital literacy alone is insufficient in today's environment, where individuals must also develop *digital intelligence* – a strategic understanding of how technologies can be integrated into their work (Boughzala et al., 2020). As Cordes and Rosemann (2020) explain, digital intelligence combines technical know-how with a willingness to embrace change, creating a foundation for employees to use digital technologies effectively and inform decision-making (Li, 2024). It involves the ability to acquire and apply new knowledge while critically assessing and

effectively integrating digital tools within complex and evolving technological environments (Adams, 2004). While digital literacy focuses on building functional competence – the "how", digital intelligence approaches a more holistic understanding of digital technologies including the implications of technology use – the "why" and "when". Both concepts are strongly interrelated and have been acknowledged as key to impacting DT (Boughzala et al., 2020).

The Concept of Intrapersonal Transformation – The Mindset

Nevertheless, intrapersonal transformation in light of DT is not limited to functional competence as displayed by digital literacy and digital intelligence; it also involves a shift in mindset. Intrapreneurship, or the ability to proactively identify and act upon opportunities for change within the organization, exemplifies this mindset and is vital to inducing and implementing change (Blanka, 2019). In a commonly used definition intrapreneurship is not only described as "a behavior creating new businesses for the organization" but also as "enhancing an organization's ability to react to internal and external advancements" (Gawke et al., 2017, p.89). Employees embodying these intrapreneurial qualities are self-motivated and proactive, thus favoring DT. Unlike traditional roles that focus on task execution, intrapreneurial employees take ownership of transformation efforts, fostering innovation and resilience within their organizations by departing from the customary (Blanka, 2019; Rabl et al., 2023; Antoncic and Hisrich, 2003). Intrapreneurship reflects a willingness to challenge the status quo and take calculated risks, e.g., by testing out and pushing through barriers (Neessen et al., 2019; Halme et al., 2012), enabling individuals to act as transformation agents within organizations (Bitzer et al., 2024). For organizations, employees with intrapreneurial qualities become invaluable assets, driving change and sustaining momentum in DT initiatives. As Rigtering and Weitzel (2013) note, intrapreneurship is a personal choice, requiring individuals to step beyond their defined roles and align their personal motivations with organizational goals, making it an intrinsic motivation that can be externally stimulated (Pinchot and Soltanifar, 2021; Pätzmann et al., 2022).

Lately, the term *digital intrapreneurship* has emerged in literature, as digital technologies and DT have opened new possibilities for intrapreneurs. Digital intrapreneurs "must possess the skills to identify new digital-technology-enabled business opportunities and bring them to fruition" (Pinchot and Soltanifar, 2021, p.239). Intrapreneurial digital technology use is vital and differs from standard organizational procedures "intrapreneurs pursue novelty with the use of digital technologies departing from customary activities" (Vassilakopoulou and Grisot, 2020, p.6) highlighting the role of digital technologies in intrapreneurial projects (Pätzmann et al, 2024).

Technology and Lifelong Learning as Catalysts for Transformation

Within the discourse on digital intrapreneurship, several authors point out the duality of digital technologies – as the objects to understand, build expertise on and leverage while also being an enablers to intrapreneurial qualities (e.g., Vassilakopoulou and Grisot, 2020; Pätzmann et al., 2024). Experiencing

supportive information technology (IT) can even be a promoter of intrapreneurial activity (Petzsche et al., 2023). In terms of supporting DT, Pätzmann et al. (2024, p.5404) emphasize that digital intrapreneurship must be inclusive for all employees in an organization, thus building the foundation for organization-wide change – "Digital intrapreneurship is an in-house form of entrepreneurship, where any corporate employee can initiate and partake in the process of developing value-adding novelty". Digital technologies can be part of a supportive structure to enhance collaboration (Shih et al., 2015) and raise the believed ability of individuals to successfully perform in intrapreneurial behavior, i.e., self-efficacy (Blanka, 2019).

Both the skill-based and the mindset-based dimensions of intrapersonal transformation within DT are strongly connected to *lifelong learning*. Thus, as DT settles as a continuous change phenomenon, individuals need to continuously redefine and reconfigure themselves as part of their intrapersonal transformation (Al Haji and Vongas, 2025). DT also creates opportunities for individuals to redefine their professional trajectories. Consequently, the continuous DT-driven change within organizations can foster ongoing opportunities for individual intrapersonal transformation. This includes recognizing challenges as opportunities for development, seeking personal growth (Pätzmann et al., 2022). By embracing continuous learning, employees can position themselves to take advantage of emerging job opportunities or better perform their current roles (Eden et al., 2019). As Nilson and Zimmerman (2023) argue, lifelong learning is essential for keeping pace with the rapid growth of knowledge and skills demanded by today's work environments. Employees who commit to lifelong learning remain resilient in the face of technological disruption, continuously evolving their competencies to meet changing workforce needs (Bitzer et al., 2024).

As previously discussed, digital technologies can act as a catalyst for intrapersonal transformation, including skill-based and mindset-based transformation as well as lifelong learning. Recently, GenAI has become such a catalyst. GenAI tools enhance productivity, facilitate knowledge-sharing, and enable employees to engage in more innovative and collaborative work (Hönigsberg et al., 2024). While augmenting cognitive processes and enhancing individual efficiency, GenAI allows for personalized use, creating a fruitful learning environment and positions individuals as active contributors to DT (Bahn and Strobel, 2023). However, the benefits depend on employees' ability to interpret AI-generated insights, challenge algorithmic biases, and strategically integrate GenAI into business processes (Ng et al., 2021; Alavi et al., 2024). Higher education institutions and organizational training programs play a critical role in supporting this journey by providing the foundational knowledge and skills necessary for individuals to succeed in digitalized environments and prepare (future) knowledge workers.

Theoretical Grounding – Technology-driven Intrapersonal Transformation

To understand how individuals develop skills and mindsets necessary for intrapersonal transformation, three theoretical perspectives, i.e. self-regulated learning (SRL), structuration theory, and technology-

mediated learning (TML), provide valuable insights. These theories do not function in isolation, instead, they interact to explain the mechanisms of individual change in digital environments.

SRL explains how individuals plan, monitor, and evaluate their learning processes in dynamic environments (Zimmermann, 2002). SRL aligns with the skill-based dimension of intrapersonal transformation in light of DT by highlighting the importance of autonomous learning, self-assessment, and continuous knowledge acquisition. However, SRL does not occur in isolation. Employees operate within structured organizational and technological environments, which shape their learning opportunities.

This is where structuration theory becomes relevant. Structuration theory provides a lens through which to examine the interaction between individuals and organizational structures in shaping DT. Employees are not passive recipients of change (Giddens, 1984), instead, they actively shape and are shaped by the digital technologies they engage with. This duality reflects the mindset-based aspect of intrapersonal transformation, where individuals who recognize their role in co-creating digital change are more likely to develop intrapreneurial qualities and proactive engagement with technology.

The process of skill acquisition and adaptation is further facilitated by TML, which highlights the role of digital tools and adaptive learning systems in fostering knowledge development (Alavi and Leidner, 2001). As technology becomes an integral part of professional development, personalized learning platforms facilitate continuous upskilling, digital literacy, and digital intelligence building. These platforms support both skill-based and mindset-based elements of intrapersonal transformation, ensuring that employees are constantly developing and applying new competencies.

By integrating SRL, structuration theory, and TML, we can better understand how employees become both learners and transformation agents within DT. In sum, while SRL explains how individuals regulate their learning, structuration theory explains how they shape and are shaped by DT, and TML explains how digital environments facilitate their continuous learning and transformation. Together, these theories shape the idea that intrapersonal transformation is both an individual and systemic process, where employees leverage learning, agency, and digital tools.

3. Problematization & Derivation of Thesis Objectives

3.1 Research Goals and Research Questions

To answer the outlined overarching research question – *How does intrapersonal transformation unfold across diverse organizational contexts, and how can digital technologies mediate and support this transformation to enable sustained digital transformation?* – this thesis is built on two underlying research goals, i.e., Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts and Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies, which I will outline in the following. The two research goals comprise different research questions, answered in the associated research articles. The associated research articles are described based on their problematization and how they contribute to addressing the overarching research goal.

Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts

DT has emerged as a complex phenomenon that dramatically challenges organizations (Legner et al., 2017), influencing existing organizational work practices and identity through the integration of digital technologies (Vial, 2019). This integration represents a time-consuming, effort-intensive, and inherently complex, while at the same time dynamic change process for organizations (Burke, 2018). To gain a more comprehensive understanding of this change process, research must address its various facets. Consequently, Hanelt et al. (2020) rightly claim that DT "cannot […] be explained entirely using established theoretical models" (Hanelt et al., 2020, p.1161). Specifically, to facilitate successful organizational development, scholars need to build a more comprehensive understanding of how to manage the technological change process, which is an enduring endeavor (Barthel and Hess, 2019; Berger et al., 2020). There is a gap in research regarding the integration and management of DT in less-explored domains, such as public institutions and SMEs. In line with these gaps, the boundaries of research contexts are often underrepresented, with studies on large organizations being applied to other contexts, neglecting their specifics (Welsh and White, 1982; Barann et al., 2019; Nadkarni and Prügl, 2021). Additionally, while DT has led to remarkable success stories, it remains a challenge for many organizations (Hanelt et al., 2020). Shifting the focus towards the pitfalls of DT seems promising, offering new perspectives and enriching the IS discipline's understanding, ultimately contributing to a more holistic picture of DT. Finally, to investigate the intrapersonal transformation of employees, encompassing the development of digital literacy, intrapreneurial mindsets, and continuous learning, which functions as a strategic mechanism through which organizations develop dynamic capabilities for DT, we must consider how this relationship varies across different organizational contexts (e.g., public institutions, SMEs) and is influenced by organizational support structures and barriers such as inertia. Thus, I derive the following objective to target this gap:

Research Goal 1:
Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts

Looking at the public sector as an under-researched domain, we need more knowledge on the way these organizations currently approach DT and how their business model is affected. There is a consensus in IS literature that the progressing DT in society and organizations relates to shifts in value creation (Skog et al., 2018), organizing (Wessel et al., 2021), and institutional logics (Faik et al., 2020), but an explicit conceptualization of those shifts for many specific contexts is missing or under-theorized (Wessel et al., 2025). Assuming that DT knowledge can be applied to all types on organizations falls short, considering that much research on DT focuses on private sector companies (Nadkarni and Prügl, 2021) or government agencies in the public sector (e.g., Mergel et al., 2019). Against this backdrop, we advocate pushing the frontiers of DT research to the context of higher education in general and universities in particular, to move beyond macro-level considerations towards investigating the dynamics of DT at the meso-level of universities value creation (Carroll et al., 2023), i.e., teaching and learning. Researchers have already highlighted the criticality of actors adopting new ways of thinking about their work over the course of DT (Corley and Gioia, 2014; Ravasi and Schultz, 2006; Wessel et al., 2021). We need to concretize the specifics of DT in higher education, which stimulates context-sensitive theorizing (Hong et al., 2014) and the development of prescriptive knowledge for driving DT in higher education more effectively. To dive into this topic, we proposed the following objective to address this gap:

How do higher education logics change over the course of digital transformation? (Essay 1)

Focusing on SMEs as a further under-researched domain, we need more knowledge on how these organizations can be enabled to cope successfully with DT (Zoppelletto et al, 2023). Still, SMEs face various resource constraints (Diez, 2002; Lee et al., 2010; Bouncken et al., 2015). Thus, digitalization often pushes these organizations to the limits of their transformative abilities (Bierwerth et al., 2015; Nieto and Santamaría, 2010). To overcome this burden, they face an increased need to search beyond their boundaries for resources to support their DT, requiring more innovation capacity (Becker and Dietz, 2004). Cooperation is a way to pursue innovation by complementing internal resources via external partners, e.g., through learning, knowledge-building, and new work methods (Wolff and Nuseibah, 2017). Cooperation fosters rapid and cost-effective adaptation to current market situations by sharing the costs and risks of transformation (Casals, 2011). Innovation in terms of products and processes is an inherent part of transformation (Kohli and Melville, 2019). To date, research has examined only single aspects of SMEs' cooperation to foster innovation as part of transformative actions. Although several aspects of SME cooperation have been in focus, no study has condensed and structured the knowledge. Moreover, practitioners strive to make the best possible use of limited resources regarding their DT through cooperation, and thus seek to classify their efforts by means of a structuring foundation. Hence, we asked the following research question:

How does one classify cooperation for innovation in the context of SMEs? (Essay 2)

Thereby, we act on the call made by Hong et al. (2014) for context-sensitive theorizing. The term SME can even be extended to non-profit organizations of similar size, also known as small and medium-sized

organizations (SMOs). As Welsh and White (1982) note, "a small business is not a little big business", i.e., that SMEs – and by extension all but the largest non-profit organizations as well – are of a fundamentally different nature compared to larger organizations. However, IS research usually – and often implicitly – focuses on such larger organizations. Since SMEs often have scarce digital resources and capabilities, there is the danger that such organizations may be left behind on the wrong side of the digital divide (i.e., failing to adapt their business for the digital age). Recent research shows that SMEs are still struggling with their DT (Barann et al., 2019), which is an indicator of a lack of appropriate support for them in this area. Essay 3 contributes to this perspective, shedding light on how and under which constraints SMEs approach innovation as a transformative action in the digital age, as an exemplary case in this research article. However, finding a clear and useful scope for SME- or SMO-specific IS research projects and questions may not be that easy, if the number of employees or revenue does not have an immediate bearing on the research topic of interest. Moreover, the shortcomings of the traditional SME perspective also mean that it is at least unclear to which extent IS-research findings apply to SMOs or can be useful for them. For instance, SMOs might not have to face the question of who shall lead a DT – the Chief Executive Officer, Chief Digital Officer, or CIO (Singh and Hess, 2017) since the latter two might not even exist as a formalized roles. Against this backdrop, we set out to answer the following research question:

How can a useful distinction of organizations of interest for SMO-specific research look like? (Essay 3)

The first three essays shed light on how we must extend the contextual scope of our research, while setting useful boundaries to enable better understanding and application of results. Nevertheless, many organizations, independent of their size and context, face difficulties in their DT. To address this issue, organizations need to understand the root causes, i.e., antecedents, of their inertia as a key barrier to any type of organizational change (Schmid, 2019; Vial, 2019; Haskamp et al., 2021) and carefully inter-weave mechanisms of inertia mitigation in their DT. However, the high failure rate of DT projects (Tabrizi et al., 2019), which are the primary way an organization operationalizes its DT, shows that this still represents a major challenge in practice (Matt et al., 2015; Kohli and Melville, 2019). Moving forward, there is a need to detail this understanding and enhance our empirical database, as well as our theoretical and practical understanding of DT inertia (Besson and Rowe, 2012; Schmid, 2019; Haskamp et al., 2021; Ashrafi et al., 2025). Little is known about the factors or conditions that precede and contribute to inertia in DT projects (Schmid, 2019; Vial, 2019; Soto Setzke et al., 2020; Haskamp et al., 2021). The project level thereby offers an interesting unit of analysis. Organizations of any industry or size use projects as the primary way to enact their DT strategy through often interdisciplinary teams (Berghaus and Back, 2016). Therefore, on the one hand, projects are connected to the organizational level, as they are part of digital strategic initiatives and essential puzzle pieces of orchestrating organization-wide change around DT (Piccoli et al., 2024). On the other hand, projects are connected to the individual level, as they depend on individual skills and capabilities, while affecting employees'

daily work practices and routines through the project output (Wessel et al., 2021). Hence, studying the interplay of antecedents to inertia of DT projects offers us a valuable theoretical perspective that complements existing DT research on the organizational and individual levels. Against this backdrop, we asked the following twofold question:

What are the antecedents of inertia in DT projects and how do they unfold? (Essay 4)

Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies

In an era marked by rapid technological advancements, leading to DT being a continuous change process, the demand for digitally literate employees who can continuously evolve their skills is growing (Cordes and Rosemann, 2020). The infusion of digital technologies and their adoption by organizations necessitates the preparation of individuals for a dynamic digital present and future. Higher education plays a pivotal role in preparing students, i.e., future knowledge workers, for this dynamic environment, equipping them with the essential competencies to thrive in the digital age (Southworth et al., 2023). The integration of GenAI tools presents a significant opportunity to enhance students' AI literacy and prepare them for the changing demands of the digital workforce. Specifically, since research shows that embedding GenAI into curricula not only fosters critical thinking and AI literacy but also helps students develop collaborative, interactive, and entrepreneurial skills essential for the future workplace (Fleischmann et al., 2024). These skills, nurtured through AI tools, prepare students to engage with complex, real-world problems and innovate within DT-driven organizations. In addition to AI tools, data-based learning systems provide students with personalized support in managing their learning, improving their time management, and fostering self-regulation (Khosrawi-Rad et al., 2022). These systems help students adapt to the demands of autonomy in higher education, particularly in navigating their academic responsibilities and staying organized in a less-structured environment. The ability to self-regulate and manage learning efficiently is essential for students to become lifelong learners, continuously evolving their competencies throughout their careers.

