



Human Resource Digital Transformation (HRDT): A Study Of Innovation And Capability Through Digitalization And Individual Factors

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ABSTRACT

Organizations are being forced to undergo digital transformation due to the emergence of new digital technologies. We gathered input on HRDT from 20 senior HR professionals from international corporations through interviews, and the outcome was a thorough conceptual framework for HRDT in our results. We provide a thorough explanation of our study process, including the steps involved in gathering the sample, collecting data, and analyzing it. An in-depth explanation of the fundamental topics, dimensions, and conclusions follows. Finally, we provide our research contributions for future research directions at the practice and research levels. The findings of this study hold significant implications for HR professionals tasked with continually evaluating current practices to ensure their relevance amid evolving organizational needs. Specifically, we underscore the imperative of technology-driven HR transformation in today's dynamic, uncertain, and complex business environment. We advocate for adopting a dynamic capability approach, asserting that an organization's ability to continuously innovate and adapt is paramount for its survival, superseding any individual or limited set of capabilities. Thus, we offer practitioners the opportunity to holistically assess their organizations, leveraging existing digital infrastructure and architecture while prioritizing personal creativity and capability to foster innovative solutions.

Keywords: HR transformation, HR professionals, Innovation, Digital infrastructure, Business Environment

1. INTRODUCTION

Organizations are being forced to undergo digital transformation due to the emergence of new digital technologies (Kraus et al., 2021; Loonam, Eaves, Kumar, & Parry, 2018). Digital transformation pertains to the amalgamation of diverse digital technologies, including big data, analytics, social media, mobile, social networks, and embedded services, with the aim of optimizing business operations, augmenting stakeholder satisfaction, and guaranteeing business continuity (Gigauri, 2020). The way businesses interact with their customers, manage their operations, schedule work, and develop their business plans has all been completely transformed by digital transformation (Haverkort & Zimmermann, 2017; Schallmo & Williams, 2017; Westerman & Bonnet, 2015). However, it is arguable that the adoption of digital transformation methods by all stakeholders across all functions is a critical component of successful digital transformation (Gray and Rumpe, 2017). Specifically, the digital workforce, digital workplace, and digital human resource practices are three major and inevitable disruptions that are specifically affecting the human resource management function (Bresciani, Huarng, Malhotra, & Ferraris, 2021). When used effectively, these are not only pertinent, but they also have the potential to be powerful instruments in the hands of HR professionals. One such disruption is the use of human resource information systems (HRISs), which assist firms in gathering, storing, manipulating, analyzing, retrieving, and disseminating data to improve recruitment and human resource planning (Fenech, Baguant, & Ivanov, 2019). Furthermore, telecommuting and other flexible work

arrangements are made possible by digital communication technology (Loonam et al., 2018; Parry & Battista, 2019; Thakur, Bansal, & Maini, 2018). Interestingly, the rise of COVID-19 accelerated these changes as the pandemic compelled organizations to find new methods of operation (Gerards, van Wetten, & van Sambeek, 2021). They adopted new work designs and technological advancements to satisfy the demands of the ambiguous and unpredictable business environment (Lanzolla, Pesce, & Tucci, 2021; Minbaeva, 2021; Palumbo, Manesh, Pellegrini, & Flamini, 2021). This highlights the significance of comprehending digital transformation in HRM, not only to guarantee company survival but also to get companies ready for the nature of work in the future (Gerards et al., 2021; Minbaeva, 2021).

First, a number of terminologies are mentioned by the researchers, including HR disruptions (Minbaeva, 2021), HR digitization (Strohmeier, 2020), and HR transformation (Sankar, 2021) to a certain extent. However, the HRDT construct as a whole is conceptually unclear and finds it difficult to distinguish itself from its precursors. Thus, "What is HRDT, and what is the organizational need and significance of HRDT, especially in the wake of the COVID-19 pandemic?" is a highly relevant question that our research addresses. As pointed out by the authors of Bansal & Panchal, 2022; Chanana, 2021; Fenech et al., 2019; Nicolas-Agustin, Jimnez-Jimenez, & Maeso-Fernandez, 2021; Schwartz et al., 2001; Silva & Lima, 2017, only a small number of digitally transformed HR practices have been reported in the literature. But this comprehension is incomplete, and the existing literature has not tackled digital transformation at the level of numerous other procedures, like employee engagement and on boarding. This might be significant for how the HRDT construct is conceptualized overall.

Secondly, the literature does a poor job of explaining what an organization's HRDT process comprises. According to Bengtsson and Bloom (2017), there is a dearth of research on how digital disruptions impact human capital in different ways and contribute to transformation in the human resource management (HRM) function. We examined the roles that technological and human variables play in HRDT in this endeavor. Studies have indicated that cultivating a creative culture and emphasizing the adoption of digital technologies are crucial (Bresciani et al., 2021; Farooq & Shoaib, 2021; John, Tiffany, Rahnema, & Van, 2017). The pandemic has given digital technology adoption a new dimension, requiring firms to be creative in reevaluating their routine HR procedures and implementing the desired sought-after digital transformation. As a result, we look into HRDT's central innovation capabilities. According to Julio, George, Miriam, and Richard's (2017) study, creative HRM initiatives entice millennials and boost their drive and involvement with the company. Regretfully, innovation potential was not examined in previous studies as a significant factor influencing HRDT within firms. Thus, we examine yet another crucial query: is innovation skill essential to HRDT?

Third, we pointed out that, in the context of digital disruption, there is a dearth of knowledge in the literature regarding the drivers of innovation capability. In this endeavor, we examined the technological means of innovation and stressed the significance of the technological infrastructure needed for innovation capabilities in addition to personal aptitude and inventiveness (Farzaneh, Wilden, Afshari, & Mehralian, 2022). With this goal in mind, our study addresses another important query, namely, what tools and developments are necessary to increase an organization's capacity for innovation. With the aid of grounded-theory research (Glaser & Strauss, 1967) and qualitative interview data from 20 senior HR professionals, the current study seeks to fill in these research gaps in the literature and respond to the following research questions. By filling in these gaps, HR practitioners will be able to see beyond the current methods and widely use cutting-edge tools and technologies to make the HRM function more "future ready." We emphasize human capital and the ability to adapt to changing contexts by drawing on the dynamic capacities approach (Teece, Pisano, & Shuen, 1997). The ability of businesses to integrate, develop, and reconfigure internal and external competences is highlighted by the dynamic capability perspective (Farzaneh et al., 2022). But innovation capability needs a lot more from the business than just people talent; it needs a lot of infrastructure, support, and direction (Rajapathirana & Hui, 2018). According to recent research, any transformation must take into account elements like the rise and introduction of digital technologies, consumer acceptance of technological innovation, and the capacity to lessen the burden of drawn-out business processes (Amla & Malhotra, 2017; Dong, 2019; Hoffman, 2017; Stephanie, 2021). Using Zawislak et al. (2012) as a model, we consider technology development to be an essential component of innovation capabilities. Scott (2020) asserts that organizations' reluctance to adopt the technology can be attributed mostly to its complexity and the high cost of acquisition.

Unquestionably, technology is important (Kartemo & Nystrom, 2021). We gathered input on HRDT from 20 senior HR professionals from international corporations through interviews, and the outcome was a thorough conceptual framework for HRDT in our results. Three significant additions to the literature and theory are presented by our research. First, we offer a comprehensive description of the HRDT construct and an in-depth analysis of the several HR practices that digital disruptions contribute to changing. Second, by viewing innovation capability as the central component of HRDT, the dynamic-capability perspective invites us to do so. We investigate innovation capability at the individual, group, and organizational levels by attempting to break down the notion into an attribute that exists at different levels within the organization. Lastly, the dynamic-capability perspective emphasizes the least-studied elements, such as technology, and proposes looking beyond human purpose and capacities as enablers of innovation capability (Zhen, Yousaf, Radulescu, & Yasir, 2021). As a result, we broaden the dynamic-capability viewpoint, which enables us to combine

technology and individual elements.

This paper is presented in the following manner. The next section provides a succinct and pertinent overview of the literature, concentrating on the separation of traditional and digital human resources, as well as the definition of transformation at the HR level and the contribution of innovation capability to it. Next, we provide a thorough explanation of our study process, including the steps involved in gathering the sample, collecting data, and analyzing it. An in-depth explanation of the fundamental topics, dimensions, and conclusions follows. Finally, we provide our research contributions for future research directions at the practice and research levels.