The combination of AI tools and data-driven learning systems is crucial for cultivating continuous learners who can navigate the ongoing technological changes in the workplace. AI tools empower students to think critically, collaborate effectively, and innovate, while data-based learning systems provide the support needed for students to manage their learning and develop skills that are fundamental for ongoing personal and professional growth. These tools collectively enable students to not only master current knowledge but also develop the ability to adapt and acquire new skills as the technological landscape continues to evolve (Davenport, 2018). Nevertheless, there is still a gap in research regarding how GenAI tools (Fleischmann et al., 2024) and data-based learning systems (Scheu and Benke, 2022) can be integrated to support students in their continuous transformation into adaptable, digitally literate individuals. The concept of the "technology-infused individual" is crucial in this context, as students need to evolve alongside technological advancements and develop the competencies

necessary for success in both the workplace and lifelong learning. This thesis aims to deepen the understanding of how DT fosters intrapersonal transformation through skill- and mindset-based development, and how GenAI tools can mediate this process to enhance digital literacy, lifelong learning, and adaptive learning behavior, particularly within higher education as a formative environment for future organizational contributors. Therefore, I define my second research goal as follows:

Research Goal 2:
Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies

The use of GenAI tools has several benefits. First, combining the capabilities of GenAI with human guidance is an important way forward blending human and AI capabilities, e.g., freeing up time and resources for higher-value tasks such as creative work. Second, knowledge workers who perform non-repetitive work must be GenAI literate and prepared for human-AI collaboration in an increasingly technology-induced work environment (Davenport, 2018; Southworth et al., 2023). GenAI literacy manifests through students' abilities to identify situations where GenAI can be applied, recognize the potential and limitations of utilizing GenAI in these contexts, and engage in critical reflection on the input generated by GenAI (Ng et al., 2021). GenAI literacy thus involves not only learning how to use GenAI tools but also recognizing situations where GenAI can be applied practically, including how to write effective prompts. It remains to be seen that existing studies focus on defining the "what" of AI literacy (e.g., Heyder and Posegga, 2021; Ng et al., 2021), while we lack empirically derived implications on the "how" to become AI literate and how this can be translated into a GenAI context (e.g., Dwivedi et al., 2023). While the potential of GenAI for the future workforce is generally acknowledged (e.g., Dempere et al, 2023), there is still a lack of detailed approaches for effectively embedding the technology into assignment designs. This deficiency extends to understanding how such integration can impact students' critical engagement with GenAI tools, their readiness for future workforce challenges, and the wider implications for educational practices (Selwyn and Gasevic, 2020). There is a need for studies that not only delve into the practical application of GenAI in education but also evaluate related outcomes, challenges, and opportunities for enhancing GenAI literacy and equipping future workforce (Fleischmann et al., 2024). Therefore, the following question arose:

How can GAI tools such as ChatGPT mediate learning in the higher education context and contribute to the development of the students' AI literacy? (Essay 5.1)

Building on Essay 5.1 and the problematization it outlines, the need for extended scoping, deeper data collection, and more detailed data analysis became evident. Furthermore, a more rigorous theoretical development appeared promising to better understand the facilitating and mediating role of GenAI within higher education courses. Therefore, building on the foundations of Essay 5.1, we proposed the following research questions as part of Essay 5.2:

How can GAI tools, such as ChatGPT, mediate learning in the higher education context and support the development of students' GAI literacy? What potential implications arise from the use of GAI tools for the teachers of the respective courses as well as university and business school bodies? (Essay 5.2)

However, the challenge of developing a digitally literate and adaptive workforce extends beyond integrating new tools into education. In higher education, many students, particularly those in the early stages of their academic careers (Metcalfe, 2017), face difficulties with self-regulation, organization, and academic integration (Bates and Hayes, 2017; Isleib et al., 2019). This challenge is compounded by the increased autonomy students face in higher education institutions, where personalized support from instructors is often limited (Scheu and Benke, 2022). As a result, students struggle to effectively manage their learning and academic responsibilities, making it difficult for them to stay on track and adapt to evolving educational demands. In this context, data-based learning systems can serve as valuable tools to enhance student success, providing scalable, on-demand support that helps students improve their learning strategies, time management, and self-regulation – all of which are important for building continuous learners. We thus proposed the following research question:

What is the state-of-the-art research on DSAs in higher education fostering self-organization in learning and study obligations? (Essay 6)

As stated above, this thesis comprises six essays, consisting of seven research articles, addressing the previously derived research goals. In summary, Essays 1–4 address Research Goal 1, and Essays 5.1–6 address Research Goal 2. Table 1[1] provides an overview of the essays and their publication characteristics.

Table 1. Overview of Essays of the Dissertation

Research Article Title	Publication Outlet	VHB[2] JQ3	VHB 2024	Publication Status
Research Goal 1. *Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts*				
Essay 1 Digital Transformation and the New Logics of Higher Education	Communications of the Association for Information Systems	C	B	Major Revision
Essay 2 Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design	International Journal of Entrepreneurial Venturing	B	C	Published as Buck et al. (2022)
Essay 3 What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and Other Organisations in the IS Discipline	Proceedings of the 30th European Conference on Information Systems	B	A	Published as Drechsler et al. (2022)

[1] In Appendix IV an overview of further research articles and book chapters authored during my time as a doctoral student is given.

[2] VHB refers to the journal and conference ranking system provided by the *Verband der Hochschullehrer für Betriebswirtschaft e.V.* (German Academic Association for Business Research).

Essay 4 Antecedents of Inertia in Digital Transformation Projects	/	/	/	Working Paper
Research Goal 2. *Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies*				
Essay 5.1 Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design	Proceedings of the Conference of the Central African Chapter of the Association for Information Systems	/	/	Published as Hönigsberg et al. (2024)
Essay 5.2 Generative Artificial Intelligence in Higher Education: Mediating Learning for Literacy Development	Communications of the Association for Information Systems	C	B	Published as Hönigsberg et al. (2025)
Essay 6 Toward Students Self-organization: A Literature Review of Digital Study Assistants in Higher Education	/	/	/	Working Paper

3.2 Overarching Research Approach & Individual Study Design

In general, research design and research methods are underpinned by two foundational philosophical concepts, i.e,. ontology and epistemology. Ontology relates to the nature of reality that we perceive, while epistemology shapes how knowledge is acquired (Hirschheim and Klein, 1989). Within IS research as part of social sciences, positivism or postpositivism and constructivism arise as different ontological and epistemological positions a researcher can follow (Orlikowski and Baroudi, 1991; Burrell and Morgan, 1979).

In postpositivism, ontology tends to be *realist*, meaning that reality exists independently of human perceptions, thus being objective and measurable. However, postpositivists acknowledge that while reality exists, it is imperfectly understood due to the limitations of human perception and knowledge. Epistemologically, postpositivists adopt an *objective* stance but acknowledge that knowledge is never fully certain. They believe that the researcher can remain objective in the process of discovering truth, but that scientific inquiry can only approximate the "truth" due to human limitations. Since knowledge is typically acquired through empirical observation, measurement, and testing, and it is always open to falsification and revision, its research approach tends to be quantitative.

In constructivism, ontology is more *relativist*, meaning reality is seen as subjective and constructed through human experience, i.e., how individuals or groups interpret and make sense of the world. There is no single objective reality; instead, different people may construct their own versions of reality based

on their perspectives, experiences, and social contexts. Constructivist epistemology is more *subjective* and focuses on how knowledge is co-constructed through social interactions and personal experiences. Researchers understand that they are part of the process of knowledge creation and cannot be entirely neutral or detached. Knowledge is seen as being constructed through dialogue, reflection, and interpretation, and it varies depending on the individual or group's context.

The overarching philosophical view of this thesis follows a pragmatic approach, as this thesis is not committed to any one concept of philosophy but instead chooses methods of research that best meet the research purpose. Most of the associated research articles apply a rather qualitative setting, since these allow to engage with participants in the associated research articles so that they can share their view of the world, understand the context or setting of the participant, and thus inductively generate meaning from the data collected (Yin, 1994). Nevertheless, we also opted for research methods such as literature reviews that mix objective and subjective epistemology. Table 2 provides an overview of applied research designs and methods[3].

Table 2. Overview of Applied Research Methods and Approaches

Research Article Title	Applied Research Designs and Methods
Research Goal 1. Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts	
Essay 1 Digital Transformation and the New Logics of Higher Education	Comparative Case Study • Comparative Case Study Approach (Eisenhardt, 1989; Yin, 1994; Edmondson and Mcmanus, 2007) • Grounded Theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990; Gioia et al., 2012) • Semi-structured Interviews (Myers and Newman, 2007) • Data Analysis & Coding (Strauss and Corbin, 1990; Gioia et al., 2012)
Essay 2 Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design	Taxonomy Development • Taxonomy Development Procedure (Nickerson et al., 2013) • Literature Review (vom Brocke et al., 2015; Webster and Watson, 2002) • Interview Study & Analysis (Mayring, 2015) • Expert Selection (Bhattacherjee, 2012)
Essay 3 What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and Other Organisations in the IS Discipline	Conceptual Paper • Boundary Conditions (Busse et al., 2017) • Theory Building & Evaluation (Gregor, 2006; Bacharach, 1989; Whetten, 1989) • Design Artefact Evaluation (vom Brocke et al., 2020)

[3] Please see for further information on the research approach and the single steps conducted the attached full length research articles in the Appendix.

Essay 4 Antecedents of Inertia in Digital Transformation Projects	Interview Study • Semi-structured Interviews (Schultze and Avital, 2011; Myers and Newman, 2007) • Inductive and Interpretative Data Analysis (Walsham, 1995) • Coding Techniques (Corbin and Strauss, 2008; Saldaña, 2021)
Research Goal 2. Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies	
Essay 5.1 Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design	Comparative Case Study • Comparative Case Study Approach (George and Bennett, 2005; Yin, 2018; Eisenhardt, 1989) • Case Selection (Creswell, J.W. and Creswell, J.D. 2017) • Data Analysis as Theory Approach (Baiyere et al., 2020) • Grounded Theory (Glaser and Strauss, 1967; Gioia et al., 2012)
Essay 5.2 Generative Artificial Intelligence in Higher Education: Mediating Learning for Literacy Development	Comparative Case Study • Comparative Case Study Approach (George and Bennett, 2005; Yin, 2018; Eisenhardt, 1989) • Case Selection (Creswell, J.W. and Creswell, J.D. 2017) • Data Analysis as Theory Approach (Baiyere et al., 2020) • Grounded Theory (Glaser and Strauss, 1967; Gioia et al., 2012)
Essay 6 Toward Students Self-organization: A Literature Review of Digital Study Assistants in Higher Education	Structured Literature Review • Literature Review Approach (Webster and Watson, 2002) • Morphological Box (Ritchey, 2011)

In this section, I will briefly outline the underlying research design and research methods of the individual essays. I believe this information to be valuable, since each research endeavor requires several decisions made by the involved researcher about the general research design and the specific research methods chosen to approach the identified problem (Creswell, J.W. and Creswell, J.D., 2017). The information on the research design and research method for research article is structured as follows: *research design and method justification, data selection, data collection, and data analysis*. The research design and method justification are intended to display information on, e.g., why a qualitative research design in the form of a case study was chosen as appropriate to conduct the research. The data selection provides information on the decision for specific sources of data, e.g., why the Web of Science is an appropriate database. The data collection describes the process of retrieving data sources and the decisions made on inclusion and exclusion, e.g., to only include literature that was published after a

certain year. The data analysis emphasizes how the data was analyzed to retrieve relevant information, e.g. using axial coding with two authors involved.

In **Essay 1,** we take a logic perspective and aim to uncover shifts in the higher education logics of teaching and learning underlying DT. *Research design and method justification*: The research article followed a qualitative design. We opted for a logic perspective as it allowed us to conceptualize implicit changes, providing an opportunity to examine both traditional and emerging shifts (Reay and Hinings, 2009; Thornton and Ocasio, 2013). To identify how higher education logics change because of DT, we followed a comparative case study approach (Chong et al., 2019; Eisenhardt, 1989; Yin, 1994). This approach seemed promising, as we have so far poorly understood the phenomenon of DT-induced changes in the higher education domain (Glaser and Strauss, 1967; Habjan et al., 2014; Miles and Huberman, 1994). Additionally, comparative case studies allow for the analysis of similarities and differences across cases, enriching our understanding of how DT influences logics in different contexts (Edmondson and Mcmanus, 2007; Gu et al., 2022). *Data selection*: We decided to investigate the cases of two public universities and chose Germany and Australia, as they are countries known for high-quality education (Detmer, 2020; Min and Falvey, 2018) and, due to their vastly different university systems, they offer comparative insights as well as better generalizability of results. Both universities provided us with rich access to relevant stakeholders and documents, two of our co-authors had been accompanying Alpha and Beta for over 20 years, gathering mature knowledge about their structure, culture, and processes. *Data collection*: First, we conducted interviews with 20 DT actors handpicked based on their involvement in DT learning and teaching, that is, 10 at each university, from June 2022 to January 2023. Second, we extended the inductive interview data with contextual information from confidential as well as publicly available documents, which we extracted from the university websites or which were provided to us by interview partners, for example, digital strategies or presentations for DT projects. Third, we enriched our data by continuously reflecting on observations with the two co-authors that we leveraged as engaged scholars, adding depth and a longitudinal perspective to our data. *Data analysis*: We adopted an abductive analysis approach, iterating between theory and data as relevant findings emerged (Baiyere et al., 2020; Mantere and Ketokivi, 2013). Interestingly, the initial analysis revealed three traditional higher education logics, which we substantiated through literature. Our analysis proceeded in three steps: First, we inductively identified DT activities at both universities and analyzed them using the traditional logics of mass production (process), provider-centric (control), and students as consumers (actors). Two authors applied open coding to interview data and synthesized it into first-order concepts. Comparing these to traditional logics, we found mismatches, indicating shifts in logics due to DT. Second, we used Gioia's methodology (2012) drawing on grounded theory to further refine concepts into second-order themes, encapsulating how DT reshaped value creation. To do so, we applied axial and selective coding techniques to aggregate the first-order concepts towards higher levels of abstraction, i.e., second-order themes Finally, we examined the logic shifts underlying these themes,

iterating between data and theory to conceptualize new assumptions, values, and practices. The results were consistent across both universities, with boundary conditions noted as limitations.