2. REVIEW OF THE LITERATURE

2.1. HRDT

In the business sector, digital transformation has become a watchword that companies must follow in order to be relevant and competitive (Goldstein, 2015). Organizations have become more aware of the significance of digital transformation to their capacity to remain in business, particularly in light of COVID-19. The application of new digital technologies to facilitate significant business improvements, such as improving customer experience, optimizing operations, or developing new business models, is central to the conceptualization of digital transformation (Bresciani et al., 2021; Fitzgerald, Ferlie, Mcgovern, & Buchanan, 2013; Warner & Wager, 2019). The COVID-19 period has had the greatest impact on and transformation of the human resource function (Bresciani et al., 2021), forcing firms to restructure their policies to accommodate changes in recruiting, on boarding, training, performance evaluation, and reward systems to suit online workforce. Acknowledging its significance, numerous organizations allocated substantial contingency funds to construct the necessary infrastructure and implement technological adaptations at the HRM functional level (Zhang et al., 2021). An overview of HRDT is provided in this paper, along with an explanation of how different HRM practices that have been previously documented have been transformed. After analyzing the HRDT literature, we find two main problems: first, there is a lack of effort put into creating a thorough theory or framework for HRDT, and second, there is inconsistent usage of multiple terminologies to convey the same concept. We examine the literature on HR digital transformation as a result of digital disruptions, which have been popularized at various times and by various authors under different labels. The literature has employed a variety of terms, including sustainable HRM (Prakash, Krishna, & Mores, 2019), digital HRM (Strohmeier, 2020), and e-HRM.

The concept of HRDT has been explained in the literature using a variety of terminologies, including digital HRM (Strohmeier, 2020), e-HRM (Prakash, Krishna, & Mores, 2019), sustainable HRM (Agarwal, Mathiyazhagan, Malhotra, & Saikouk, 2021), HR digitalization (Jedynak, Czakon, Kuźniarska, & Mania, 2021), and smart HRM (Ogbeibu, Pereira, & Burgess, 2021). These terminologies result in a lack of conceptual clarity and understanding. The definitions of these terms from different studies are given in Table 1. The majority of definitions and understandings of these terms those are now in use center on technological interventions at the HRM function level.

To ensure accuracy and clarity, we refer to this phenomenon as "HRDT" while explaining it. Human resource digital transformation (HRDT), indicated in the digital upgradation of HR processes, is a multidimensional construct that results from an organization's innovation capability, enabled through the successful integration of its digital infrastructure, digital architecture, and individual capability and creativity. This definition highlights the role of qualitative grounded theory research in HRDT. We offer a thorough explanation of the HRDT construct along with other relevant variables in Table 1.

| Reference | Purpose and Focus | Methodology | Definition of HRDT or Related Concepts | Conceptualization of HRDT/ Theoretical Framework |
|-----------------------|---|---------------------------------------|---|---|
| Seufert & Meier, 2016 | Study organization-wide E-learning contribution in digital transformation | Systematic Literature Review Research | The greatest impediments felt at the level of information, nor any other components of the | No/ No |
| Larkin, 2017 | Focusing on inward, outward, and across | Systematic Literature Review Research | The technology has completely changed how HR processes currently run, or more specifically, how businesses gather, store, use, and disseminate information about their HR. Business executives have long emphasised the value of IT integration with operational processes to | No/ No |

| | | | | |
|----------------------|---|---------------------------------------|---|---------------|
| | | | make inroads in digital HRM . | |
| Silva & Lima, 2017 | Study innovations in technology to understand HR | Conceptual Research | Human Resource Information System (HRIS) is a digital innovation that acquires, stores, manipulates, analyse, retrieves and distributes information related to human resources to automate a large number of HR functions.” | No/ No |
| Prakash et al., 2019 | Investigate digitally induced changes in HRM including attitudes, qualifications, behaviours, and expectations. | Conceptual Research | e-HRM has achieved much importance now because of its use to organizations to increase productivity by maximizing the value of the organization’s most significant asset i.e., employees in the digital age. | No/ No |
| Strohmeier, 2020 | Provide a language and typology for digital HRM, and digital organisations | Systematic Literature Review Research | Digital HRM is not merely about aligning digital technologies to pre-formulated HR strategies but formulating and executing HR strategies that are directly based on the potential for digitization to create value for an organization. | Partially/ No |
| Agarwal et al., 2021 | Align the industry 4.0 disruptions with HRM and emphasize on sustainable HRM | Mixed Methods Descriptive Research | Sustainable HRM enables organisations to accomplish their goals by utilising the best skills and abilities of its people. | No/ No |
| Jedynak et al., 2021 | Identify the development of digital transformation literature | Systematic Literature Review Research | HR Digitalization depicts the relationships between human and digital agents within organizations | Partially/ No |
| Ogbeibu et al., 2021 | Investigate the relationship between digital task interdependence, disruptive technology and smart HRM in determining team creativity and organizational level outcomes | Descriptive Research | SHRM (Smart HRM) is defined as the digital revolution in HRM tasks which are executed in a manner that depends somewhat on artificial intelligence, cloud computing, big data and automation. | No/ No |

2.2. The dynamic capability theory and HRDT

The theory of dynamic capability, which defines it as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments," has historically been used to explain an organization's capacity for adaptation and competitive advantage (Tece et al., 1997). By emphasizing the deliberate adjustments of the resource base to suit the external environment and maintain the firm's existence, the dynamic-capability perspective expands on the static perspective of the resource-based view of firms (Avanade, 2016). Dynamic capability is viewed from a variety of angles, including its focus on quick decisions and its role as a boundary condition for high-speed and unstable organizations (Eisenhardt & Martin, 2000). A more recent viewpoint, however, examines the dynamic characteristics that provide competitive advantage in a quick-paced digital context (Peteraf, Stefano, & Verona, 2013).

In our work, we extend this perspective on dynamic capacities and propose that, in times of crisis, it is imperative to develop them more regularly and continuously in order to address the needs that unpredictable and unforeseen changes generate, particularly those that call for a significant upgrade of current capacities

(Dejardin et al., 2022). Organizations now need to reevaluate their people-management strategies in light of COVID-19, not only to obtain a competitive edge but also to guarantee their survival by utilizing their available human and technological resources (Carnevale & Hatak, 2020). Our study provides a more comprehensive description of how the HRM is adjusting to digital advances. This stayed true even in the digital age by offering more challenging and diverse career options, which allowed for the acquisition of youthful talent with a high degree of engagement (Palmer, Dunford, & Buchanan, 2017). To embrace digital technologies in HRM, draw in and keep talent, and provide accurate and effective results for making long-term decisions, it was necessary to possess specific skills and talents (Bell, Lee, & Yeung, 2006). In addition to offering opportunities, digital transformation also poses challenges (Schwab, 2016). These challenges include managing digital employees and updating HR procedures in line with their needs (Makridakis, 2017), as well as ensuring that the necessary technological infrastructure and resources are available when needed (DiRomualdo, El-Khoury, & Girimonte, 2018). The advent of digital technology, such as big data and the Internet of Things (IoT), and artificial intelligence (AI) have made the HRM level transition even more necessary (Islam, Dhir, Talwar, & Walsh, 2021; Hecklau, Galeitzke, Flachs, & Kohl, 2016).

2.3. Firm innovation capabilities and HRDT

According to the literature currently in publication, innovation is the primary driver of business success and survival (Cho & Pucik, 2005; Palumbo et al., 2021), particularly during periods of extreme uncertainty and ambiguity (Freel, 2005), such as the COVID-19 pandemic. In order to explain this, we point out that an organization's capacity to continuously enhance and modernize its procedures is still important; regardless of how much training it receives in new competencies. Therefore, we suggest that, in order to respond to various external environmental changes, an organization's capacity for innovation is essential to achieving the transformation (Bresciani, Huarng, Malhotra, & Ferraris, 2021; Ferraris et al., 2017; Lopez, Perez, & Valle, 2009). A company's capacity to attain high performance in ambiguous times should be strengthened by innovative approaches (Maditheti, 2017). Nevertheless, innovation does not always appear when a need does. Instead, it depends on the skills and inventiveness of the current workforce, supported by the required organizational resources (Khin & Ho, 2018). The use of digital methods for employee engagement and recruitment, as well as other data from research and practice, indicate that the digital transformation of HR is not new (Fenech et al., 2019). However, the pandemic has once again shown to be a useful tool for businesses looking to dramatically increase their capacity for innovation (Wang, Qin, Xu, & Skare, 2022), an underappreciated concept in the HRM space. The majority of studies focus on new product development and the company's performance (Taherparvar, Esmaeilpour, & Dostar, 2014; Huhtala, Sihvonen, Fro's'en, Jaakkola, & Tikkanen, 2014). We address this gap by examining the factors that support and influence an organization's capacity for innovation. The significance of organizational actions in promoting employee involvement in creative behavior is emphasized by Gerards et al. (2021). Organizations are now far more inclined and receptive to pursuing innovation and utilizing resources to encourage innovative behavior as a result of the epidemic (Chaubey & Sahoo, 2019). In response to market demands for adaptability to change and a competitive edge, the idea of disruption in human resources arose (Thomas, 2016).