In **Essay 2,** we seek to classify cooperation types used by SMEs to foster innovativeness as a means. *Research design and method justification*: To achieve this aim, we opted for a qualitative research design, developing a taxonomy as it offers a structured approach to organize knowledge, while enabling researchers and practitioners alike to understand the investigated domain (Nickerson et al., 2013). Thereby, we followed the established seven step approach by Nickerson et al., (2013). Within this approach, we followed a combination of deductive and inductive iterations, allowing us to iteratively test and refine the taxonomy based on empirical insights. *Data selection*: For the initial taxonomy development, we conducted a structured review of 36 articles from well-regarded databases like Google Scholar and Scopus, focusing on innovation and DT. Real-world objects were selected from both literature and a targeted Google search to balance academic and practical perspectives. For the final iteration, we conducted expert interviews with professionals experienced in SME and innovation cooperation projects, ensuring diversity in the sample to capture a wide range of insights across different industries. *Data collection*: The data collection process began with two literature reviews. The first focused on innovation, using databases like Google Scholar and Scopus leading to 36 relevant articles. The second targeted IS-specific literature to account for the impact of digitalization, resulting in 9 additional relevant articles. In the next iteration, 17 real-world objects were mapped to the taxonomy's dimensions, refining its structure. In the third iteration, 10 semi-structured expert interviews were conducted with professionals experienced in SMEs and innovation cooperation, ensuring diversity in organization size and industry to minimize biases. Interviews, lasting 15 to 60 minutes, focused on evaluating the taxonomy’s comprehensiveness and consistency. These interviews validated the taxonomy and provided valuable insights into the evaluation criteria. The process concluded when both subjective and objective conditions for the taxonomy’s completion were met (Bhattacherjee, 2012). *Data analysis*: We used an iterative approach across four iterations for data analysis. In the first iteration, we conducted a structured literature review, screening 100 papers and ranking 70 based on relevance using a Likert scale. After excluding 34 papers, we selected 36 for taxonomy development, extracting dimensions and characteristics and mapping 17 real-world objects to the taxonomy. In the second iteration, we reviewed 31 IS-specific papers from the Association for Information Systems electronic Library (AISeL), leading to the inclusion of 9 papers that added two dimensions and four characteristics to the taxonomy. The 17 real-world objects were then mapped to this updated version. The third iteration involved classifying the 17 real-world objects to identify gaps and refine the taxonomy. We compared the real-world data with the existing taxonomy, making iterative adjustments to enhance its applicability and address characteristics across different industries and contexts. In the final iteration, 10 semi-structured expert interviews were conducted to validate the taxonomy's comprehensiveness, consistency, and relevance. Experts with diverse backgrounds in SME cooperation provided feedback, which led to

further refinement of the taxonomy. This iterative process, combining expert insights and literature, resulted in the final, validated taxonomy for SME cooperation in innovation as a transformative effort.

In **Essay 3**, we derive and propose an approach to more purposefully scope SME research in the IS discipline. *Research design and method justification*: We adopted a context-sensitive approach to scope research on SMEs and SMOs, recognizing that traditional size-based classifications (e.g., employee count, turnover) fail to capture the essential characteristics for understanding SME-specific IS phenomena. Instead, we focus on defining the research scope based on the study's goals and the unique attributes of the organizations involved, ensuring relevant and grounded outcomes. *Data selection*: Drawn on Busse et al. (2017), we propose a more actionable six-step approach, that is also derived from the authors teams own research projects (i.e., the role of the CIO; approaching innovation through cooperation, value co-creation as SME) in an SME context. We emphasized the importance of defining SMEs and SMOs based on criteria that align with the research objectives, rather than relying on conventional size-based classifications. We purposefully selected organizations that exhibited characteristics critical to our research questions, such as limited IT resources or specific digital innovation capabilities. Our selection process drew on both academic literature and field-based insights. The focus was on organizations that fit the conceptual framework of the research, ensuring that the data collected would yield meaningful insights. *Data collection*: Our data collection process was conducted in multiple stages. Initially, we identified a sample of relevant SMEs and SMOs through literature reviews and expert consultations. These organizations were selected based on their alignment with our refined inclusion criteria, which considered both qualitative and quantitative factors relevant to our research goals. We employed case study and interview methods to conduct in-depth investigations while at the same time taking into account insights from a large body of organizations, focusing on those with specific characteristics tied to our research focus, such as innovation practices or digital resource constraints. Expert interviews were also conducted to validate our scope and further refine our focus, ensuring that the data collected was both comprehensive and contextually appropriate. *Data analysis*: The data analysis process followed an iterative approach, beginning with the refinement of our research scope and continuing with a constant reassessment of the chosen SMEs and SMOs. We used a combination of literature analysis, expert feedback, and empirical data to validate and continuously adjust our research framework. Through this process, we identified and examined how various SME characteristics, such as organizational size, technological capabilities, and innovation maturity, affected the applicability of existing IS research. We continuously revisited the boundaries of our study, adjusting our focus as new insights emerged, ensuring that the results were not only theoretically sound but also contextually grounded in the realities of the SME and SMO environments.

In **Essay 4** we aimed to untangle inertia on the DT project-level. *Research design and method justification*: We applied an inductive qualitative research approach, as it can be particularly advantageous to enable the acquisition of detailed insights while addressing the underlying causes and

processes (Eisenhardt and Graebner, 2007; Graebner et al., 2012). *Data selection*: Thus, we conducted semi-structured interviews with professionals involved in DT projects from organizations across different industries. We used purposive sampling by identifying valuable experts involved in DT projects from our extended professional network and conducted an acquisition campaign via professional social networks such as LinkedIn. In total, we contacted more than 120 experts. Our final sample included interviews with 36 experts from 32 organizations, covering 9 of the 11 economic sectors defined by the Global Industry Classification Standard. The respondents were all directly involved in or responsible for one or more DT projects and were either part of top-level management themselves or reported directly to their respective management. The participants had at least 5 and up to 25 years of work-related experience in the field of DT. By selecting a varied sample of experts, we were able to capture a broader range of perspectives, experiences, and contexts. *Data collection*: For the interviews we followed Schultze and Avital (2011) to develop a semi-structured interview guide, concentrating on our distinctive research topic while also exploring and collecting in-depth information (Myers and Newman, 2007). Inspired by the findings of Haskamp et al. (2021), we based our interview guide on the extant literature on inertia in DT (Hinings et al., 2018; Schmid, 2019; Vial, 2019; Hanelt et al., 2021; Verhoef et al., 2021), and preliminary discussions with domain experts. More precisely, we presumed that concepts such as uncertainty (Haskamp et al., 2021) or resistance to change (Vial, 2019) would come up as general drivers of inertia and prepared follow-up in-depth questions e.g., why and how uncertainty was connected to the specific DT projects and the emerging inertia. To ensure comparability across DT projects (e.g., all projects had to be part of an organization-wide DT), we started the interviews with a discussion about what the participants and the respective organization understood by the term DT and which corresponding projects they were involved in and were affected by inertia. Subsequently, we asked the interviewees to reflect on multiple or one of these DT projects with a special focus on the challenges they faced. All interviews were conducted between December 2022 and March 2023, ranging from 45 to 73 minutes, and were audio and video recorded as well as transcribed. *Data analysis*: For data analysis, we adopted an interpretive perspective (Walsham, 1995) to explore the antecedents of inertia in DT projects, informed by existing literature. Using open coding, three authors reviewed and coded interview transcripts in MAXQDA to identify common themes and patterns. After coding the first ten interviews, we conducted two half-day workshops to establish a shared understanding of relevant codes. The remaining interviews were coded by one author, with findings discussed weekly. Using axial and selective coding (Gioia et al., 2012), we iterated between the data and theory to identify relationships, clustering open codes into 8 second-order concepts. These were then categorized into three aggregate dimensions, capturing the essence of the antecedents of inertia in DT projects.

In **Essay 5.1** and **Essay 5.2,** we followed the same methodological approach, while Essay 5.2 builds on Essay 5.1 and adds additional data as well as a refined data analysis, a more robust results section and enhanced discussion of the results. *Research design and method justification*: In both essays, we used a comparative case study approach (George and Bennett, 2005; Yin, 2018), focusing on two versions of a

project assignment using GenAI in business education. This approach is ideal for exploring the emerging role of GenAI in learning, as it provides a deep, context-specific understanding of its impact. Given the exploratory nature of the research and our "how" research question, a qualitative case study was chosen to develop guiding propositions that can be corroborated empirically (Yin, 2018). While our approach does not employ a control group or directly compare courses without GenAI, it is methodologically sound for exploring a new and under-researched phenomenon, providing rich qualitative insights into the mechanisms and nuances of GenAI's mediating role in learning. *Data selection*: Our sample includes a diverse blend of groups (26 French-speaking and 19 English-speaking groups, in a total of 189 students), which allows for comparative analysis across language and cultural groups within the same institutional setting (Creswell, J.W. and Creswell, J.D., 2017). Groups were freely formed, with sizes ranging from 3 to 6 students, promoting diverse perspectives. The assignments, integrating ChatGPT throughout the idea-generation process, required students to collaborate and creatively use GenAI tools, providing rich data on students' engagement with GenAI in business education. *Data collection*: Data was collected in the form of student reports produced during the course assignments, conducted across different times and languages. Reports were written in two formats: Word (for text-based answers) and PowerPoint (encouraging visual elements and broader GenAI tool use). The reports were collected over eight time points from September 2023 to March 2024. The study focused on student perspectives, without integrating teacher feedback, to capture their engagement and reflections on GenAI in the educational context. Ethical guidelines were followed, ensuring anonymity and fairness in student participation and assessment. One author associated with the school was one of three teachers involved in the course and conducted the data collection in three of the eight cases. This ten-month interaction with the students during the courses potentially enriched the quality of the data and the insights gained (George and Bennett, 2005; Yin, 2018), although we acknowledge a possible influence on data collection and possible biases due to the researcher's direct interaction with the students. *Data analysis*: Data analysis followed a four-stage abductive approach (Baiyere et al., 2020). First, we used a deductive framework based on TML theory to develop initial propositions. Second, we conducted an inductive open coding of the reports using grounded theory (Gioia et al., 2012), focusing on students' experiences with GenAI. Third, we applied axial coding to refine first-order concepts into second-order themes. Finally, we mapped these themes into the original theoretical domains, comparing empirical findings with our theoretical expectations. Coding was performed by two independent coders, achieving a high inter-coder agreement (92%) after several rounds of refinement, including input from the full author team to ensure consistency and validity.

In **Essay 6,** the motivation was to conceptualize and evaluate existing knowledge on DSAs. *Research design and method justification*: We aim to provide a comprehensive overview of current knowledge on DSAs, specifically focusing on self-regulation in learning and fulfilling study obligations (e.g., meeting deadlines). Therefore, we conducted a structured literature review (Webster and Watson, 2002). The structured literature review was based on peer-reviewed literature, providing a broad understanding of

the topic and highlighting gaps for future research. *Data selection*: We used a broad search string to capture various synonyms describing DSAs in the context of higher education, such as “digital learning tutor” and “pedagogical conversational agent.” The search was applied to the databases AISeL and Web of Science. Inclusion criteria were based on peer-reviewed sources related to DSA design for higher education, excluding irrelevant articles or those in other than English. After screening titles and abstracts relevant articles were preselected. *Data collection*: We selected AISeL and Web of Science for the structured literature review due to their comprehensive coverage of academic literature on DSA-supported self-organization in learning. The search yielded 826 articles, which were screened based on predefined inclusion criteria: peer-reviewed articles addressing DSA design or creation for higher education. After excluding irrelevant or non-English articles, 19 relevant articles remained. We then used backward snowballing to identify 10 additional articles, bringing the total to 29. *Data analysis*: We applied an iterative approach to analyze the 29 academic articles. Two researchers developed initial dimensions based on their previous knowledge of DSAs, aiming to provide a holistic understanding of self-organization in learning for higher education students. These dimensions were refined through analysis and discussions, ensuring a common framework. The final analysis identified five major and 15 minor dimensions. A morphological box was created to structure these dimensions into categories, offering a systematic perspective on the problem and solution space. The box highlights research streams and gaps, but it does not provide a comprehensive overview of DSA characteristics, which would require further iterations. Minor dimensions reflect varying levels of abstraction, such as the specific context in which a DSA was used (e.g., course type or student group).

4. Summary of Results

This section reports on the results of this thesis. Accordingly, the results of all research articles are summarized, highlighting each research article's objectives. The results provide insights into the previously raised overarching research question, i.e., *How does intrapersonal transformation unfold across diverse organizational contexts, and how can digital technologies mediate and support this transformation to enable sustained digital transformation?* as well as the derived research goals, i.e., *Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts* and *Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies*.

4.1 Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts

This chapter integrates the results of four research articles that address how DT unfolds across different organizational contexts and how intrapersonal transformation contributes to building organizational agility.

The research article "*Digital Transformation and the New Logics of Higher Education*" investigates the role of DT in reconfiguring learning environments within higher education. Through a comparative case study of two universities, we identify three foundational logic shifts in higher education logics: from mass production to mass personalization (process logic), from provider-centric to student-centric (control logic), and from students as consumers to students as prosumers (actor logic). These shifts are accompanied by enabling structures such as platform infrastructures and co-design partnerships that empower individuals, both students and faculty, to take on more autonomous, digitally supported roles and transformative paths. By demonstrating how localized engagement and digital competencies foster DT, this paper shows how agility in public institutions emerges from intrapreneurial action and mindset adaptation among individuals embedded within evolving institutional structures.

The research article "*Cooperation for Innovativeness in SMEs - A Taxonomy on Cooperation Design*" examines the variety of cooperation designs that SMEs can rely on to foster innovativeness. Taking on the perspectives of dynamic capabilities and the resource-based view, we develop a taxonomy of cooperative configurations that support innovation in SMEs. Based on a systematic literature review and iterative development, the taxonomy introduces eleven dimensions that describe how SMEs structure cooperation efforts to overcome resource constraints and enhance innovation capacity. This study highlights that organizational agility in SMEs is enabled through an organization's capacity to adapt via external partnerships (i.e., absorptive capacity) and align internal capabilities with external opportunities (i.e., dynamic capabilities).

The third research article "*What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and other Organizations in the IS Discipline*" extends the view of IS research to SMEs and advances a tailored approach for aligning IS research with the unique needs of small-scale,

resource-constrained contexts. By proposing a scoping framework that includes digital maturity, environmental embeddedness, and collaborative orientation, the study shows how organizational agility in SMEs is highly dependent on the adaptive capacity and contextual awareness of individual actors. Here, importantly, the contextual awareness is pointed out as something that shapes how roles and intrapersonal transformation can vary across contexts and must be understood in this variety.

The research article "*Antecedents of Inertia in Digital Transformation Projects*" aims to understand why DT projects, in many cases, are considered a failure. It consolidates antecedents of inertia in DT projects across three aggregated dimensions: Different Realities, Unclear Business Value, and Complexity and Dependency. These dimensions reveal how misalignments between individual perceptions and organizational strategy hinder transformation. Through the lens of intrapersonal transformation, the article underscores how overcoming inertia depends on individuals' ability to engage with uncertainty, reframe digital value, and align their roles with shifting organizational goals. In this view, organizational agility is not just a structural outcome but a function of transformation capacity at the individual level, shaped by digital mindsets and organizational support.

Essay 1 – Digital Transformation and the New Logics of Higher Education

In Essay 1, we investigate how DT reshapes the fundamental logics of teaching and learning in higher education (Baiyere et al., 2020). Drawing on a comparative case study of two public universities, Alpha in Germany and Beta in Australia, we unfold how DT activities at the meso-level of universities' pedagogical value creation are linked to deep structural changes in assumptions, practices, and values. Our goal is to understand how higher education institutions adapt their ways of thinking in response to environmental changes driven by digital technology, particularly in the context of Education 4.0.

The problem we address is the persistent reliance of public universities on traditional logics that prioritize mass production, provider-centric control, and passive student roles. These long-standing logics, though historically effective, are increasingly insufficient in the face of three key environmental changes: (1) the rise of digitally literate learners with high expectations for personalized digital experiences, (2) the proliferation of omnichannel education ecosystems, and (3) the accelerating depreciation of knowledge. Despite pressure to adapt, many public universities struggle to advance DT beyond the digitalization of isolated services or content, limiting their ability to respond to these shifts. To address this, we contextualize DT research to public institutions, specifically, universities as providers of higher education, highlighting the need for a deeper understanding of how DT unfolds in organizations whose value propositions are rooted in public service, academic freedom, and long-standing institutional norms.

To explore how universities are responding at a deeper level, we adopt a qualitative, comparative case study design using two purposefully selected institutions operating in contrasting national university systems. Our method combines 20 semi-structured interviews, analysis of confidential and public

documents, and longitudinal reflections by two engaged scholars who held leadership roles at Alpha and Beta. Employing an abductive analytical approach, we iterated between empirical data and theory to uncover how DT activities correspond to shifts in underlying higher education logics. We used Gioia's method of coding to derive conceptual themes and identify new assumptions, values, and practices that signal logic change.

We found that DT at Alpha and Beta is underpinned by three major logic shifts: (1) from *mass production* to *mass personalization* in the design of teaching and learning processes; (2) from *provider-centric* to *student-centric* control over educational delivery; and (3) from viewing *students as consumers* to engaging them as *prosumers*, co-creators of educational experiences. These logic shifts (Figure 3) manifested through six conceptual themes (CT) of DT, including multi-sourcing of educational content, empowering learning decisions, using data for learning analytics, extending and intensifying collaboration in education ecosystems, complementing pedagogical capabilities with digital intelligence, and applying a partnership model with students. Importantly, we observed that these shifts were driven and championed by dedicated organizational units that acted as catalysts for transformation.

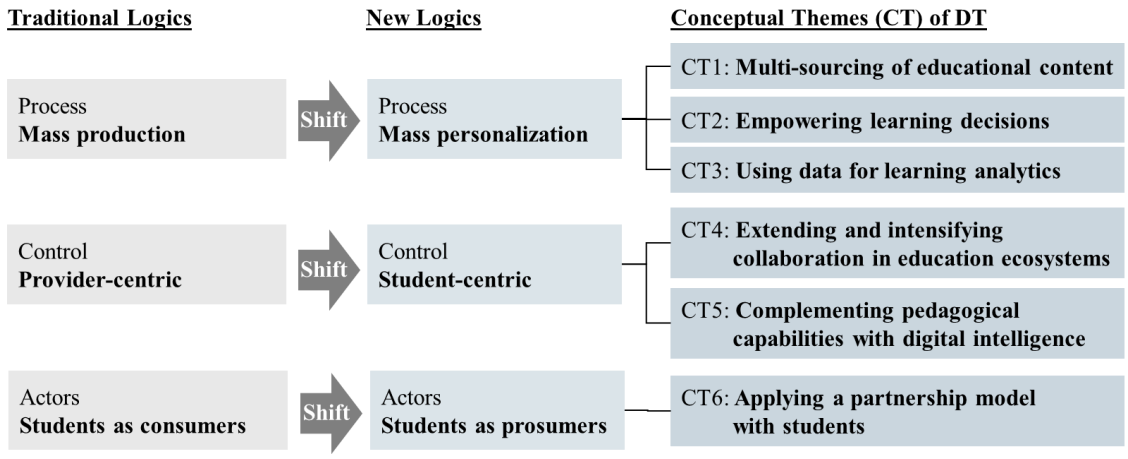

Figure 3. Shifts in Higher Education Logics and Conceptual Themes of Digital Transformation

Our findings contribute to existing research by offering a logic-based explanation of DT's impact on organizational identity and pedagogical practices in higher education. While previous DT literature has predominantly emphasized strategy or technological adoption, we provide a theory-informed account of how DT drives deep, value-laden changes in how universities perceive and enact their core educational mission. We show that public universities can transition from a teaching-centric to a learning-centric value proposition, embodying core principles of Education 4.0 such as personalization, agency, and engagement. Furthermore, our work bridges IS and higher education research by highlighting how socio-technical dynamics shape the transformation process.

Practically, our results provide guidance for decision-makers in higher education institutions navigating DT. By making logic shifts explicit, universities can critically assess whether their current activities align with outdated or emerging assumptions. The conceptual themes we derived offer actionable

examples that can serve as inspiration or benchmarks for ongoing transformation initiatives. Importantly, we emphasize that transformational success depends not only on adopting digital tools but also on redefining organizational logics and fostering shared understanding among stakeholders.

Essay 1 primarily contributes to **Research Goal 1**, linking intrapersonal transformation with organizational agility in the context of higher education – a formative environment for future organizational contributors. The study shows how DT is shaped not only by individual adaptation but also by strategic scaffolding from institutions, especially where role expectations and learning needs are evolving. We identify three logic shifts that illustrate the deep interplay between mindset change and institutional responsiveness: from control to facilitation, standardization to personalization, and unilateral to collaborative learning. These shifts manifest through new practices such as multi-sourcing content, empowering student learning decisions, using learning analytics, expanding EdTech and BigTech partnerships, and enabling co-creation with students. By tracing how individuals adopt and propagate these new logics, we highlight how cognitive and behavioral transformation at the individual level enables greater organizational agility in digitally transforming environments.

Across both universities, DT was accompanied by systemic efforts that enabled these shifts – ranging from infrastructural investments and faculty development initiatives to the creation of student partnership roles. These efforts created the conditions for intrapersonal transformation among both students and faculty. Educators were increasingly expected to act as facilitators and designers of personalized digital learning environments, supported by institutional resources and digital strategies. Simultaneously, students became active prosumers, contributing content, shaping services, and engaging in institutional change. Together, these developments reflect a broader redefinition of higher education's value proposition and support the thesis' layered conceptual framework, which emphasizes the mutual reinforcement of individual, organizational, and ecosystem-level transformation.

Essay 2 – Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design

In Essay 2, we develop a comprehensive taxonomy to classify cooperation types for innovation in SMEs. Recognizing that SMEs are vital drivers of economic success but often constrained in their innovation capabilities, we seek to address the lack of a structured foundation for understanding and designing cooperative innovation strategies. Our research is theoretically grounded in the resource-based view, and the dynamic capabilities view. These theoretical lenses underpin our view of cooperation as a capability that enhances SME innovativeness through resource complementarity, learning, and adaptation. While research has explored selected aspects of SME collaboration, an integrated overview of cooperation characteristics remains missing. Our goal is to provide both researchers and practitioners with a framework that captures the diversity of cooperation designs and supports strategic decision-making in innovation contexts.

The central problem we address lies in the fragmented understanding of cooperation for innovation among SMEs, particularly given their resource constraints and the increased pressure to innovate in dynamic, digitalized markets. Despite abundant literature, there has been no unified structure to guide SMEs in why, with whom, and how to cooperate. Consequently, organizations face challenges in identifying suitable cooperation strategies and making effective use of limited innovation resources.

To systematically investigate this issue, we applied the taxonomy development method by Nickerson et al. (2013). Our approach combined a structured literature review with iterative conceptual-to-empirical and empirical-to-conceptual refinement. We analyzed 36 scholarly articles, mapped 17 real-world cooperation cases, and conducted 10 expert interviews to ensure the taxonomy's robustness, comprehensiveness, and practical relevance. The final taxonomy (Table 3) offers a holistic and validated classification scheme for cooperation for innovation in SMEs. It reflects both theoretical insights and real-world practices. The evaluation confirmed its comprehensibility, ease of use, and fidelity with actual cooperation projects. Experts highlighted the taxonomy's practical value in evaluating existing collaborations and designing future ones more effectively.

Table 3. A Taxonomy on Cooperation for Innovativeness among SMEs

Dimension	*Characteristics*	*Description*	*ME/NE*
Purpose	Defined | Undefined	Is a goal specified?	ME
Value-added	Supplementary | Complementary	Are the assessed resources supportive or additional?	NE
Composition	Material | Immaterial	Which resource type is sought?	NE
Partner source	Internal | External	What is the origin of cooperation?	NE
Direction	Horizontal | Vertical | Lateral	Links with partner/s?	NE
Network range	Bilateral | Multilateral	How many partners are involved?	ME
Timeframe	Short-term | Mid-term | Long-term	How long is the cooperation supposed to last?	ME
Organization structure	Hierarchy | Heterarchy	How is cooperation organised?	ME
Governance	Formal | Informal | Agent	What is the applied regulatory framework?	ME
Information management	Manual | Automatic	How is information shared?	NE
Communication	Real | Virtual	Which interaction type is used?	NE

Theoretically, this research contributes to the fields of innovation, organizational science, and IS by addressing a gap in the fragmented literature on SME cooperation for innovation. We integrate disparate research streams, spanning relational governance, knowledge networks, open innovation, and digital collaboration, into a cohesive and structured model. By doing so, we offer a basis for descriptive theory (Gregor, 2006) that enables the systematic analysis, comparison, and classification of cooperation

configurations among SMEs. Our taxonomy provides a foundational framework that facilitates theory building around the conditions, configurations, and outcomes of innovation-driven cooperation. Moreover, we extend the resource-based view by detailing how SMEs leverage heterogeneous, often externally sourced, resources to compensate for internal limitations. Importantly, we enrich this with the dynamic capabilities view by conceptualizing cooperation not merely as a static resource acquisition mechanism, but as a dynamic capability that allows SMEs to sense, seize, and reconfigure innovation opportunities in fast-changing environments. The taxonomy highlights how different cooperation forms enable capability development, absorptive capacity building, and organizational adaptability over time. Practically, it equips SME managers with a decision-support tool to structure innovation partnerships, optimize cooperation design, and overcome resource limitations.

In line with **Research Goal 1** of this thesis, linking intrapersonal transformation to organizational agility in underexplored contexts, this study contributes by addressing the strategic and structural conditions under which SMEs can adapt to external demands. By unpacking the cooperative configurations that enable innovation, the taxonomy illuminates how external knowledge integration and role shifts foster agility in resource-constrained environments. In contexts where dedicated innovation roles or departments may be lacking, structured collaboration becomes a critical enabler for dynamic capability development. It underscores the role of cooperation as a capability that enables SMEs to reconfigure their assets dynamically – extending individual transformation into an organizational response to change.

Essay 3 – What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and other Organizations in the IS Discipline

SMOs, including both SMEs and non-profit organizations, constitute the majority of organizational forms globally. Yet, IS research often implicitly assumes large enterprise characteristics, such as the presence of CIOs, formal IT governance structures, or abundant IT capabilities, which limits the applicability and impact of its findings in SMO contexts. In Essay 3, we problematize the lack of contextual precision in IS research involving SMOs and propose a structured and theoretically grounded approach to improve research design through deliberate, reflective scoping. We argue that a "small business is not a little big business" (Welsh and White, 1982) and demonstrate how inadequate scoping of research boundaries risks excluding the very organizations that often struggle most with DT.

We address the central research problem that existing SME definitions, typically based on employee count or turnover, are insufficient proxies for assessing the relevance and applicability of IS research to real-world organizational contexts. These traditional size-based thresholds are frequently disconnected from the organizational capabilities, digital maturity, and resourcing structures that are critical to IS research phenomena, such as DT, IT security, or innovation processes. As a result, IS research findings are often misaligned with the needs and conditions of SMOs, especially those on the margins of digital readiness.

To address this issue, we develop a six-step approach for scoping SMO-specific IS research. Our method builds on Busse et al.'s (2017) framework for managing boundary conditions and translates it into a practical tool tailored to the IS domain. The approach guides researchers through identifying their topic's SMO relevance, defining topic-specific inclusion and exclusion criteria, integrating these into the research design, and reflecting on scoping implications throughout the research lifecycle. We illustrate this approach across three IS research domains: (1) IT and information security management in SMOs, (2) cooperative innovation in SMEs, and (3) DT within SME networks. Each case demonstrates how contextual criteria, such as IT governance capacity, innovation maturity, or network positioning, can serve as more meaningful delimiters than generic size classes.

The main result is a scoping framework (Table 4) that enables more valid, rigorous, and context-sensitive IS research in SMO settings. By emphasizing organizational realities over arbitrary size thresholds, this framework supports better sampling, clearer boundary specification, and stronger alignment between theory and practice. Moreover, it enables the development of more accurate and applicable research results, particularly for organizations that are often underserved or mischaracterized in current IS literature.

Table 4. Exemplary Proposal for Size-classes from an IS/IT Management Perspective

Size-class	**Characteristics**
Micro	Noone in-house really takes care of IT matters
Small	One operational and perhaps one strategic in-house 'involuntary IT manager'
Small-to-medium	IT function with 1-2 employees in a part-time IT role, perhaps shared with other roles
Medium	Dedicated IT function with a part-time or full-time CIO and 2-5 employees (FTE)
Large	Dedicated IT function with a full-time CIO and more than 5 employees (FTE)

Theoretically, this research contributes to IS research by integrating fragmented knowledge into a structured, generalizable model. We propose a descriptive design theory for scoping research that helps clarify when and how existing IS theories can, or cannot, be meaningfully applied in SMO contexts. Building on the importance of boundary conditions, the framework advances context-aware theorizing by challenging the IS field's overgeneralization toward large enterprise assumptions. By enabling more nuanced theorizing about digital capabilities, transformation pathways, and organizational learning, we provide a foundation for middle-range theories that can bridge existing gaps in SMO-relevant IS knowledge.

With respect to **Research Goal 1**, this study makes an important contribution by enabling a more differentiated understanding of contextual conditions that shape how individuals within organizations undergo intrapersonal transformation as part of DT initiatives. It invites researchers to examine the interaction between individual transformations and their institutional enablers or barriers in a more tailored, context-aware manner in less visible or structurally lean environments like SMOs. We argue

that without appropriately scoped research, the relationship between individual-level adaptation and organizational agility remains under-theorized in the SMO context. Our scoping approach helps surface and account for the environmental and structural conditions that affect how digital competencies are cultivated, roles are enacted, and change is experienced by individuals across different types of organizations. By explicitly mapping such variation, we lay the groundwork for future research that can better support individuals in their skill- and mindset-based transformation, ensuring that DT efforts are not only technologically sound but also humanly sustainable.

Essay 4 – Antecedents of Inertia in Digital Transformation Projects

In Essay 4, we investigate the antecedents of inertia in DT projects, a critical but underexplored phenomenon within DT literature. While prior research has acknowledged inertia as a major impediment to successful DT, there remains a lack of nuanced, empirical understanding of how and why inertia arises at the level of DT projects, which are the main vehicle through which organizations enact their transformation strategies.

The core problem addressed in our research is that although organizations invest heavily in DT initiatives, the failure rate remains alarmingly high – often due to inertia. Inertia, defined as the persistence of established structures, behaviors, and beliefs, is particularly problematic during DT because the process involves fundamental shifts in organizational identity, structures, and value creation. Despite a growing theoretical interest in the topic, little is known about the antecedents of inertia within the specific context of DT projects, which serve as intermediaries between strategic ambitions at the organizational level and individual-level actions.

We employed an inductive, qualitative research design to derive insights directly from practice. Our empirical basis consists of 36 semi-structured interviews with DT experts from 32 organizations across a broad range of industries. The data were analyzed using open, axial, and selective coding in accordance with grounded theory methodology. This approach allowed us to conceptualize eight second-order themes, which we aggregated into three core antecedents of inertia in DT projects: different realities, unclear business value, and complexity and dependency. These antecedents were then integrated into a theoretical model of inertia emergence in DT projects.

Our findings show that these antecedents arise from project-level uncertainty and are moderated by organization-wide factors such as resistance to change, a lack of digital resources, and the intended shift in organizational identity (Figure 4). For example, “different realities” emerge when project stakeholders hold divergent understandings of DT, leading to misaligned actions and identity mismatches. “Unclear business value” reflects difficulties in capturing the strategic and financial justification for DT initiatives, especially under shifting technological and market conditions. “Complexity and dependency” stems from project-level interdependencies and ambiguous stakeholder responsibilities, which impede effective decision-making and increase risk aversion.