Human resource disruption is necessary to adapt to new business realities (Julio et al., 2017), to endure and rebound from a downturn in the economy (Emmy, 2016), and to guarantee that workers' performance is improved in shifting conditions (Agarwala, 2003). Organizations now have the Internet-driven systems and technology tools needed to successfully develop those systems and associated procedures thanks to digital disruptions (Manuti, 2017). But despite the fact that instruments and frameworks aid in the progress of Digital transformation in HR, organizations could not overlook human interaction as a process. Research indicates that companies should recognize the importance and contribution of their workforce in order to improve their capacity for innovation, as human resources frequently encapsulate essential organizational competencies (Wei & Lou, 2005). It might be argued that an organization's HRM practices and the architecture and policies that support the capacity for learning that leads to innovation must be coherent (Bresciani et al., 2021; Ferraris et al., 2017; Lopez et al., 2009). HRM and innovation capacity seem to be related to learning and knowledge gain. Therefore, according to Gibb and Waight (2005), HR specialists play crucial roles in advancing individual, group, and organizational capacities. Innovation capabilities are developed through the creation of new HRM functions that incorporate human experience, knowledge acquisition, and shared and leveraged learning procedures (Pastor, 2010). In order to ensure comprehensive HR digital transformation, we thoroughly examine in our research the role that infrastructure and technology play in fostering organizational innovation capabilities.

3. METHODOLOGY FOR RESEARCH

3.1. Research methodology and environment

Our goal in doing this study was to provide a more thorough grasp of the HRDT concept. As a result, we concentrated on three main goals. Initially, our goal was to define and conceptualize HRDT, as this has been done terribly and ambiguously in the literature. In the second section, we sought to investigate if the foundation of HRDT is innovation capability. Lastly, our goal was to look into how innovation capability is enabled by digital and personal factors. During the COVID-19 epidemic, it is revealed that how firms

accepted digital disruptions and how this resulted in changes to the HR function using an exploratory qualitative grounded-theory technique (Clark, Gioia, Ketchen, & Thomas, 2010; Glaser & Strauss, 1967). A research technique known as "grounded theory" (Glaser & Strauss, 1967) helps create theories based on the systematic finding of various patterns that make up a process (Malodia, Dhir, Mishra, & Bhatti, 2021; Strauss and Corbin, 1998). Compared to a descriptive account, it aims to investigate important categories, their relationships, and context in greater detail (Becker, 1993). Researching how individuals manage their lives and respond to changing situations can benefit from the application of grounded theory (Adolph, Kruchten, & Hall, 2011). The researchers used this methodology as a result.

3.2. Sampling

Using first-hand accounts from persons who were really witnessing the events, our research aimed to understand the occurrences in a first-order way (Van Maanen, 1979). Based on their familiarity with HRDT in their workplaces during the epidemic, we chose the participants. We conducted interviews with human resource experts working for companies, primarily multinational corporations, that had just undergone a digital transformation of their HR procedures. We conducted interviews during India's nationwide shutdown, which forced businesses to switch from traditional HR procedures to virtual ones. Organizations embraced remote work and operated online during the lockdown, which provided an essential foundation for this study. In accordance with a theoretical framework (Glaser & Strauss, 1967), we deliberately chose human resource experts employed by companies that had recently undergone HRDT. Using a snowball sampling strategy, we separately contacted HR experts and asked them to put us in touch with other HR experts in their network (Naderifar et al., 2017). We made sure to gather data from a variety of experts in fields such as Information Technology (IT), Agrochemical, Manufacturing, Banking and Financial Services, and Education/Education Technology. Even while this study advances the investigation of the HRDT phenomenon, but our main goal was to produce insights that would apply to a range of businesses operating in different sectors.

Twenty people made up our final sample, 80% of whom were Indian citizens and 30% of whom were female. They identified as assistant human resource managers (HRM) (20%), HR business partners (15%), and senior HR managers (60%). Their ages ranged from 25 to 55 (mean of 39.5), with 10% of them under 30, 20% between 31 and 35, 65% between 36 and 40, and the remaining individuals over 40. 15% had more job experience than ten years, whereas 85% had up to 10 years. The participant details are compiled in Table 2.

| Characteristics | Subgroup | Frequency |
|----------------------|---------------------------------------|-----------|
| Industry | Information Technology/Technology | 8 |
| | Education/Education Technology | 3 |
| | Construction | 1 |
| | Agrochemical | 1 |
| | Banking and Financial Services | 11 |
| | Chemicals | 1 |
| | Consultancy | 4 |
| Position | Assistant Human Resource Manager | 1 |
| | Senior HR Manager | 17 |
| | HR Business Partner | 2 |
| HR Functions Managed | HR Compliance Manager | 1 |
| | Talent learning & development Manager | 1 |
| | Talent Acquisition Manager | 1 |
| | Program Manager (Operations) | 1 |
| | Generalist HR Manager | 16 |
| Years of Experience | Up to 10 years | 17 |
| | Above 10 years | 3 |
| Gender | Female | 6 |
| | Male | 14 |
| Age | Below 30 | 2 |
| | 30 - 35 | 4 |
| | 35 - 40 | 13 |
| | Above-40 | 1 |

3.3. Data gathering and interview scheduling

We were able to contact a greater number of HR professionals located in various regions and we gathered information both offline and online. Interviews were done by the first author with participants between 2022 and the beginning of 2023. To facilitate the data collection, a semi-structured interview schedule was used. We created it in order to investigate the most recent adjustments made to the organization's HR procedures. We looked into employee innovation and inventive behavior at the HR practice level using a series of open-ended qualitative questions. The questions also highlighted the difficulties participants had comprehending employee-level support as well as the technology infrastructure and support during HRDT. The requirement for training to guarantee HRDT was another theme of the questions. Furthermore, we asked HR specialists to

explain the organization's organized approach to innovation, how to guarantee it, and the obstacles experienced by staff members. Finally, we asked the participants to list the current HR procedures and the modifications they anticipated taking place in the upcoming years. Most of the interviews had a conversation format. While the majority of the questions were asked of every participant, several of their answers raised specific questions. HR experts in the IT sector, for instance, talked about the revolutionary efforts that took place throughout the entirely online hiring process. A few emerging inquiries centered on the use of hiring methods and tools to support online recruiting.

3.4. Analysis of data

To find the patterns and themes that made up our conceptual model, we developed a quasi-grounded theory coding procedure (see Fig. 2). We started our investigation with word-by-word transcription of the tape-recorded interviews, which provided us with approximately 290 pages of detailed and detailed details. After member reviewing these transcripts, we used a three-step coding procedure that included open, axial, and selective coding (Malodia et al., 2021; Miles & Huberman, 1994). After completing the first round of open coding, the first two contributors produced a paper of 13 single-spaced pages. The first round of coding combined detailed participant descriptions (Strauss & Corbin, 1998) of the HRDT in their companies with the tools needed to complete it. Second-order codes were then grouped according to their applicability and assigned to various topics. The final framework for this research was developed through a meeting with all of the writers, who arranged the connected concepts into broad dimensions and established connections and patterns between them. For instance, there are three degrees of innovation capability as an overall dimension: individual, group, and organizational. Innovation implementation requires continuous integration of these levels. These themes also contained a number of subthemes, including team management, high-involvement work methods, and person-organization fit. We gradually created a framework for HRDT. Building such a framework can be facilitated by the organization's capacity for innovation as well as interventions like creating digital infrastructure and embracing digital architecture, as well as by the ability and creativity of the individual, guided, for example, by organizational culture, communication, and management support.