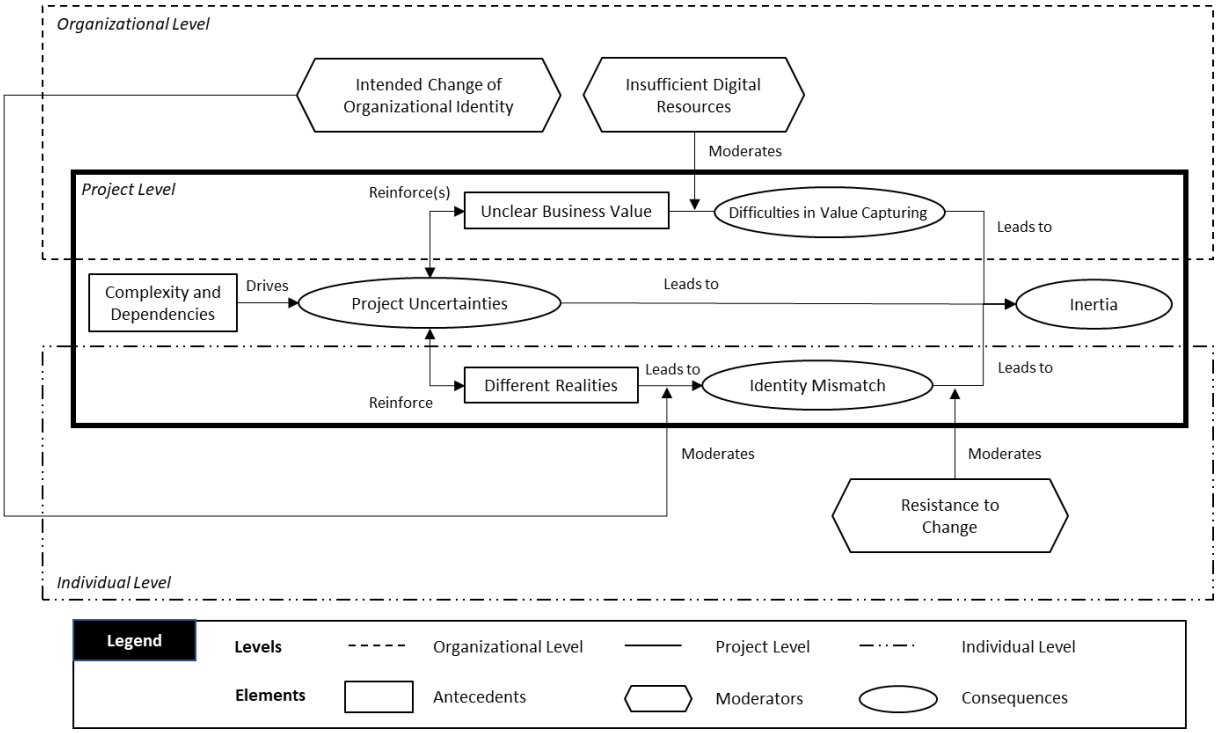

Figure 4. Theoretical of Antecedents of Inertia in DT Projects

This study contributes to research and practice in several important ways. Theoretically, we extend current knowledge on DT inertia by introducing the project level as a crucial unit of analysis that bridges organizational and individual levels. We contribute to the literature on DT (e.g., Vial, 2019; Wessel et al., 2020) and organizational inertia (e.g., Besson & Rowe, 2012) by theorizing how identity misalignment, stakeholder divergence, and resource scarcity interact to give rise to project-level inertia. Our model responds to recent calls for greater empirical depth on DT inertia and supports the development of more targeted prescriptive knowledge for DT initiatives.

Practically, our research provides a framework for diagnosing potential sources of inertia before they derail DT projects. Organizations can use our model to improve stakeholder alignment, develop robust and iterative business cases for DT investments, and anticipate friction caused by ambiguous objectives or technology-related interdependencies. These insights are particularly valuable for managers seeking to improve the execution of DT initiatives in dynamic environments.

Essay 4 contributes to **Research Goal 1** by shedding light on the layered nature of transformation resistance, positioning inertia not merely as an organizational dysfunction but as a project-level phenomenon influenced by individual, structural, and systemic misalignments. The findings underscore that enabling intrapersonal transformation – through shared understanding, digital literacy, and proactive engagement – must be seen as a core mechanism for overcoming inertia and enhancing organizational agility. By conceptualizing how individuals' transformation processes interact with organizational contexts in DT projects, this essay supports a more granular understanding of how change unfolds and stalls across levels, particularly in diverse and resource-constrained environments. Together, these

dimensions build a conceptual understanding of DT inertia rooted and acting around projects, while emphasizing how structural misalignments (on the organizational level) and cognitive misalignments (on the individual level) shape the organizational response to DT efforts. This framework lays a foundation for theorizing how intrapersonal transformation and organizational support structures must align to overcome inertia and enable adaptive, context-sensitive change.

4.2 Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies

This chapter encompasses the results of three research articles that examine how emerging digital technologies, specifically GenAI and DSAs, mediate intrapersonal transformation processes in higher education, thereby supporting adaptive learning and self-directed development.

The research articles *"Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design"* and *"Generative AI in Higher Education: Mediating Learning for Literacy Development"* investigate how GenAI tools such as ChatGPT serve as mediators in student learning, shaping how learners interact with, adapt to, and internalize AI-supported processes. Using a comparative case study approach, the studies reveal how GenAI fosters not only AI literacy but also metacognitive reflection and adaptive learning behavior, both critical components of intrapersonal transformation. By adapting and extending the TML perspective, we reconceptualize GenAI as an active learning mediator and derive theoretical implications that move beyond passive tool use toward a more dynamic, learner-technology interaction model.

The second article *"Toward Student Self-organization: A Literature Review of Digital Study Assistants in Higher Education"* analyzes the design and function of DSAs in supporting students' self-organization in both learning and the management of study obligations. By identifying distinct design dimensions and configuration options of DSAs, the study highlights how these tools facilitate the development of self-regulatory skills and mindset shifts necessary for digital learning environments. Theoretically, the article builds on concepts from SRL and digital nudging, extending them by positioning DSAs as scaffolding agents that both externally structure and internally stimulate transformation.

Essay 5.1 – Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design & Essay 5.2 - Generative AI in Higher Education: Mediating Learning for Literacy Development

In Essays 5.1 and 5.2, we explore how GenAI tools, specifically ChatGPT, mediate learning and foster GenAI literacy in higher education. In doing so, Essay 5.2 builds on Essay 5.1. Drawing on the theoretical lens of TML, we investigate the integration of GenAI tools into business education through a comparative case study of two master's-level courses at a French business school. Our aim is to

understand both the pedagogical impact of GenAI tools on student learning and the broader implications for faculty and institutions.

The problem addressed is the lack of empirical evidence on how GenAI tools influence learning processes and literacy development in higher education, particularly within business and IS studies. While prior research has defined AI literacy conceptually, there remains a gap in understanding how students attain this literacy in practice and how educators can design GenAI-integrated assignments that promote critical and reflective learning. Additionally, as GenAI assumes more autonomous and interactive roles in educational settings, there is a need to revisit foundational assumptions in TML theory, which traditionally views technology as a passive mediator.

To address this problem, we conducted a comparative qualitative case study involving 45 student groups across two courses: “Big Data & Business Analytics” and “Digital Transformation & Cyber Security.” In each course, students collaborated with ChatGPT to ideate, pitch, and document startup concepts, with GenAI positioned as either a digital consultant or Chief Executive Officer. The assignments were designed to immerse students in practical human-GenAI collaboration while encouraging critical reflection. Data from written group reports (n=45) were analyzed using a four-stage abductive coding process that combined TML theory with inductive thematic analysis for richer conceptual insights.

Our analysis yielded three key propositions: (1) GenAI mediates learning by addressing disparities in students’ subject literacy, (2) GenAI enables scalable and adaptive learning through personalized support, and (3) GenAI fosters GenAI literacy via hands-on engagement and prompt-based interaction. These propositions were empirically supported by findings such as enhanced entrepreneurial ideation, improved confidence, increased use of AI for integrating business and technology strategies, and emerging competencies in prompt engineering and critical evaluation of AI-generated content. Notably, students used ChatGPT in diverse roles (e.g., idea generator, corrector, motivator), and many humanized their interactions with the tool, referring to it with anthropomorphic language and assigning it distinct roles. However, students also emphasized the irreplaceable role of human teachers in providing ethical, emotional, and contextual feedback.

Our findings (Figure 5) contribute to research by extending TML theory to the context of GenAI. Unlike traditional technologies, GenAI actively co-creates learning experiences and takes on dynamic roles within student workflows. This necessitates a shift in educators’ roles, from content deliverers to designers of GenAI-enhanced learning environments. Furthermore, we differentiate GenAI literacy from general AI literacy by outlining specific competencies, including prompt design, task delegation to GenAI, and instant feedback interpretation, while also emphasizing common ground in ethical reasoning and critical evaluation skills.

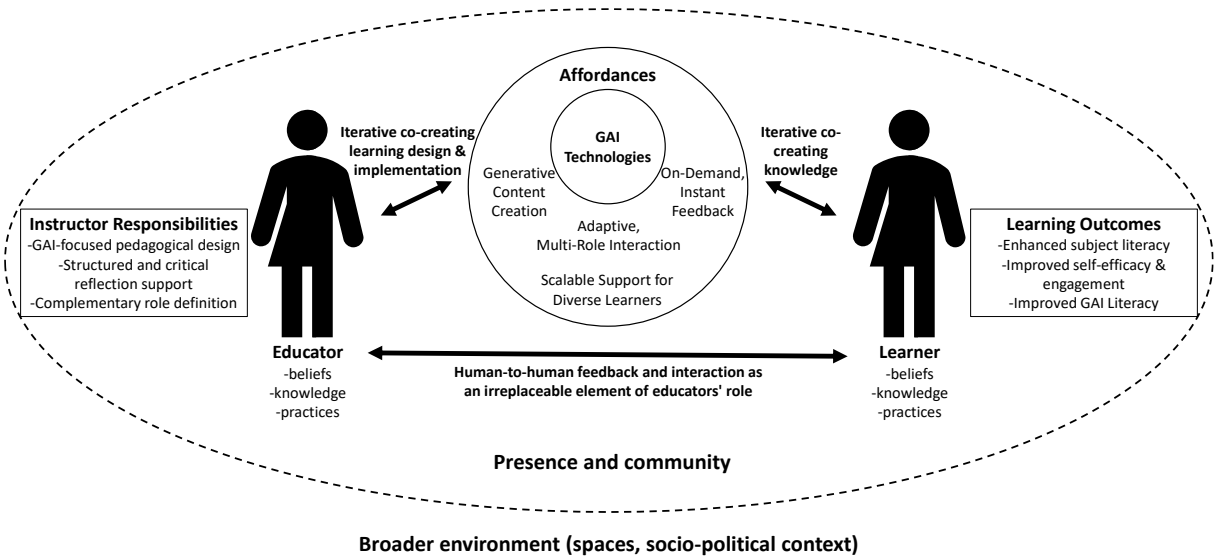

Figure 5. GenAI Mediated Learning (own results depicted drawing on Bower's (2019)) TML Figure

Practically, the study provides actionable insights for educators and higher education institutions. It emphasizes the importance of thoughtfully designed assignments that incorporate both GenAI and human feedback, assessment criteria that recognize GenAI's baseline contributions, and support structures for developing both student and faculty GenAI literacy. We argue for a balanced, human-centered approach that leverages the strengths of GenAI while preserving the essential roles of educators.

Aligned with **Research Goal 2** of our overarching research agenda, this study illustrates how digital technologies, specifically GenAI, can act as mediators of intrapersonal transformation. By equipping students with the competencies to navigate GenAI tools critically and reflectively, we foster adaptive learning processes that support self-regulated and entrepreneurial mindsets. Thus, GenAI does not merely facilitate content mastery but becomes a catalyst for personal development, aligning with broader DT goals in education. Therefore, the derived dimensions offer a conceptual model for how GenAI tools mediate intrapersonal transformation through the development of entrepreneurial skills, technological fluency, SRL behavior, and AI literacy. They contribute to a layered understanding of how digital tools in educational settings can act as enablers of DT-driven learning processes and support the formation of technology-infused individuals prepared for dynamic and innovation-oriented work environments.

Essay 6 – Toward Student Self-organization: A Literature Review of Digital Study Assistants in Higher Education

In Essay 6, we investigate how DSAs can foster student self-organization in higher education by supporting both learning activities and the management of study-related obligations of students. Against the backdrop of increasing student heterogeneity, declining lecturer-student interaction, and rising autonomy demands, we identify a pressing need for scalable, adaptive digital systems that enable students to structure their learning environments effectively. Building on the theoretical lenses of SRL

(Pintrich, 2000; Zimmerman, 2002), TML (Alavi & Leidner, 2001), and design theory for IS (Gregor & Hevner, 2013), we provide a comprehensive synthesis of state-of-the-art DSA research to guide both scholarly inquiry and practical design efforts.

The problem we address lies in the conceptual fragmentation and lack of integrative design knowledge concerning DSAs. Although prior research has explored DSAs, particularly pedagogical conversational agents, most studies narrowly focus on either cognitive learning support or administrative guidance, rarely linking both aspects. Moreover, the literature lacks unified definitions, conceptual clarity, and a theoretically grounded framework for understanding how DSAs can holistically foster intrapersonal transformation through self-regulation – an ability central to academic success and digital maturity.

To close this gap, we conducted a multivocal literature review, incorporating both peer-reviewed academic literature and grey literature to ensure relevance across scholarly and practice-oriented communities. Using established guidelines (Webster & Watson, 2002; Garousi et al., 2019), we analyzed 29 academic publications and three GL sources. Our inductively derived framework categorizes findings into five theoretically informed dimensions: (A) DSA Scope, (B) DSA Design, (C) Technology Embeddedness and Data, (D) Research Design and Theories, and (E) Problem Space and Outlook. Each dimension is structured through 15 minor dimensions and 81 characteristics, synthesized in a morphological box – an analytical artifact grounded in morphological analysis (Ritchey, 2011) that enables theory-building and design space exploration.

Our analysis reveals a broad landscape of DSA configurations differing in their pedagogical goals, interaction roles (e.g., tutor, mentor, companion), and adaptive functionalities (e.g., time management tools, personalized feedback, gamified nudging). Yet, few systems integrate both cognitive regulation (e.g., learning strategies) and metacognitive scaffolding (e.g., organizational planning) in a unified way, which limits their capacity to fully support SRL. While some studies adopt theoretical lenses such as constructivist learning theory, goal-setting theory, or learning analytics, most stop short of translating these into prescriptive design knowledge or actionable design principles. Moreover, system-level details and longitudinal impacts remain underexplored. This reflects a gap in applying design science research rigor to educational technology development.

These results (Table 5) contribute to IS research by offering a theoretically grounded, holistic synthesis of the DSA design space. We bridge the gap between functional design attributes and educational value creation, emphasizing DSAs not merely as tools, but as socio-technical learning companions embedded within the educational ecosystem. Our study lays the foundation for building design theories that enable targeted development of DSAs for diverse learner profiles and institutional contexts. By classifying DSAs across learning and organizational purposes, we also extend the scope of TML theory to account for both instructional content delivery and student agency development. These insights reinforce the

proposition that intrapersonal transformation is not merely an outcome of technology use, but a co-constituted process mediated by intelligent, interactive systems.

Table 5. Morphological Box on Existing Research on DSAs

Dimensions		**Characteristics**								
A	DSA Name	Companion	Intelligent	Educational	Digital	Individual	N/A			
	DSA Context	Information Systems	Business and Economics	Law	Online Education	On-Campus Education	Further Education	First Semester Students	Foreign Students	Working Students
	DSA Definition	Technical	Socio-technical	Socio	N/A					
B	DSA Purpose	Learning	Study Obligations							
	DSA Goal	Learning Success	Motivation	Self-organization	Training Skills	Social Inclusion				
	DSA Role	Tutor	Mentor	Organizer	Companion	Motivator	Ideator			
	DSA Functionality	Time Management	Visualization of Progress	Gamification Elements	Interaction	Provision of General Information	Personalization of Information			
C	DSA Technology	Learning Analytics	Natural Language Processing	Machine Learning Algorithms	Chatbot Integration	N/A				
	DSA System	Learning Management System	Campus Management System	Mobile Learning System	Conversational Agent	Messenger Platform	Virtual Assistant			
	DSA Data	User Input	Course Content	Institutional Data Bases	External Data Base	User Demographics	Performance Data			
D	Study Design	Qualitative	Quantitative	Mixed Methods	N/A					
	Method	Design-Science Research	Literature Review	Field Experiment	Online Survey	Lab Experiment	Action Design Research			
	Theory or Concept	Learning and Cognition	Analytics and Assessment	Interaction and Engagement	Student-Focused					
E	Problem or Gap	Self-organization	Individual Support	Motivation	Missing Skills	Social Exclusion	Trust			
	Future Research	Different Contexts	Sample Size	Evaluation	Longitudinal Studies	Data Security	Continuous Learning			

In practice, our findings help higher education institutions design and evaluate DSAs based on differentiated student needs, supporting more inclusive, personalized, and sustainable learning environments. Our morphological framework enables both the comparative evaluation and modular development of DSAs, fostering continuous iteration and alignment with students' evolving self-organization challenges. Moreover, by identifying future research avenues, such as the integration of adaptive recommendation systems, context-sensitive interaction roles, and dynamic student clustering based on learning analytics, we invite scholars to pursue the next wave of design-oriented educational technology research.

This work also strongly advances **Research Goal 2** by conceptualizing how DSAs act as mediators of intrapersonal transformation – a central mechanism for coping with the demands of DT in education. Drawing on SRL theory, we position DSAs as enablers of metacognitive control, motivation, and behavioral self-management. Through structured interaction with digital agents, students can develop the mindset and competencies necessary for adaptive and autonomous learning. Thus, we see DSAs not only as efficient tools, but as catalysts of digital maturity and self-directed intrapreneurship within learning ecosystems.

5. Discussion & Conclusion

5.1 Discussion

In the following section, I address the overarching research question of this thesis: *How does intrapersonal transformation unfold across diverse organizational contexts, and how can digital technologies mediate and support this transformation to enable sustained digital transformation?* To answer this, I will first discuss the findings of the essays in relation to the two outlined research goals. I will then outline the overall theoretical contribution of this thesis, followed by practical implications that can be derived. Finally, I will present the limitations of the research, propose avenues for future work, and offer a concluding summary.

Research Goal 1 - Linking Intrapersonal Transformation to Organizational Agility Across Diverse Contexts

To advance the understanding of how intrapersonal transformation links to organizational agility across diverse contexts, this discussion synthesizes insights from Essays 1–4 in accordance with the multilayered conceptual framework in Section 2. DT is widely recognized as a continuous, complex, and often identity-shifting phenomenon (Vial, 2019; Wessel et al., 2021). It transcends episodic technological adoption and instead involves deep shifts in how organizations operate, create value, and perceive themselves (Baiyere et al., 2020; Verhoef et al., 2021). Yet, this shift is frequently slowed down or halted by organizational inertia, particularly in DT project execution (Besson and Rowe, 2012; Haskamp et al., 2021).

Essay 1 contributes by showing how DT in public institutions such as universities triggers fundamental logic shifts from mass production to mass personalization, provider- to student-centric control, and consumers to prosumers. These changes reflect transformations in organizational identity and value proposition (Wessel et al., 2021), realized through localized intrapreneurial engagement and digital mindset adoption. Importantly, DT did not affect entire organizations uniformly, but rather originated from smaller, intrapreneurially engaged units. This decentralization of transformation underlines the importance of individual agency in the DT process.

Management must more eagerly provide employees with the resources needed to engage in intrapreneurial ways (e.g., Hornsby et al., 1993). While this was recognized decades ago, the supporting role of digital technologies has recently drawn attention, with new findings confirming their positive effects on intrapreneurial behavior as an extra-role behavior (e.g., Rabl et al., 2023). This underscores that agility emerges not from blanket transformation, but from enabling key individuals to act as transformation agents (Eden et al., 2019; Rabl et al., 2023). Such individuals translate digital opportunities into institutional reform, helping organizations adapt to changing societal and technological demands. Essay 1 has shown that these employees are central drivers of transformation within higher education institutions and benefit in their actions from organizational support.

Essay 2 adds a vital dimension to this picture by offering a structured taxonomy of cooperation for innovation in the context of SMEs that reflects how these organizations engage with external partners to drive innovation (Becker and Dietz, 2004). While not focused on intrapersonal transformation per se, the taxonomy offers a conceptual scaffold that clarifies how individual agency and learning are situated within broader cooperation structures. Specifically, dimensions such as value-added, composition, and governance highlight the types of knowledge and resource flows that SMEs rely on when internal capabilities are insufficient. These flows create touchpoints for intrapreneurial behavior, particularly when cooperation enables individuals to access novel expertise, experiment with new technologies, or assume bridging roles across organizational boundaries (Wolff and Nuseibah, 2017). The essay shows that organizational agility in SMEs is closely tied to the ability of individuals to leverage cooperative environments for their own learning and adaptation. This extends the layered framework by clarifying how organizational contexts influence the realization of individual transformation – and vice versa – particularly in resource-constrained environments where agility depends on distributed, interorganizational learning (Becker and Dietz, 2004; Bouncken et al., 2015; Rabl et al., 2023).

Essay 3 complements this perspective by focusing on SMEs and SMOs, where resource constraints necessitate innovative cooperation strategies and external knowledge sourcing (Becker and Dietz, 2004; Bouncken et al., 2015). Here, agility is less about scale and more about adaptability through context-sensitive scoping and external orientation (Casals, 2011; Wolff and Nuseibah, 2017). Applying tailored scoping criteria (e.g., organizational maturity, network embeddedness) enables better alignment between research and practice and reveals the heterogeneity of small organizations – a factor that is critical for advancing prescriptive IS knowledge (Drechsler et al., 2022). In such contexts, intrapersonal transformation becomes critical for enabling digital experimentation, cross-boundary collaboration, and ongoing learning within structural limitations (Blanka et al., 2022).

Essay 4 deepens the analysis by highlighting how intrapersonal transformation mitigates inertia at the intersection of individual and organizational levels. Complexity and dependencies, unclear business value, and identity mismatch emerge as key antecedents of inertia in DT projects. These dimensions reveal how DT initiatives falter when employee transformation is unsupported or fragmented (Ashrafi et al., 2025). Individuals experiencing identity mismatch or uncertainty often cling to outdated routines, while others adapt to new digital realities (Wessel et al., 2021; Kaganer et al., 2023). Thus, employee capacity to engage with digital complexity is a central enabler of organizational agility. Transformative capacity, framed as a dynamic capability (Teece, 2007), is rooted in employees' ability to sense opportunities, seize them through action, and embed changes into the organization (Warner and Wägner, 2019; Cordes and Rosemann, 2020).

Across all contexts studied – public institutions, SMEs/SMOs, and cross-sector DT projects – intrapersonal transformation emerges as a pivotal element in sustaining organizational agility. Whether dealing with regulatory rigidity, resource scarcity, or identity-related frictions, organizations benefit

when individuals develop digital literacy, intrapreneurial mindsets, and lifelong learning habits. Supporting employees in developing intrapreneurial characteristics can distribute agency and enhance transformation success across many actors, helping to positively induce change (Nambisan, 2017; Rigtering and Weitzel, 2013).

This thesis thus contributes to the IS literature by interweaving insights across layers: demonstrating how the individual (inner layer) enables or constrains the organization (middle layer) in responding to a continuously evolving DT landscape (outer layer). By theorizing intrapersonal transformation as a foundational capability, the research shifts attention to the human core of DT agility and provides a path forward for organizations aiming to remain resilient amidst constant technological flux.

Research Goal 2 - Exploring DT-driven Intrapersonal Transformation and the Mediating Role of Digital Technologies

Linking to Research Goal 1, GenAI and DSAs offer scalable support for such transformation of individuals, fostering SRL and bridging skill gaps through TML (Gimpel et al., 2023; Fleischmann et al., 2024). This thesis advances our understanding of how DT fosters intrapersonal transformation and how GenAI tools mediate this process within higher education. Across the studies, we find strong empirical and theoretical support for the role of GenAI and DSAs in shaping both the skill-based and mindset-based dimensions of intrapersonal transformation.

Building on TML (Alavi and Leidner, 2001; Bower, 2019), the results of Essays 5.1 and 5.2 demonstrate how ChatGPT facilitates adaptive learning, fills knowledge gaps, and fosters GenAI literacy through learning-by-doing. These findings align with SRL theory (Zimmerman, 2002), illustrating how students plan, monitor, and iterate their learning with digital tools. Notably, the expanded journal study offers a more granular analysis of how GenAI supports digital competence development and learner autonomy. Collaborative technologies like ChatGPT, which acts as a team member and communication tool, can improve the efficiency and quality of project-based group work (Shih et al., 2015) and thus contribute to finding problem solutions by connecting diverse backgrounds (Recker et al., 2013).

Beyond skills, the studies underscore the importance of mindset development, particularly confidence, creativity, and reflection, hallmarks of intrapreneurial behavior (Blanka, 2019; Gawke et al., 2017). As shown in both essays, students increasingly use GenAI tools not only to complete tasks but to test assumptions, challenge ideas, and co-create solutions. These practices mirror intrapreneurial behaviors such as opportunity recognition and proactive problem solving (Vassilakopoulou and Grisot, 2020).

Essay 6 complements this by showing how DSAs, as an increasingly popular digital support tool within higher education institutions, scaffold self-regulation – another key enabler of intrapersonal transformation. Features like personalized feedback, time management, and gamification map directly onto the behavioral foundations of intrapreneurship and lifelong learning (Dunlosky et al., 2013; Schlagwein and Bjørn-Andersen, 2014). These insights respond to calls for a more individual-centered view of DT (Braojos et al., 2024), where GenAI and DSAs empower students to become “technology-

infused individuals" (Cordes and Rosemann, 2020), capable of driving innovation within dynamic digital environments.

Crucially, this research also contributes to underexplored links between digital intrapreneurship and overcoming DT inertia. While previous work has emphasized organizational enablers (e.g., Hornsby et al., 1993; Rabl et al., 2023), this thesis shows how digitally supported self-regulation and GenAI-mediated learning can build individual agency and commitment – factors central to resisting stagnation (Bitzer et al., 2024; Wessel et al., 2025). The findings point to GenAI not simply as a knowledge provider, but as a mediating force for intrapersonal transformation (Hönigsberg et al. 2024). By supporting both the acquisition of digital capabilities and the evolution of intrapreneurial mindsets, GenAI tools help bridge the gap between technological affordances and the human capacity to enact digital change.

The results and contributions of the seven research articles are integrated into the initial conceptual model outlined in Section 2 and are presented in Figure 6. Essays 1–4 unfold within the middle layer of the conceptual model, while Essays 5.1–6 unfold within the inner layer.

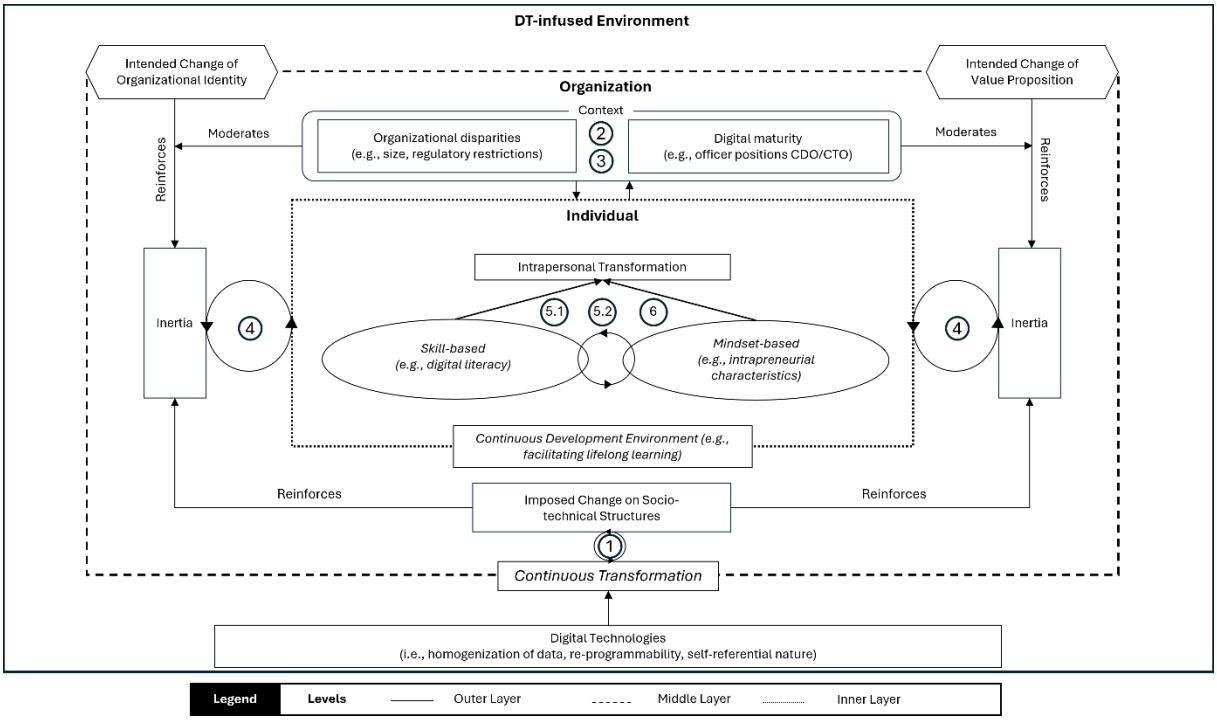

Figure 6. Conceptual Framework including Research Articles

5.2 Theoretical Contribution

First, this thesis advances the theorization of DT by developing a human-centered perspective grounded in the concept of intrapersonal transformation. Addressing calls to further theorize DT as a continuous and complex socio-technical phenomenon (Wessel et al., 2025), this thesis introduces a multilayered conceptual framework that captures how DT unfolds across environmental, organizational, and individual layers. In particular, this thesis conceptualizes intrapersonal transformation as a dynamic

capability of organizations (Teece, 2018) that fosters their agility to respond to outer-layer dynamics and changes (e.g., Eden et al., 2019; Li et al., 2018). Additionally, this thesis explores organizations' roles in enabling intrapersonal transformation in alignment with evolving organizational strategies, and in overcoming inertia across diverse organizational contexts, thereby adding to the existing research on digital intrapreneurship (e.g., Pätzmann et al., 2022) and digital literacy (e.g., Boughzala et al., 2020, Cordes and Rosemann, 2020) by combining their characteristics, which are seen as essential to respond to continuous DT.

Essay 1 contributes to the theorization of DT in the context of higher education by showing how deep structural changes and logic shifts – triggered by digital strategizing and identity claims – redefine universities' value propositions from teaching to learning. Extending the work of Wessel et al. (2021) and Baiyere et al. (2020), the study demonstrates how the identity-related dynamics of DT materialize in new assumptions and work practices. It provides a structured analysis of higher education logics, identifying logic shifts towards mass personalization, student-centric control, and the integration of students as prosumers. These shifts provide insight into how intrapersonal transformation, manifested through digitally enhanced pedagogical capabilities and the adoption of student partnership models, drives agility in universities by highlighting the importance of highly motivated employees within this transformative process. Moreover, the comparative case study highlights that such transformations are not linear but iterative, aligning with Vial's (2019) conceptualization of DT as a dynamic process.

Essay 2 advances the theoretical understanding of contextual enablers of intrapersonal transformation by developing a taxonomy for classifying cooperation for innovation in SMEs. Responding to the fragmented nature of cooperation research (Hagedoorn et al., 2000; Baba et al., 2009), the taxonomy consolidates knowledge across IS and innovation management literature (Frey et al., 2020). This essay explores how cooperation is a way to pursue innovation by complementing internal resources via external partners, e.g., through learning, knowledge-building, and new work methods (Wolff and Nuseibah, 2017). Furthermore, it enables the analysis of cooperation configurations that support intrapreneurial behaviors in resource-constrained environments. By demonstrating how SMEs can strategically engage in innovation ecosystems, the essay supports the view that organizational context shapes the conditions under which individuals develop and apply transformative skills and mindsets, thus responding to earlier research that views organizational environments as a facilitating condition for individual change (e.g., Kim et al., 1993; Mueller and Renken, 2017), and emphasizes context-sensitivity (e.g., Hong et al., 2014). Thus, the essay highlights that organizational agility emerges from an interplay of contextual structuring and individual capability enactment. Encouraging employees to take ownership of digital initiatives and explore external partnerships enables SMEs to remain competitive in evolving digital markets (Bitzer et al., 2024).