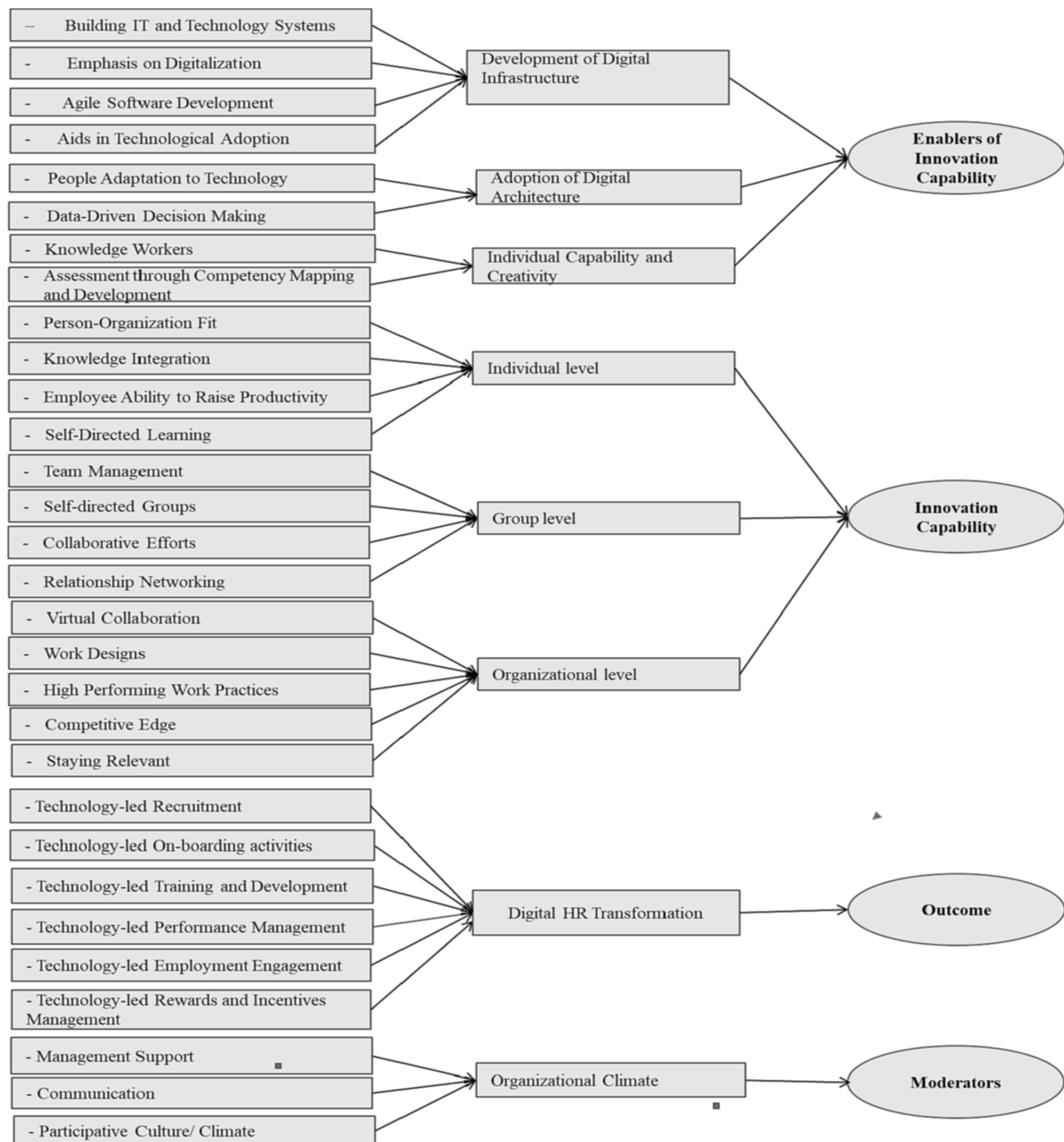


Fig. 1. Hierarchical Data Structure with Second-Order Codes, First-Order Themes, and Overarching Dimensions.

4. OUTCOMES

The goal of the current study was to investigate how, during the COVID-19 pandemic, HR departments adopted digital disruptions, leading to HRDT as a result of an organization's capacity for innovation. Digital transformation was once understood to be the adoption or updating of technology (Kraus, Durst, Ferreira, Veiga, & Kailer, 2021). The significance of human interventions and current procedures was entirely ignored by this understanding. Therefore, we began with the concept that if people lack the skills and creativity to assure innovation capability at all organizational levels, then technological and infrastructural initiatives toward transformation will stay unfinished (Saunila, 2020). We thus looked at the functions of people, procedures, and technology as key facilitators of innovation capacity.

Furthermore, as demonstrated by our research, management support, effective communication, and participative understanding all play moderating roles in our research framework, which is outlined below (see Fig. 2).

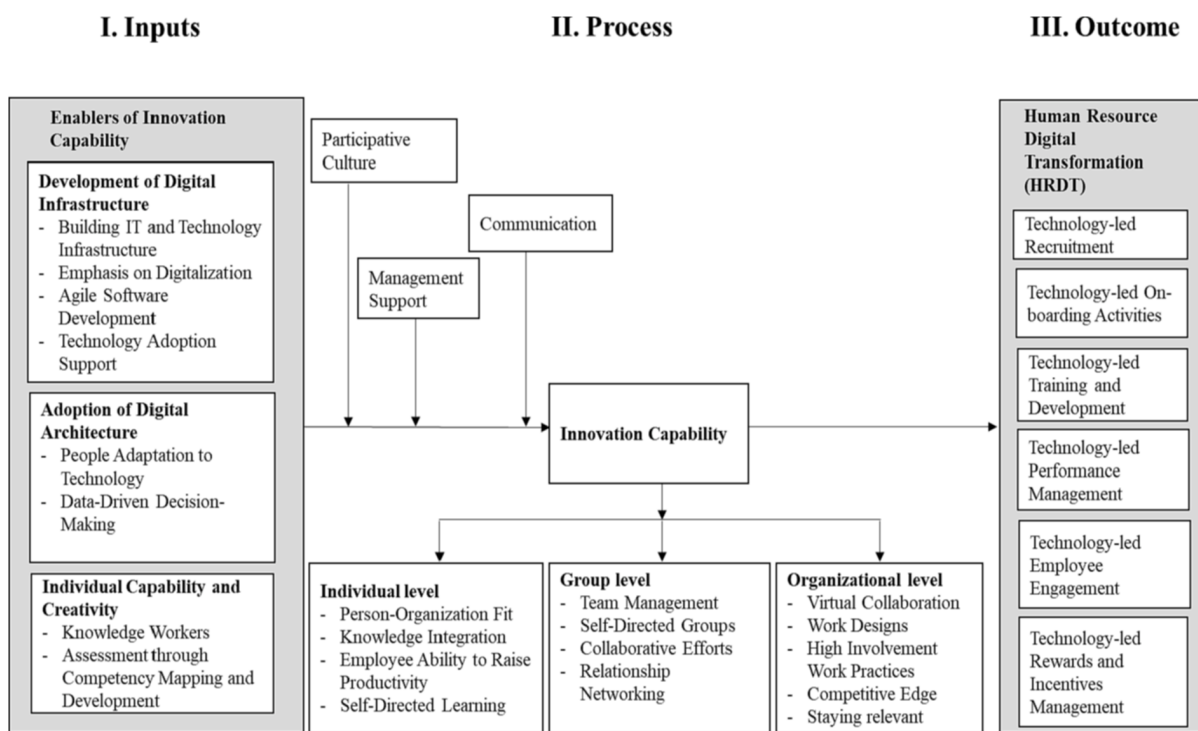


Fig. 2. Framework for Digital Transformation in Human Resource Management (HRDT).

4.1. Facilitators

By strategically integrating digital technologies, transforming businesses (Nambisan, Wright, & Feldman, 2019) by improvising on existing business processes, culture, and consumer expectations, and facilitating shifting market trends, digital transformation has gained importance in management practice and research (Sankar, 2021). Despite being widespread, HRDT is not just a result of technology. HRDT is aided by elements that increase the organization's capacity for innovation (John et al., 2017). So, we made an effort to investigate HRDT's fundamental innovation capacity. "The ability to continuously transform knowledge and ideas into new products-ucts, processes, and systems for the benefit of the firm and its stake- holders" is how Lawson and Samson (2001) describe innovation capability (p. 384). According to our research, innovation capability is the ability to create new business processes. According to our research, innovation capability is the ability to develop novel approaches to carrying out business tasks by skillfully assimilating new technologies, becoming knowledgeable about current procedures, and eventually making use of unique talents and inventiveness. Therefore, our research combines the three factors that foster an organization's capacity for innovation: the creation of digital infrastructure, the adoption of digital architecture, and the capacity and creativity of the individual.

4.1.1. Digital infrastructure development

The ability to drive Human Resources Development and Transformation (HRDT) through innovation hinges largely on the development of digital infrastructure. This underscores the imperative of having accessible technology and supportive infrastructure, centering on four key themes: advancing IT and technology systems, prioritizing digitization, fostering agile software development, and facilitating technology adoption. Businesses are recalibrating their operations and ethos to meet the imperatives of the digital era. According to Kristine, Ina, and Nick (2017), technological infrastructure comprises "physical, cultural, and digital arrangements that streamline working life in the complex, dynamic, and often unstructured working environment." The ongoing epidemic has catalyzed a significant shift from physical to virtual organizational operations, heightening reliance on technology and necessitating the fortification and enhancement of IT infrastructure. Furthermore, the entire HRDT framework within organizations is placing a robust emphasis on digitalization, defined as the adoption of innovative methods leveraging digital technologies and the Internet, encompassing big data, the Internet of Things, cloud computing, augmented reality, virtual reality, and artificial intelligence. The exigencies of the pandemic have propelled organizations towards technologically enriched personnel management and business practices.