Essay 3 extends this contextual theorization by proposing a scoping approach for IS research on SMOs, thus addressing the theoretical gap in how DT affects diverse organizational forms (Welsh and White,

1982; Nadkarni and Prügl, 2021). The essay makes a methodological contribution by offering a structured framework for identifying context-specific research boundaries responding to Hong et al's. (2014) call, and allowing for more accurate theorizing of DT's effects on intrapersonal development in SMOs (e.g., Li et al., 2016; Li et al., 2018). It argues that differences in digital resource availability, governance structures, and role distributions require differentiated support strategies. In turn, more context-sensitive research can foster more suitable ways to enable workforce transformation (Hong et al., 2014). This understanding is foundational for designing environments that foster intrapersonal transformation at scale for marginalized organizations.

Essay 4 contributes to DT theory by refining the conceptualization of inertia as a key barrier to DT. Extending the work on the concept of inertia (e.g., Rumel et al., 1995; Gilbert, 2005) and DT-related inertia of Schmid (2019) and Haskamp et al. (2021) this study introduces the project level as an analytically distinct lens to examine how inertia unfolds through the interplay of individual, organizational, and project-level dynamics – introducing the latter as central to understanding. The project-level lens thereby allows us to observe how inertia emerges from the interplay between organizational structures, project-specific challenges, and individual resistance. This perspective complements and extends previous work on organizational-level inertia in DT (e.g., Schmi, 2019; Haskamp et al, 2021) by showing how broader organizational inertia is instantiated, reinforced, or potentially overcome within the context of specific DT projects. It also builds on individual-level studies of resistance to change (e.g., Soluk and Kammerlander, 2021) by illustrating how such resistance manifests and aggregates at the project level. The study reveals how different realities – i.e., mismatches between individual identity and changing organizational purpose (Wessel et al., 2021) – fuel resistance and identity-related inertia. Building on Tripsas (2009) and Ashrafi et al. (2025), it offers empirical insights into how identity misalignment at the project level disrupts DT efforts. Theorizing on the underlying concepts extends our understanding of how intrapersonal transformation may mitigate inertia when individuals can reconcile evolving identities with organizational direction.

Together, these essays contribute to the theorization of intrapersonal transformation as a foundational organizational capability. The thesis aligns with and supports findings by Braojos et al. (2024), who show that digital leadership and a continuous learning environment enhance employee commitment during DT. By integrating individual-level development into broader DT capabilities, this work advances a multi-level understanding of how individuals contribute to sensing, seizing, and transforming opportunities for strategic renewal (Teece, 2007; Warner and Wäger, 2019). In doing so, the thesis expands the theoretical frontier of DT research toward a more nuanced, context-sensitive, and human-centered view of transformation, while connecting it to its context of DT.

Second, this thesis advances the theorization of intrapersonal transformation by exploring the mediating role of GenAI and DSAs in fostering skill- and mindset-based development that together constitute intrapersonal transformation, thereby extending our understanding of TML, SRL, structuration theory,

and DT in educational contexts. Across Essays 5.1, 5.2, and 6, the research contributes to IS theory by conceptualizing how GenAI and DSAs can enable personalized SRL, building on the work of Zimmerman (2002), and thus support the emergence of an intrapreneurial and digitally competent workforce of tomorrow as transformation agents within evolving digital ecosystems.

Specifically, Essays 5.1 and 5.2 contribute to advancing TML theory (Alavi and Leidner, 2001; Gupta and Bostrom, 2009) by positioning GenAI not merely as an intermediary tool, but as an active and intelligent learning agent that co-constructs knowledge alongside learners. This expands prior models of technology use in learning by integrating GenAI's capabilities for real-time feedback, context-sensitive ideation, and adaptive engagement into the learning process (e.g., Bower, 2019; Dellermann et al., 2019). The findings extend the understanding of TML by showing how GenAI facilitates intrapersonal transformation through interactive and scalable learning trajectories that promote critical thinking, problem-solving, and AI literacy (Sundberg and Holmström, 2024; van Slyke et al., 2023). Moreover, the studies refine the theoretical distinction between AI literacy – often focused on technical understanding (e.g., Long and Magerko, 2020; Ng et al., 2021; Heyder and Posegga, 2021) – and GenAI literacy, which encompasses competencies such as prompt engineering, task delegation, and iterative collaboration with AI agents (Gimpel et al., 2023; Fleischmann et al., 2024).

This thesis also draws on structuration theory (Giddens, 1984) to explain how students and educators co-create new digital learning structures through repeated interactions with GenAI and DSAs (e.g., Khosrawi-Rad et al., 2021). Rather than viewing learners as passive recipients of content, this perspective foregrounds their agency in shaping and being shaped by the socio-technical systems they engage with. GenAI tools, in this sense, are both products of existing institutional norms and catalysts of their transformation – enabling students to redefine their roles from knowledge consumers to co-producers within digitally transforming educational environments. Through this lens, the thesis positions GenAI as a key enabler of intrapersonal transformation in learning contexts, where students shift from passive consumers to active co-creators of knowledge. This perspective resonates with emerging human-AI collaboration literature (e.g., Dellermann et al., 2019; Fügener et al., 2022) and proposes a hybrid instructional model in which educators and GenAI systems jointly facilitate transformation by aligning technological affordances with ethical, reflective, and context-aware learning design (e.g., Bansal et al., 2024). These insights push the theoretical frontier by highlighting how intrapersonal transformation is not only shaped by human agency but also co-mediated by intelligent, generative systems in learning environments.

Essay 6 complements and expands these contributions by theorizing DSAs as socio-technical artifacts that support students' self-regulation in both learning and study-related obligations. The analysis of academic studies culminated in the development of a morphological framework (Ritchey, 2011) that maps the multidimensional design space of DSAs across five key dimensions: DSA scope, DSA design, technology embeddedness and data, research design and theories, and contextual outlook. This

framework contributes to a systematized understanding of DSAs as embedded, adaptive, and role-fluid technologies that can act as digital mentors, motivators, or tutors depending on user needs and context (e.g., Schlimbach et al., 2024; Khosrawi-Rad et al., 2022). Importantly, DSAs support the development of SRL (e.g., Dunlosky et al., 2013) and digital organizational skills, which are foundational to intrapersonal transformation in higher education.

In addition, the thesis builds on SRL theory (Nilson and Zimmerman, 2013) and connects it with intrapreneurial behavior (Pinchot and Soltanifar, 2021; Rabl et al., 2023) to show how digital technologies such as DSAs and GenAI can support continuous, personalized development. This theoretical integration positions intrapersonal transformation not only as an outcome of DT but as an active driver of organizational agility (Sambamurthy and Bharadwaj, 2003; Teece, 2018). Furthermore, the thesis addresses the theoretical fragmentation of DSA research by integrating interdisciplinary insights into a consolidated IS-focused conceptualization of DSAs, thereby supporting theory development in a currently under-structured field. By identifying gaps in existing design approaches – such as the limited personalization logic, insufficient longitudinal data usage, and the need for predictive analytics to guide learner support (Piccoli et al., 2020) – the thesis calls for new theoretical models that integrate adaptive, data-driven learning pathways with goal-aligned transformation metrics.

Together, these essays advance a human-centered and systemic view of DT-driven intrapersonal transformation by embedding GenAI and DSAs within a multilayered framework of learning and self-organization. This extends existing IS theory by conceptualizing GenAI as a collaborative agent for personalized, transformation-driven learning; differentiating GenAI literacy as a critical capability in the digital age; theorizing DSAs as enablers of self-regulation and sustained learner engagement; and integrating structuration theory to explain the mutual shaping between digital learners and the evolving educational structures they inhabit. The thesis contributes to a refined theoretical understanding of how digital technologies not only mediate but also shape the ongoing transformation of individuals in digitally transforming organizations. In sum, this thesis adds to the general discourse on the impact of DT on organizations and individuals, by proposing a human-centered DT strategy (e.g., Matt et al., 2015), to overcome inertia and leverage successful DT through intrapersonal transformation (e.g., Kaganer et al., 2023), and by sharpening the understanding of DT as a multi-context organizational change phenomenon (e.g., Hanelt et al., 2021).

5.3 Practical Implications

To successfully navigate DT and harness the transformative potential of individuals, organizations must treat DT as a continuous, human-centered transformation process – not a discrete technological shift within isolated organizational units (e.g., Eden et al., 2019). This requires moving beyond isolated innovation units or spin-offs and embedding intrapreneurial mindsets and self-directed digital learning across all levels of the organization. Management must cultivate environments where digital literacy

and intrapreneurial characteristics can align with organizational structures and strategies, making change both scalable and sustainable.

This thesis emphasizes that intrapersonal transformation, including the development of digital literacy and intrapreneurial skills, must become a central pillar of organizational development strategies. These capabilities enable individuals to act as transformation agents – sensing, seizing, and shaping digital opportunities – thus contributing directly to dynamic capabilities and organizational agility (e.g., Karimi et al., 2015). To that end, organizations should actively foster lifelong learning environments, support self-directed digital upskilling (e.g., Li, 2024), and embrace collaborative technologies that connect diverse expertise (Hönigsberg et al., 2024). This is especially relevant in the face of increasing workforce heterogeneity, including the rise of digital natives and intergenerational differences in technology engagement.

Overcoming DT inertia also requires systemic alignment between strategy, culture, and project execution (e.g., Haskamp et al. 2021). Leaders must establish clear communication channels, define shared transformation goals, and provide training that supports both mindset and skill development (e.g., Braojos et al., 2024). Transparent communication, psychological safety, and opportunities for intrapreneurial experimentation all contribute to building resilient digital cultures capable of sustained adaptation (e.g., Bitzer et al. 2024). Educational institutions and training providers similarly bear responsibility in shaping future-ready workforces (e.g., Fleischmann et al., 2024). They must design curricula and platforms that prepare learners to ethically, critically, and creatively interact with emerging technologies such as GenAI and DSAs (e.g., Khosrawi-Rad et al., 2022). Institutions that adopt a balanced, human-AI approach to learning will be better equipped to prepare students for evolving digital work environments and societal needs (e.g., Mukul and Büyükozkan, 2023).

In sum, the thesis urges organizations to institutionalize intrapersonal transformation and lifelong learning as strategic imperatives for navigating the complexities of continuous DT. Only by doing so can they overcome inertia, maintain agility, and create inclusive, adaptive, and future-ready systems.

5.4 Limitations and Future Research

First, although the comparative and exploratory nature of the studies offers transferable insights, the findings may not be readily generalizable across other cultural or organizational environments. Systemic differences in institutional structures, digital maturity, and national policies may shape how intrapersonal transformation unfolds and how technologies such as GenAI and DSAs are adopted. Future research should conduct cross-contextual studies to explore how intrapersonal transformation manifests across industries, sectors, and institutional types. This would help identify boundary conditions and contextual enablers or constraints, further informing how DT strategies can be tailored to different environments.

Second, several of the contributions are exploratory or conceptual in nature. Essays 3 and 6, for instance, focus on developing structured overviews and taxonomies to clarify under-conceptualized areas in

cooperation for innovation and self-organization in higher education. These frameworks serve as theoretical starting points, but future studies are needed to empirically validate and refine the proposed dimensions and relationships.

Third, the thesis uses ChatGPT as the primary instantiation of GenAI in its analysis. While this is currently one of the most prominent tools in academic and professional use, it may not represent the full spectrum of GenAI capabilities, affordances, or limitations. Additionally, as GenAI technologies evolve rapidly, the findings presented here must be revisited and updated to stay aligned with emerging practices and systems. The integration of GenAI and digital study assistants into learning environments introduces new dynamics of co-agency, adaptive learning, and critical reflection. Future research should investigate how to design human-centered and ethically grounded systems that support responsible GenAI use, especially in contexts requiring high levels of autonomy and trust.

Fourth, the thesis lacks longitudinal data to capture the sustained effects of intrapersonal transformation and DT initiatives over time. While the essays demonstrate promising links between individual skill development, mindset shifts, and broader organizational agility, causal pathways remain underexplored. Understanding how digital literacy and intrapreneurial behavior persist and scale across DT projects requires future longitudinal and mixed-method studies.

5.5 Conclusion

To conclude, this thesis has demonstrated that overcoming inertia is essential for achieving successful DT – and that this challenge must be addressed from within the organization's most valuable asset – its people. As Besson and Rowe (2012, p.105) aptly state,

"If the organization were perfectly fluid and plastic, the question of transformation would not surface. It is inertia that makes organizational transformation an important theoretical and practical problem".

This highlights that transformation is not hindered by technology itself, but by the resistance embedded in existing routines, identities, and capabilities. By leveraging intrapersonal transformation – through fostering digital literacy and intrapreneurial thinking – organizations can equip their employees to continuously adapt and innovate. In doing so, DT becomes not just a project or endpoint, but an ongoing, human-driven journey of renewal.

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Appendix

Appendix I: Index of the Seven Research Articles

Research Article #1: Digital Transformation and the New Logics of Higher Education

Kreuzer, T.; Eymann, T.; Oberländer, A.; Rosemann, M. & Watkowski, L. Digital Transformation and the New Logics of Higher Education. Major Revision: *Communications of the Association for Information Systems.*

(VHB-JQ3: Category C | VHB-2024: Category B)

Research Article #2: Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design

Buck, C.; Watkowski, L. & Wyrtki, K. (2022). Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design. Published in: *International Journal of Entrepreneurial Venturing*.

(VHB-JQ3: Category B | VHB-2024: Category C)

Research Article #3: What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and other Organisations in the IS Discipline

Drechsler, A.; Hönigsberg, S. & Watkowski, L. (2022). What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and other Organisations in the IS Discipline. Published in: *Proceedings of the 30th European Conference on Information Systems.*

(VHB-JQ3: B | VHB-2024: Category A)

Research Article #4: Antecedents of Inertia in Digital Transformation Projects

Buck, C.; Hofbeck, C.; Kreuzer, T. & Watkowski, L. Antecedents of Inertia in Digital Transformation Projects. *Working paper.*

Research Article #5.1: Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design

Hönigsberg, S.; Watkowski, L. & Drechsler, A. (2024). Feeding Two Birds with One Scone: Teaching Students AI Literacy alongside Regular IS Topics by Integrating Generative AI into Assignment Design. Published in: *Proceedings of the Conference of the Central African Chapter of the Association for Information Systems.*

(VHB-JQ3: / | VHB-2024: / | AIS Conference)

Research Article #5.2: Generative Aritificial Intelligence in Higher Education: Mediating Learning for Literacy Development

Hönigsberg, S.; Watkowski, L. & Drechsler, A. (2025) Generative Artificial Intelligence in Higher Education: Mediating Learning for Literacy Development. Published in: *Communications of the Association for Information Systems.*

(VHB-JQ3: C | VHB-2024: B)

Research Article #6: Toward Students Self-organization: A Literature Review of Digital Study Assistants in Higher Education

Watkowski, L.; Gutheil, N. & Eymann, T. Toward Students Self-organization: A Literature Review of Digital Study Assistants in Higher Education. *Working paper*.

Appendix II: Individual Author Contributions to the Seven Research Articles

This cumulative doctoral thesis comprises seven research articles, which make up the main body of this work. All articles were developed in different author teams with multiple authors. Thus, I will outline my individual contribution to each article as follows:

Research article #1 (Kreuzer et al.) was developed with a team of four co-authors (i.e., Thomas Kreuzer, Torsten Eymann, Anna Maria Oberländer, Michael Rosemann). The development of the research article was led by Thomas Kreuzer as the lead co-author. I supported the data collection and contributed to the iterative development of the paper. The three senior co-authors helped to mature the research articles' relevance and theoretical contribution. The research article received a **major revision** from the *Communications of the Association for Information Systems.*

Research article #2 (Buck et al., 2022) was developed with two co-authors (i.e., Christoph Buck and Kathrin Wyrtki). The problem statement and methodological procedure were initially proposed by me and iteratively defined with the two co-authors. I collected the data for taxonomy development and discussed the findings with both co-authors. The taxonomy as central artefact was developed in several rounds of alignment between the co-authors. Each co-author contributed to the discussion of the results and contributed to addressing the reviewer's comments of a major revision. The research article was **published** in the *International Journal of Entrepreneurial Venturing*. All three authors contributed equally to the research article.

Research article #3 (Drechsler et al., 2022) was developed with a team of two co-authors (i.e. Andreas Drechsler and Sarah Hönigsberg). The development phase of the paper was led by Andreas Drechsler, while the other co-authors contributed their experiences from content-wise affiliated research projects. Each team member contributed a separate section of the examples and was involved throughout the process of the research article, i.e. ideation, regular discussions, contributions to various sections of the research article. The research article was **published** in the *Proceedings of the 30th European Conference on Information Systems*. I prepared and held the presentation on the conference site.

Research article #4 (Buck et al.) was written with three co-authors (i.e., Christoph Buck, Christoph Hofbeck, and Thomas Kreuzer). The research articles scope was defined in two workshops with all authors contributing. The data collection was led by one co-author, while the analysis and derivation of results were conducted by all co-authors. The theoretical model as the main contribution of the research article was again developed in a workshop including three of the co-authors, while the senior co-author provided feedback to sharpen the contribution. Further data collection was conducted by three of the co-authors. The research article is currently **in preparation for submission**.

Research article #5.1 (Hönigsberg et al., 2024) was developed with a team of two co-authors (i.e., Sarah Hönigsberg and Andreas Drechsler). Together with one of the co-authors I led the development of the

research article. I was substantially involved in all parts of the research article. We analyzed the collected data and iteratively developed the research article. The senior co-author provided valuable feedback toward maturing the contribution of the paper. One of the co-authors presented the **published** research article at the *Central African Conference of the Association for Information Systems*.

Research article #5.2 (Hönigsberg et al., 2025) was developed with a team of two co-authors (i.e., Sarah Hönigsberg and Andreas Drechsler). Together with one of the co-authors, I was responsible for developing and revising the conceptual background and contributed extensively to refining the research goals and contribution statement. The other leading co-author was primarily responsible for data analysis and results description. Together, we outlined the discussion and contribution section. The senior co-author contributed with expertise on methodological framing and refining the research articles' overall contribution. The research article is **published** in the *Communications of the Association for Information Systems*.

Research article #6 (Watkowski et al.) was developed with two co-authors (i.e., Niklas Gutheil and Torsten Eymann). I was the leading author responsible for the problem statement and research design. I led the data collection and was supported for the data analysis by one of the co-authors. Further, I led the description of the results, the research agenda as the main artefact, and the discussion. Although the article represents largely my work, one of the co-authors was involved throughout the research project. The senior co-author provided valuable suggestions to improve the research articles' contribution. The research article is currently **in preparation for submission**.

Appendix III: The Seven Research Articles

Research Article #1: Digital Transformation and the New Logics of Higher Education

Authors: Kreuzer, C.; Eymann, T.; Oberländer, A.; Rosemann, M., & Watkowski, L.

Major Revision: *Communications of the Association for Information Systems*

Extended Abstract:

Universities are the most numerous providers of higher education and play a central role in sustaining our modern knowledge society (Ashour, 2020). To fulfil this role, they have traditionally followed three fundamental higher education logics—understood as dominant assumptions, practices, and values (Baiyere et al., 2020): (1) mass production (Marginson, 2016), i.e., scalable 'one-to-many' classroom teaching; (2) provider-centric control (Sadler, 2012), where institutions determine the curriculum; and (3) students as consumers (Woodall et al., 2014), viewing learners as passive recipients of knowledge.

In recent years, however, the landscape has changed significantly. Digital-native students now expect more proactive, personalized learning experiences (Lacka & Wong, 2021), while advances in digital technology have diversified both the creation and consumption of educational content (Oliveira et al., 2021). At the same time, universities are confronted with an ever-growing volume of digitally accessible knowledge whose relevance diminishes more rapidly (Platonova et al., 2022). In response, many institutions are embarking on digital transformation (DT) journeys (Benavides et al., 2020) yet encounter two major challenges. First, current environmental changes are putting pressure on the traditional logics of teaching and learning, requiring actors to navigate deep structural shifts and cognitive realignments (Baiyere et al., 2020). Second, the dominant assumption in the literature that DT knowledge can be transferred across domains overlooks the unique characteristics of the higher education, as much of the existing research is focused on the private or public administration domains.

To explore this gap, we apply a logic perspective to study DT in higher education. Logics, as theoretical constructs, can be used across contexts and levels of analysis and have proven valuable in information systems research to make sense of technology-driven change (Baiyere et al., 2020). This perspective offers a useful lens to analyze how DT affects "taken-for-granted assumptions, value systems, and related practices" in teaching and learning (Baiyere et al., 2020, p. 239). Our central research question is: *How do higher education logics change as a result of digital transformation?*

To answer this question, we draw on a comparative case study of DT efforts at two public universities—one in Germany and one in Australia. Our data includes expert interviews, secondary sources (both internal and public), and longitudinal insights from our own academic engagement at both institutions. Our findings reveal that DT triggers three major shifts in higher education logics related to the process, control, and roles in teaching and learning: *from mass production to mass personalization*; from *provider-centric to student-centric*; and *from students as consumers to students as prosumers*.

This study contributes to the growing discourse on Education 4.0 by moving beyond strategic or operational views of digital transformation to examine how it reconfigures the underlying logics that shape teaching and learning. For researchers, it opens up new avenues to explore DT through a logic lens in higher education. For practitioners, it offers practical insights to support DT initiatives that are aligned with evolving learner expectations and institutional missions.

Keywords: digital transformation, education 4.0., higher education, logic perspective, comparative case study

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Research Article #2: Cooperation for Innovativeness in SMEs – A Taxonomy on Cooperation Design

Authors: Buck, C.; Watkowski, L. & Wyrtki, K.

In: *International Journal of Entrepreneurial Venturing*
DOI: 10.1504/IJEV.2022.122015

Abstract: Various resource constraints of small and medium-sized enterprises (SMEs) highlight the strategy of cooperation for innovation as it enhances organizations' options and breadth of knowledge sources. Nevertheless, research lacks guidance on why, with whom, and how to cooperate and has so far not provided a comprehensive overview of the characteristics of cooperation to foster SMEs innovativeness. To build a conceptual body of knowledge for further iterations, we conducted a structured literature review since, to our best knowledge, there is as yet no structured knowledge on cooperation for innovation among SMEs that could have served as the basis of a taxonomy. Our taxonomy delineates the design options for practitioners and advises that one select organization-specific parameters. With this taxonomy, we conceptually structure existing research and empower practitioners to analyze their current cooperation projects, reconsider them, and gain knowledge to design new ways of cooperation that best suit their aims.

Keywords: small and medium sized enterprises, SMEs, taxonomy, innovation, cooperation

Research Article #3: What's in an SME? Considerations for Scoping Research on Small and Medium Enterprises and other Organizations in the IS Discipline

Authors: Drechsler, A.; Hönigsberg S. & Watkowski, L.

In: *Proceedings of the 30th European Conference on Information Systems*
Link: https://aisel.aisnet.org/ecis2022_rp/50

Abstract: We propose an approach to better scope an IS research project for the context of small and medium organisations (SMOs), depending on the project's topic and goals. SMOs are of a fundamentally different nature compared to large organisations, yet IS research often implicitly assumes the context of large organisations. This may lead to IS research outcomes not being applicable to the SMO context due to incompatible boundary conditions. Simultaneously, common criteria to distinguish SMOs (employee count, turnover) are often not particularly useful to include or exclude distinct classes of SMOs from the scope of a specific research project. Our proposed scoping approach thus considers research topic-dependent criteria to classify SMOs to be included. We illustrate our approach with examples from our own research. Other researchers can draw on our approach to include/exclude suitable SMOs of interest more clearly and thus produce research that is applicable to clearly delineated SMO classes.

Keywords: SME, small and medium enterprises, SMO, small and medium organisations, research scope, research configuration, boundary conditions

Research Article #4: Antecedents of Inertia in Digital Transformation Projects

Authors: Buck, C.; Hofbeck, C.; Kreuzer, T. & Watkowski, L.

Working Paper

Extended Abstract:

Inertia is one of the key barriers to any type of organizational change. It has long been recognized as a critical obstacle to transformation efforts and has been widely discussed in the context of organizational change and management (Ford et al., 2008; Oreg et al., 2011; Vakola, 2013). Digital transformation (DT) is no exception: it demands a fundamental reconfiguration of an organization's work practices, structures, and identity through the integration of digital technologies (Wessel et al., 2020). As such, DT introduces both technological and cultural challenges that confront established routines and trigger resistance. Existing research acknowledges inertia as a major impediment to DT initiatives (Schmid, 2019; Haskamp et al., 2021), but often considers inertia at a high level, leaving a more granular understanding—especially at the project level—underexplored.

This research starts from the observation that DT is primarily operationalized through discrete DT projects, which serve as vehicles to enact change across organizational units. However, the high failure rate of such projects (Rankin & Roszmann, 2023) suggests that many organizations still struggle to effectively mitigate inertia. A key reason lies in the insufficient understanding of the concrete antecedents of inertia in the context of DT projects—i.e., how and why inertia emerges and persists during these initiatives. Addressing this gap, we pose the following research question: *What are the antecedents of inertia in DT projects, and how do they unfold?*

To explore this question, we adopt an inductive, qualitative research approach and build on rich empirical insights drawn from 36 semi-structured interviews with DT experts across 32 organizations. Following interpretive traditions in IS research (Schultze & Avital, 2011) and applying established methodologies for data collection and analysis (Myers & Newman, 2007; Gioia et al., 2013; Saldaña, 2013), we construct a grounded understanding of inertia in DT projects. Our analysis reveals three interrelated aggregate dimensions that act as antecedents to project-level inertia: *(1) different realities*, referring to conflicting understandings and expectations among stakeholders; *(2) unclear business value*, highlighting uncertainty or lack of alignment around the value proposition of DT projects; and *(3) complexity and dependency*, capturing the systemic entanglements that inhibit swift decision-making and coordinated action.

We advance theoretical understanding by embedding these antecedents into a conceptual framework that illustrates how inertia manifests in DT projects through a dynamic interplay of individual, organizational, and technological factors. This framework also considers the relationship between project-level dynamics and broader organizational conditions, offering a multi-level lens on DT inertia.

Our findings make several contributions. First, we enrich the conceptualization of inertia in DT by identifying and theorizing its project-specific antecedents. This complements existing macro- and micro-level accounts and supports a more nuanced understanding of DT failure. Second, we provide actionable insights for practitioners by offering a diagnostic perspective: organizations can use the identified antecedents as lenses to assess and monitor inertia risks in their transformation efforts. By recognizing early signs of misalignment, ambiguity, and structural entanglement, decision-makers can proactively implement mitigation strategies tailored to their specific project contexts.

Keywords: digital transformation projects, inertia, antecedents, interview study, organizational transformation

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Research Article #5.1: Feeding Two Birds with One Scone: Teaching Students AI Literacy Alongside Regular IS Topics by Integrating Generative AI into Assignment Design

Authors: Hönigsberg, S.; Watkowski, L. & Drechsler, A.

In: *Proceedings of the Conference of the Central African Chapter of the Association for Information Systems*

Link: https://aisel.aisnet.org/cacais2024/5

Abstract: We investigate the use of Generative Artificial Intelligence (GAI), such as ChatGPT, as an integral part of higher education courses to boost students' AI literacy. Addressing the dual aspects of opportunity and challenge presented by GAI, we explore embedding GAI into curricula to prepare students for the digital future. Through a case study, we apply Technology-Mediated Learning (TML) theory to illustrate how integrating ChatGPT into assignment work can enhance student learning by demonstrating the professional application of AI, fostering interactive and collaborative learning, and encouraging critical engagement with AI. Our findings offer insights on integrating GAI in higher education, highlighting GAI's role in developing AI literacy and equipping students for the workplace of the future by fostering entrepreneurial skills using AI.

Keywords: generative AI, artificial intelligence, education, technology-mediated learning, IS curricula

Research Article #5.2: Generative Artificial Intelligence in Higher Education: Mediating Learning for Literacy Development

Authors: Hönigsberg, S.; Watkowski, L. & Drechsler, A.

In: *Communications of the Association for Information Systems*
DOI: 10.17705/1CAIS.05640

Abstract: We investigate the integration of generative artificial intelligence (GAI), such as ChatGPT, into higher education courses and assignments to understand how GAI tools mediate learning and support the development of students' subject and GAI literacy. By investigating the embedding of GAI into educational contexts, we address both the opportunities and challenges of GAI in higher education teaching. Utilizing technology-mediated learning (TML) theory, our case study explores how incorporating ChatGPT and other GAI tools into courses and assignments can enhance learning outcomes, foster interactive and collaborative learning, support critical thinking, and prepare students for professional use of GAI. We examine the role of GAI tools in facilitating learning and reflect on the implications for teachers and higher education institutions. Our findings provide valuable insights into the integration of GAI into higher education courses and assignments, highlighting its potential to build GAI literacy and prepare students for future workplaces.

Keywords: generative AI, artificial intelligence, AI literacy, generative AI literacy, education, technology-mediated learning, assignment design, course design

Research Article #6: Toward Students Self-organization: A Literature Review of Digital Study Assistants in Higher Education

Authors: Watkowski, L.; Gutheil, N.; & Eymann, T.

Working Paper

Extended Abstract:

Higher education students face increasing challenges in navigating a dynamic and complex academic environment (Ngwacho, 2023). These challenges are amplified by growing student diversity, including individuals from non-academic backgrounds (Karrenbauer et al., 2021), and by the need for students to take on greater responsibility in managing their learning and academic obligations. Particularly first-year students often struggle with developing adaptive learning strategies, lack academic integration, and experience difficulties in structuring their study routines (Metcalfe, 2017). Simultaneously, the shift from structured school environments to autonomous university systems demands high levels of self-organization, a skill many students have not yet developed. The limited availability of teaching staff relative to increasing student numbers leads to reduced student–lecturer interaction and a lack of personalized support, reinforcing a sense of disconnection and inadequate guidance among students. These issues contribute to a heightened risk of poor academic performance and dropout.

Digital Study Assistants (DSAs) represent a promising response to this problem. As scalable, always-accessible technologies, DSAs can offer guidance on both academic and non-academic aspects of student life, supporting not only self-regulated learning but also the organization of administrative and time-management tasks (McTear et al., 2016; Hobert, 2023). However, existing research on DSAs in higher education remains fragmented and largely centered on learning-focused support (e.g., Khosrawi-Rad et al., 2023), with little integration of organizational dimensions such as study planning or fulfilling bureaucratic requirements. Moreover, no consolidated overview exists that captures how DSAs support students' self-organization in a holistic sense.

To address this research gap, we pursue two research questions: *What is the state-of-the-art research on DSAs in higher education fostering self-organization in learning and study obligations? And what are future research streams on DSAs in higher education fostering self-organization in learning and study obligations?*

We adopt a mixed literature review approach. First, we conduct a structured literature review to identify relevant peer-reviewed journal and conference publications (Webster and Watson, 2002). Second, we complement this with a targeted search for grey literature (Garousi et al., 2019). In total, we analyzed 29 academic sources and 3 grey literature items. Our analysis led to the development of a morphological box that structures the design space of DSAs across five major dimensions: scope, design, technology embeddedness and data, research design and theories, and problem space and outlook. These major dimensions are further divided into 15 minor dimensions and encompass a total of 81 distinct characteristics. A central insight of our work is the importance of differentiating between DSAs aimed

at supporting self-organization in learning and those aimed at assisting with study obligations. This distinction is not trivial—it implies different user needs, functional requirements, and data inputs, which must be addressed during system design and implementation. It also bears implications for evaluating the impact of DSAs on academic outcomes and student well-being.

With regard to our first research question, our findings reveal that while several studies explore DSA support for learning, much of the existing knowledge is scattered, lacks integration, and does not fully account for organizational aspects of student self-management. In addressing our second research question, we identify several underexplored areas in need of further investigation. These include the design of DSAs that holistically support both academic and administrative self-organization, the application of consistent theoretical frameworks to guide development, and empirical research on DSA effectiveness in varied institutional contexts. This analysis is critical for developing DSAs that support learning and help manage study obligations besides learning, potentially reducing student dropout rates and fostering academic success through enhanced organizational support.

Keywords: digital study assistant, self-organization, higher education, taxonomy, student support

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