To ensure the proliferation of digital infrastructure at the organizational level, fostering technology adoption is imperative. This includes providing virtual training on technology adoption and leveraging digital platforms to maintain and enhance engagement with teams. Companies are also partnering with external agencies to outsource agile software development, ensuring end-to-end business solutions. This proactive approach not only prepares organizations for contingencies like the pandemic but also enhances operational efficiency and employee experience.

4.1.2. Adoption of digital architecture

Webster's dictionary defines "architecture" as "the art and practice of designing and building structures, or the science or building of building or construction." However, today, the term is widely applied across various domains, including software, computers, and technological or digital architecture, which facilitates the conceptual and technical understanding of digital technology. Infrastructure constitutes the tangible collection of components comprising a system, while architecture delineates their design and interrelationships in greater detail (Winters, 2001). Despite their nuanced differences, both architecture and infrastructure play pivotal roles in organizational transformation. Modern businesses are urged to harness and optimize the existing digital infrastructure to enhance company efficiency, effectiveness, and competitive edge. Our research indicates that successful implementation of digital architecture hinges on two key elements: individuals adapting to technology and data-driven decision-making to foster innovation within the organization. The rapid evolution of information technology has profoundly impacted businesses, necessitating employees to stay abreast of technological advancements and transition traditional organizational tasks into virtual realms.

Several research participants highlighted the importance of technology adoption. For instance, Participant 8 remarked, "everyone is using the new technology and it is working very smoothly." Indeed, numerous system upgrades occurred during the pandemic, and individuals are adapting to the new normal. However, the success of Human Resources Development and Transformation (HRDT) necessitates collective support across all organizational departments, individuals, and overarching objectives. It cannot solely rely on individual initiatives. Many participants emphasized the need for collaborative teams to ensure successful execution. Moreover, data-driven decision-making significantly benefits HRDT. AI and IoT technologies have generated vast amounts of data, aiding strategic decision-making processes and facilitating the hiring of tech-savvy personnel. The tech sector witnessed a surge in demand for analytical skills in 2020, surpassing the need for traditional competencies (Kartik & Jeanette, 2021). Leveraging data for decision-making leads to superior outcomes in employee development and candidate recruitment.

4.1.3. Personal aptitude and inventiveness

Ultimately, our findings underscore the indispensable human element and underscore the pivotal role each individual plays in fostering the Human Resources Development and Transformation (HRDT) process. Original ideas serve as the catalyst for change, complemented by the requisite tools for their implementation. Our research identified two key factors influencing creativity: knowledge workers and competency mapping and development for evaluation. Knowledge management (KM) systems, as conceptualized by Damodaran and Olphert (2000), are instrumental in facilitating organizational learning by capturing and disseminating significant knowledge. These systems empower knowledge workers, providing them with a competitive edge and enabling effective leadership in HRDT initiatives. Participant 12 highlighted the importance of aligning knowledge delivery methods with the preferences and learning styles of employees, emphasizing interactive and experiential approaches.

Furthermore, knowledge workers are pivotal in introducing innovative working and processing techniques, leveraging insights gleaned from knowledge management systems. Participant 1 exemplified this by highlighting collaborative efforts with project managers and teams from diverse backgrounds to streamline processes and enhance client experiences. Competency mapping and development for evaluation emerged as crucial components in nurturing organizational creativity. Competency development enhances the organization's creative potential through team empowerment, while competency mapping delineates individual abilities. In response to the pandemic, businesses are intensifying their focus on digital competency mapping of current employees. Participant 1 illustrated this by integrating gamification into candidate selection processes, prioritizing problem-solving skills over traditional assessments. This adaptive approach ensures alignment with evolving organizational needs and challenges, fostering a culture of innovation and resilience. As a result, we propose the following:

P1: *Companies can better support HRDT if they make large investments in their technology infrastructure and architecture and are willing to expand individual resources.*

4.2. Capability for innovation

According to our research, HRDT's essential component is innovation capability. As a result, its promoters—discussed above—develop the capacity for innovation at the individual, collective, and organizational levels.

4.2.1. Capability for creativity at the individual level

Our research identifies four key themes—person-organization fit (PO fit), knowledge integration, employee productivity enhancement, and self-directed learning—as pivotal in fostering creativity at the individual level. PO fit, defined by Chatman (1989) as the alignment of personal values with organizational norms, not only influences job performance but also reflects overall compatibility with the company (Khalid Abed, Mohammed, & Bansal, 2020). One participant emphasized the importance of PO fit, highlighting how a referral mechanism streamlined hiring, ensuring better candidate matches for business development roles in the digital age. Additionally, information integration fosters individual-level creativity, especially amid the pandemic, with virtual platforms facilitating knowledge sharing. Participant 12 noted the challenge in

knowledge delivery methods initially but emphasized the effectiveness of case studies and real-life examples in bridging this gap.

Finally, our findings underscore self-directed learning as another catalyst for individual innovation, amplified by advancements in technology and blended learning approaches. Participant 15 highlighted how exposure to diverse tasks encourages lateral movement and personal growth within the organization. Thus, self-education yields significant benefits, contributing to individual and organizational adaptability and success.

4.2.2. Capability for group-level innovation

The organization has mobilized groups and teams to collectively manage work, communication, and adaptation amidst the pandemic. Our research reveals these groups as significant sources of innovative capability, contributing to overall HR transformation. Four key factors enhancing group-level creative capabilities were investigated: relationship networking, team management, self-directed groups, and collaborative efforts. Amidst the epidemic, virtual team management posed challenges, but it also facilitated interaction with diverse teams globally, fostering a sense of global networking among employees. Prioritizing team-building exercises positively impacts workplace culture and nurtures creativity. For instance, Participant 3 highlighted how diverse teams generate innovative ideas to overcome challenges, enriching the user interface.

Virtual group creation during pandemics spurred self-directed working methods, fostering decentralization in the virtual workplace. Participant 2 emphasized the company's commitment to innovation and empowering employees through autonomous work groups, enhancing accountability and self-governance. This autonomy exposes employees to diverse tasks, as noted by Participant 15, fostering growth opportunities. While team leaders set examples, every individual bears the responsibility to be imaginative and inventive. Ensuring all employee suggestions are valued fosters a culture of innovation, recognizing the potential for market disruption in even the smallest details.

4.2.3. Innovation capacity at the organizational level

Our research identifies five key themes contributing to organizational innovation capabilities: virtual collaborations, work design, high-performing work practices, competitive edge, and relevance. Virtual collaboration, leveraging internet tools to connect geographically dispersed teams, became imperative during the pandemic, enabling cost-effective operations through global outsourcing. Participant 1 exemplified virtual collaboration, utilizing software support for salary document processing from a partnered CA firm. Work design, as defined by Parker (2014), adapted to pandemic challenges, embracing decentralization, remote work, and diverse workforce arrangements. Participant 19 highlighted flexible work schedules and remote options as vital adjustments. Line managers gained autonomy, ensuring task completion within designated hours, as Participant 1 noted the enhancing labor efficiency. High-involvement work practices empowered employees, fostering engagement and innovation. Participant 5 emphasized a culture of inclusivity and idea generation, enhancing productivity. Recognition for contributions further bolstered innovation, as Participant 3 highlighted.

Ultimately, organizational innovation sustains relevance amidst disruption. The pandemic spurred a hybrid working model, with Participant 5 foreseeing a blend of offline and online services. Institutionalizing remote work reduces costs, as noted by Participant 12. However, challenges include articulating remote work benefits to candidates, as mentioned by Participant 12. Participant 13 highlighted increased work-from-home scenarios, anticipating continued virtual operations.

Thus, embracing digital transformation and hybrid models offers cost savings and flexibility, while addressing challenges of remote work integration and candidate perception is crucial for sustained innovation and relevance.

Consequently, we suggest:

P2: *Enablers at the technological and individual levels first foster an organization's capacity for innovation before they directly drive HRDT.*

P3: *The capacity for innovation, as shown at the individual, collective, and at the organizational levels is the central idea of HRDT.*

4.3. Moderators

Our research underscores the significance of innovation capability's antecedents while highlighting three moderators—management support, communication, and a participative culture—that accelerate this relationship significantly. Amidst the pandemic, individuals faced disruptions to their regular routines and workplaces. Management support, characterized by individualized care, gratitude, empowerment, and teamwork, fosters higher employee happiness and creativity, thereby enhancing organizational innovation. Participant 1 emphasizes senior management's role in supporting all roles, including the HR department, during change management. Effective communication is imperative in virtual workplaces, ensuring timely dissemination of information and strengthening bonds between employees and management. Open communication and transparency foster employee involvement in organizational innovation at both individual and group levels. Participant 1 advocates for a systematic communication approach, facilitating problem-solving and idea-sharing among employees.

Furthermore, a participative culture empowers employees to voice their ideas and concerns, contributing to organizational success. Maintaining regular communication channels and encouraging employee participation proved vital during the pandemic, as noted by Participant 7. Participant 1 highlights the buddy mentor program as a means to support new hires and foster a participative culture, acknowledging the challenges introverted employees may face in expressing themselves. In organizations valuing participation, employees feel empowered and motivated to contribute original solutions. Participant 3 underscores the importance of prioritizing task completion while allowing flexibility for innovative approaches.

Remote work presents unique challenges, necessitating acknowledgment of employees' voices and proper care for their well-being. Acknowledging and respecting employee voices ensures their optimal contribution to the organization's objectives, as emphasized by Participant 1. Finally, management support, effective communication, and a participative culture are instrumental in fostering innovation capability within organizations, particularly in navigating challenges like remote work during the pandemic. By prioritizing employee well-being and facilitating idea-sharing, organizations can maintain a motivated workforce and drive sustained innovation.

Therefore, we suggest:

P4: *An organization's participative culture, communication, and management support enhance the link between its innovation capability and the digital and individual-level enablers.*

4.4. HRDT

Our research underscores the pivotal role of innovation capability in driving the transformation of HR processes, termed HRDT, within organizations. This capability is facilitated by enablers such as technological infrastructure, architecture, individual capability, and creativity, while being moderated by top management support, internal communication, participative culture, and climate.

Amidst the pandemic, HR subfunctions like hiring, onboarding, performance management, training and development, and rewards and incentives management have undergone a significant digital transformation. Technology-driven recruitment methods, including virtual and social media hiring, have streamlined recruitment processes, making them more adaptable and appealing to potential candidates. Participant 13 highlights the elimination of traditional logic tests in favor of virtual interviews, which have become more convenient for both recruiters and candidates.

Furthermore, technology has facilitated virtual onboarding processes, allowing new hires to familiarize themselves with company culture and environment remotely. Initiatives like 360-degree virtual tours, as described by Participant 3, have enabled new employees to immerse themselves in the organization's architecture. Additionally, online orientation and induction programs have been developed to introduce new hires to company practices and colleagues. Technology-driven training and development initiatives have also gained prominence, with companies implementing virtual training programs to enhance employees' competencies. These programs, as described by Participant 1, cater to both seasoned workers and new recruits, focusing not only on technical skills but also on work culture and behavior.

Moreover, technology-led rewards and incentives administration has helped maintain high staff motivation. Participant 19 notes the shift towards providing online tools and individualized benefits, offering employees a variety of specialized options tailored to their specific needs and career stages. Financial and non-financial incentives further encourage competence and autonomy, fostering employee creativity and innovation, as emphasized by Participant 15. Thus, the integration of technology across HR functions has revolutionized traditional processes, making them more efficient, adaptable, and employee-centric. By embracing technology-driven approaches, organizations can enhance their innovation capability and maintain a competitive edge in today's dynamic business landscape.

To that purpose, we so suggest:

P-5: *One or two automated processes do not necessarily show HRDT overall. Instead, it is demonstrated via technology-driven hiring, onboarding, training, development, performance reviews, staff engagement, and rewards and incentives administration.*

In addition, we define the construct of HRDT as follows, drawing from the previously explained findings: "Human resource digital transformation, indicated in the digital upgradation of HR processes, is a multidimensional construct that results from an organization's innovation capability, enabled through the successful integration of its digital infrastructure, digital architecture, and individual capability and creativity."

5. DISCUSSION

Technology has revolutionized how HR operations are conducted, reshaping how businesses collect, and store, utilize, and share employee data. Failure to adapt to the digital landscape, as warned by Schwartz et al. (2001), could lead to "digital Darwinism," where inflexible companies may perish, leaving only those adept at technological integration to compete effectively. While integrating IT with business operations has long been advocated by business executives (Larkin, 2017), it was the HR department that accelerated this during the COVID-19 pandemic to ensure work continuity amid personal and professional upheaval (Prakash et al., 2019). However, this transition is not without challenges. Edelman (2020) highlights a scarcity of digital

talent in firms, and traditional organizations often lack expertise in leveraging digital resources effectively. Moreover, the rapid evolution of new technology and the uncertainties posed by the pandemic significantly impacted operational procedures (Varadaraj & Mahmoud, 2021). Grounded theory research offers a valuable approach to understanding HRDT, providing practitioners and scholars with a toolkit for navigating these challenges. Theoretical consequences of our study enrich our understanding of HRDT and advance HRDT theory, which has historically suffered from vague definitions. Our research focuses on conceptualizing HRDT as a multidimensional construct arising from an organization's innovation capability, facilitated by the successful integration of digital infrastructure, architecture, individual capability, and creativity. We provide a comprehensive conceptual framework, addressing enablers, moderators, and indicators, which were previously lacking. Furthermore, we emphasize the importance of innovation capability in achieving HRDT, stressing its role in facilitating agility, opportunity capture, and effective response to external stimuli. Building innovation capability requires continuous organizational effort at all levels, including infrastructure development, systems enhancement, and support for individual creativity and learning. Management support is crucial in ensuring the success of these endeavors.

Thus, our research underlines the pivotal role of individual creativity and organizational innovation capability in embracing modern technologies and advancing HRDT. By leveraging knowledge management systems to recruit and develop knowledge workers, organizations can enhance their capacity for innovation and navigate digital transformations effectively, ensuring their relevance and resilience in a rapidly evolving business landscape.

5.1. Theoretical Implication

The current study enriches our comprehension of HR Digital Transformation (HRDT) and contributes to its theoretical development, which has suffered from unclear terminology such as HR digitalization, digital HR, smart HRM, e-HRM, and sustainable HRM. While previous concepts attempted to elucidate technological disruptions in HRM, they fell short of defining HRDT comprehensively. Our research addressed this gap by meticulously examining related concepts and deriving insights from grounded-theory research. We define HRDT as a multidimensional construct resulting from an organization's innovation capability, facilitated by the integration of digital infrastructure, architecture, individual capability, and creativity. Expanding on the conceptualization of HRDT, which was previously lacking, our study offers a detailed framework with enablers, moderators, and indicators. Furthermore, we underscore the role of innovation capability in HRDT, as it equips organizations with tools to adapt swiftly and seize opportunities in dynamic environments. Our research highlights the ongoing nature of capability building and the need for organizational-wide investment in process enhancement. Emphasizing individual capability and creativity, our study addresses human capital as a barrier to digital adoption. We stress the importance of knowledge workers and competency development to enhance organizational capabilities and innovation. Overall, our findings contribute to a deeper understanding of HRDT and its implications for organizational success in the digital era.

5.2. Implications for practitioners

The results of this study have consequences for HR professionals, who have to continuously assess current procedures to ensure they remain applicable in light of evolving company needs. More precisely, we discuss the necessity of technology-driven HR transformation in the dynamic, uncertain, and complex times we live in today. We provide an explanation of the dynamic capability approach and come to the conclusion that an organization's capacity for continuous innovation and evolution is more essential to its survival than any one or a small number of capabilities. As a result, we provide practitioners the chance to consider the organization as a whole, look for digital infrastructure and architecture that is available, and emphasize personal creativity and capability to come up with creative solutions.

The emphasis on a person's creativity arises from the necessity to review job descriptions and provide adequate attention to the technical and creative components of these modifications. The emphasis on capability and creativity has to do with soft skills, inventive behavior, and critical thinking, whereas the emphasis on technical components asks for experience in robotics, big data analytics, programming, and smart system maintenance (Nicolas-Agustin et al., 2021). Businesses in the new digital era need to welcome HR digital innovations that provide innovative answers to specific business problems, particularly those that emerge during a crisis like the COVID-19 epidemic. For instance, our study focused on artificial intelligence and the application of HRIS to assist HR practitioners in gathering, storing, manipulating, retrieving, and analyzing data about talent (Silva & Lima, 2017). Additionally, innovations like analytics and augmented reality have strengthened employee engagement with the company and improved the HR experience (Parry & Battista, 2019). Furthermore, there is a movement from formal coaching to creating a culture of womb-to-tomb individual growth (Gok et al., 2021; Jarvis, 2010; Sloman, 2007), which supports Mikolajczyk's (2021) conclusions that learning, teaching, and relearning should happen while working. As a result, our research advances the understanding of the several HR activities that have been disrupted by digital technology and the subtleties associated with it.

Moreover, companies will need 40% of workers to continue working from home in 2025, up from the current 65% (Tata Consultancy Report, 2020). Consequently, HR shouldn't view this new digital HR scenario as a one-time or transitory requirement. With the right combination of digital technology, process, and strategy,

our study helps HR professionals become "future ready" and available to modify operational models more quickly and comprehensively, addressing not only pandemic-driven concerns but also a variety of business scenarios. Additionally, although companies were open to new technologies for a while, the pandemic's digital disruptions have drastically cut barriers to entry, opening the door for new, disruptive competitors like Uber and Netflix. Therefore, in order to stay ahead of the curve in terms of technology adoption, firms need to be proactive in the face of growing rivalry and competition. With the tools provided by our research, the HR function can be digitally transformed appropriately.

5.3. Conclusion

The findings of this study hold significant implications for HR professionals tasked with continually evaluating current practices to ensure their relevance amid evolving organizational needs. Specifically, we underscore the imperative of technology-driven HR transformation in today's dynamic, uncertain, and complex business environment. We advocate for adopting a dynamic capability approach, asserting that an organization's ability to continuously innovate and adapt is paramount for its survival, superseding any individual or limited set of capabilities. Thus, we offer practitioners the opportunity to holistically assess their organizations, leveraging existing digital infrastructure and architecture while prioritizing personal creativity and capability to foster innovative solutions. Our emphasis on individual creativity stems from the need to revise job roles, giving due attention to both technical and creative aspects of these revisions. This focus on capability and creativity encompasses soft skills, inventive behavior, and critical thinking, alongside technical proficiencies such as robotics, big data analytics, programming, and smart system maintenance. In the new digital era, businesses must embrace HR digital innovations that offer novel solutions to specific challenges, especially those arising from crises like the COVID-19 pandemic. For instance, our study explores the use of artificial intelligence and HR information systems (HRIS) to enhance talent management processes, including data collection, storage, analysis, and retrieval. Furthermore, innovations like analytics and augmented reality have enhanced employee engagement and improved the overall HR experience. There is also a shift towards fostering a culture of lifelong individual growth, supporting the notion that learning and development should occur continuously throughout one's career. As remote work becomes increasingly prevalent, with an estimated 40% of workers expected to continue working from home by 2025, HR professionals must view digital HR as a long-term strategic imperative rather than a temporary measure. Our study equips HR practitioners with the tools and insights needed to navigate digital transformations effectively, enabling them to adapt operational models swiftly and comprehensively to address various business scenarios, not just those prompted by the pandemic.

Moreover, as the pandemic has lowered barriers to entry for digital disruptions, companies face increased competition from disruptive newcomers. To maintain a competitive edge in technology adoption, firms must proactively embrace digital transformation. Our research empowers HR functions to lead the charge in digital transformation, ensuring organizations stay ahead of the curve amidst growing competition.

5.4. Research limitations and future directions

The report generates fresh insights through firsthand experiences of HR professionals navigating HR Digital Transformation (HRDT) during the COVID-19 pandemic. While the study offers valuable contributions, it acknowledges certain limitations that signal avenues for further exploration. Primarily, the onset of the pandemic likely impacted the efficacy of the chosen research methods. Combining online and offline data collection methods may have restricted rapport-building between interviewers and interviewees. Additionally, the integration of grounded theory with qualitative interviews might not yield widely applicable results. The long-term effects of pandemic-induced disruptions on corporate processes remain underexplored, necessitating quantitative validation of research findings. Continuous learning and skill adaptation are imperative for employees amidst the evolving HR landscape driven by sophisticated technological advancements.

Geographically diverse data would enhance the generalizability of findings beyond the limited scope of Indian locales covered in the study. Future research should explore cultural contexts beyond India to enrich understanding of HRDT's impact on organizational innovation.

Moreover, investigating the gig economy's response to the pandemic and its implications for HRDT would be insightful. Understanding the individual and organizational demands shaping HRDT's role in fostering growth warrants further exploration.

5.5. Contribution to Research

- The study offers a comprehensive description of the HRDT concept in addition to a thorough analysis of the several ways that digital disruptions have changed HR practices.
- Examining innovation capability as the central component of HRDT is encouraged by the dynamic capability approach. Therefore, the research endeavors to deconstruct the notion of innovation aptitude as a quality that is exhibited at various organizational levels, and consequently, examines the same at the individual, group, and organizational levels.
- The study provides a broader view of dynamic capability, which made it possible to incorporate individual

elements and technology.

5.6. Implications for HR

- To enable HRDT at various organizational levels, HR professionals must foster an atmosphere that embraces digital disruptors like robotics, big data analytics, machine learning, artificial intelligence, and smart system maintenance.
- To come up with creative solutions, HR professionals must consider the organization as a whole, search for accessible digital infrastructure and architecture, and be creative and capable of thinking outside the box.
- As a result, hiring managers may need to look for candidates with a high creative quotient.
- Employee engagement is increased when HR is involved in implementing HRDT.

5.7. Suggestions for future research

- Conducting interviews using a suitable combination of offline and online methods as part of HRDT investigations.
- An empirical investigation with a quantitative approach would support the current study's findings.
- Employees who work with modern technology must constantly learn new skills or perhaps overhaul their current ones. Future research is necessary to help L&D managers understand how to prepare their staff members for change.
- Since several elements might increase or decrease an innovation capability across different geographies, it is advisable to look into this across diverse cultures.

Bibliography

1. Adolph, S., Kruchten, P., & Hall, W. (2011). Reconciling perspectives: A grounded theory of how people manage the process of software development. *The Journal of Systems and Software*, 16(4), 1269–1286.
2. Agarwal, V., Mathiyazhagan, K., Malhotra, S., & Saikouk, T. (2021). Analysis of challenges in sustainable human resource management due to disruptions by Industry 4.0: An emerging economy perspective. *International Journal of Manpower*.
3. Agarwala, T. (2003). Innovative human resource practices and organizational commitment: An empirical investigation. *International Journal of Human Resource Management*, 14(2), 175–197.
4. Amla, M., & Malhotra, M. (2017). Digital transformation in HR. *International Journal of Interdisciplinary and Multidisciplinary Studies*, 4(3), 536–544.
5. Avanade. (2016). Global survey: consumer technologies are changing long-standing business processes and work cultures and impacting the bottom-line. <https://www.avanade.com/-/media/asset/point-of-view/work-redesigned-research-findings.pdf>.
6. Bansal, A., & Panchal, T. (2022). Training transfer during COVID-19 pandemic: A study of technology adoption in the training programs. In *Academy of management proceedings* (Vol. 2022, No. 1, p. 17553). *Briarcliff Manor, NY: Academy of Management*.
7. Becker, G. S. (1993). Human capital: A theoretical and empirical analysis, with special reference to education (3rd ed.). *Chicago: University of Chicago Press*.
8. Bengtsson, C., & Bloom, M. (2017). Human resource management in a digital era: A qualitative study of HR managers' perceptions of digitalization and its implications for HRM. *Sweden: Lund University School of Economics and Management. Unpublished Master's thesis*.
9. Bresciani, S., Huarng, K., Malhotra, A., & Ferraris, A. (2021). Digital transformation as a springboard for product, process and business model innovation. *Journal of Business Research*, 128(2), 204–210.
10. Bresciani, S., Huarng, K., Malhotra, A., & Ferraris, A. (2021). Digital transformation as a springboard for product, process and business model innovation. *Journal of Business Research*, 128(2), 204–210.
11. Bresciani, S., Huarng, K., Malhotra, A., & Ferraris, A. (2021). Digital transformation as a springboard for product, process and business model innovation. *Journal of Business Research*, 128(2), 204–210.
12. Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183–187.
13. Chanana, N. (2021). The impact of COVID-19 pandemic on employees organizational commitment and job satisfaction in reference to gender differences. *Journal of Public Affairs*, 21(4), 1–12.
14. Chatman, J. (1989). Improving interactional organizational research: A model of person- organization fit. *The Academy of Management Review*, 14(3), 333–349.
15. Chaubey, A., & Sahoo, C. K. (2019). Role of HR interventions in enhancing employee creativity and organizational innovation: An empirical study. *Industrial and Commercial Training*, 51(3), 195–206.
16. Cho, H. J., & Pucik, V. (2005). Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal*, 26, 555–557.
17. Clark, S. M., Gioia, D. A., Ketchen, D. J., & Thomas, J. B. (2010). Transitional identity as a facilitator of organizational identity change during a merger. *Administrative Science Quarterly*, 55(3), 397–438.

18. Damodaran, L., & Olphert, W. (2000). Barriers and facilitators to the use of knowledge management systems. *Behaviour and Information Technology*, 19(6), 405–413.
19. DeJardin, M., Raposo, M. L., Ferreira, J. J., Fernandes, C. I., Veiga, P. M., & Farinha, L. (2022). The impact of dynamic capabilities on SME performance during COVID-19. *Review of Managerial Science*, 1–27.
20. DiRomualdo, A., El-Khoury, D., & Girimonte, F. (2018). HR in the digital age: How digital technology will change HR's organization structure, processes and roles. *Strategic HR Review*, 25(1), 147–159.
21. Dong, & Yang. (2019). Business value of big data analytics: A systems-theoretic approach and empirical test. *Information and Management*, 57(1), 1–10.
22. Edelman, D. (2020, March 22). The war for digital talent is already here. Retrieved from Forbes: <https://www.forbes.com/sites/mckinsey/2012/01/23/the-war-for-digital-talent-is-already-here/?shd9eb25262cbf>.
23. Eisenhardt, K., & Martin, J. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121.
24. Emmy, G. (2016). Innovative HR practices: For revival and survival during economic slowdown. *Journal of Business and Management*, 50–56.
25. Farooq, A., & Shoaib, M. (2021). Psychosocial impacts of COVID-19 pandemic: A cross-sectional study of Mirpur, Pakistan. *International Review of Sociology*, 31(3), 470–486.
26. Farzaneh, M., Wilden, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research*, 148, 47–59.
27. Fenech, R., Baguant, P., & Ivanov, D. (2019). The changing role of human resource management in an era of digital transformation. *Journal of Management Information and Decision Sciences*, 22(2), 166–175.
28. Fenech, R., Baguant, P., & Ivanov, D. (2019). The changing role of human resource management in an era of digital transformation. *Journal of Management Information and Decision Sciences*, 22(2), 166–175.
29. Fenech, R., Baguant, P., & Ivanov, D. (2019). The changing role of human resource management in an era of digital transformation. *Journal of Management Information and Decision Sciences*, 22(2), 166–175.
30. Ferraris, A., Del Giudice, M., Grandhi, B., & Cillo, V. (2019). Refining the relation between cause-related marketing and consumers purchase intentions: A cross-country analysis. *International Marketing Review*, 37(4), 651–669.
31. Fitzgerald, L., Ferlie, E., Megivern, G., & Buchanan, D. (2013). Distributed leadership patterns and service improvement: Evidence and argument from English healthcare. *The Leadership Quarterly*, 24(1), 227–239.
32. Freel, M. S. (2005). Perceived environmental uncertainty and innovation in small firms. *Small Business Economics*, 25(1), 49–64.
33. Gerards, R., van Wetten, S., & van Sambeek, C. (2021). New ways of working and intrapreneurial behaviour: The mediating role of transformational leadership and social interaction. *Review of Managerial Science*, 15(7), 2075–2110.
34. Gerards, R., van Wetten, S., & van Sambeek, C. (2021). New ways of working and intrapreneurial behaviour: The mediating role of transformational leadership and social interaction. *Review of Managerial Science*, 15(7), 2075–2110.
35. Gerards, R., van Wetten, S., & van Sambeek, C. (2021). New ways of working and intrapreneurial behaviour: The mediating role of transformational leadership and social interaction. *Review of Managerial Science*, 15(7), 2075–2110.
36. Gibb, S., & Waight, C. L. (2005). Connecting HRD and creativity: From fragmentary insights to strategic significance. *Advances in Developing Human Resources*, 7(2), 271–286.
37. Gigauri, I. (2020). Effects of Covid-19 on human resource management from the perspective of digitalization and work life balance. *International Journal of Innovative Technologies in Economy*, 1–12.
38. Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. *Piscataway, NJ: Transaction*.
39. Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. *Piscataway, NJ: Transaction*.
40. Gok, K., Babalola, M. T., Sumanth, J. J., Lakshman, C., Vo, L. C., Decoster, S., Bansal, A., & Coskun, A., 2021. Enhancing employees' duty orientation and moral potency: Dual mechanisms linking ethical psychological climate to ethically-focused proactive behaviors. *Journal of Organizational Behavior*.
41. Goldstein, J. (2015). Digital technology demand is transforming HR. *Workforce Solutions Review*, 6(1), 28–29.
42. Gray, J., & Rumpe, B. (2017). Models for the digital transformation. *Software and Systems Modeling*, 16(2), 307–308.
43. Haverkort, B., & Zimmermann, A. (2017). Smart industry: How ICT will change the game? *IEEE*

- Internet Computing*, 21(1), 8–10.
44. Hecklau, F., Galeitzke, M., Flachs, S., & Kohl, H. (2016). Holistic approach for human resource management in Industry 4.0. *Procedia CIRP*, 54, 1–6.
 45. Hoffman, & Novak. (2017). Consumer and object experience in the internet of things: An assemblage theory approach. *Journal of Consumer Research*, 44(6), 1178–1204.
 46. Huhtala, J. P., Sihvonen, A., Frösén, J., Jaakkola, M., & Tikkanen, H. (2014). Market orientation, innovation capability and business performance: Insights from the global financial crisis. *Baltic Journal of Management*.
 47. Islam, N., Dhir, A., Talwar, S., & Walsh, S. (2021). Reimagining emerging technologies in the new normal: Forecasting growth trajectory, risk and resistance towards a friction free diffusion in varied industry verticals. *IEEE Technol. Eng. Manage. Special issue*.
 48. Jedynak, M., Czakon, W., Kuzniarska, A., & Mania, K. (2021). Digital transformation of organizations: What do we know and where to go next? *Journal of Organizational Change Management*, 34(3), 629–652.
 49. John, B., Tiffany, M., Rahnema, A., & Van, D. (2017). Global human capital trends 2017: Rewriting the rules for the digital age. In the organization of the future: Arriving now. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/human-capital/hc-2017-global-human-capital-trends-us.pdf>
 50. Julio, C., George, G., Miriam, G., & Richard, D. (2017). Navigating the new workplace: Technology, millennials and accelerating HR innovation. *AIS Transactions on Human- Computer Interaction*, 9(3), 243–260.
 51. Kaartemo, V., & Nystrom, A. (2021). Emerging technology as a platform for market shaping and innovation. *Journal of Business Research*, 124, 458–468.
 52. Kartik, R., & Jeanette, W. (2021, March 10). Tech looks to analytics skills to bolster its workforce. Retrieved from <https://www2.deloitte.com/us/en/insights/industry/technology/data-analytics-skills-shortage.html>.
 53. Khalid Abed, D., Mohammed, A., & Bansal, A. (2020). Servant leadership and affective commitment: The role of psychological ownership and person–organization fit. *International Journal of Organizational Analysis*, 29(2), 493–511.
 54. Khin, S., & Ho, T. (2018). Digital technology, digital capability and organizational performance A mediating role of digital innovation. *International Journal of Innovation Science*, 11(6), 1–20.
 55. Kraus, S., Durst, S., Ferreira, J., Veiga, P., Kailer, N.; Weinmann (2021) A digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63(4), 1–18.
 56. Kraus, S., Durst, S., Ferreira, J., Veiga, P., Kailer, N.; Weinmann (2021) A digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63(4), 1–18.
 57. Kristine, D., Ina, M., & Nick, M. (2017, June). The Digital Eorkplace is key to Gigital Innovation. *MIS Quarterly Executive*, 16(2), 135–152.
 58. Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: A dynamic capabilities approach. *International Journal of Innovation Management*, 5, 377–400.
 59. Loonam, J., Eaves, S., Kumar, V., & Parry, G. (2018). Towards digital transformation: Lessons learned from traditional organisations. *Strategic Change*, 27(2), 1–20.
 60. Lopez, C. A., Perez, L. A., & Valle, C. R. (2009). Knowledge as a mediator between HRM practices and innovative activity. *Human Resource Management*, 48(4), 485–503.
 61. Maditheti, N. N. (2017). A comprehensive literature review of the digital HR research filed. *Organization*, 4(7), 15–20.
 62. Makridakis, S. (2017). The forthcoming artificial intelligence (AI) revolution: Its impact on society and firms. *Futures*, 90, 46–60.
 63. Malodia, S., Dhir, A., Mishra, M., & Bhatti, Z. A. (2021). Future of e-Government: An integrated conceptual framework. *Technological Forecasting and Social Change*, 173, Article 121102.
 64. Manuti, A. (2017). Digital HR: A critical management approach to the digitalization of organizations. *Cham: Springer*.
 65. Mikolajczyk, K. (2021). Changes in the approach to employee development in organisations as a result of the COVID-19 pandemic. *European Journal of Training and Development*, 46(5/6), 544–562.
 66. Minbaeva, D. (2021). Disrupted HR? *Human Resource Management Review*, 31(4).
 67. Naderifar, M., Goli, H., Ghaljaie, F., 2017. Snowball sampling: A purposeful method of sampling in qualitative research. *Strides in Development of Medical Education Journal*, 14(3), 1–4.
 68. Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8), 1–20.
 69. Nicolas-Agustin, A., Jimenez-Jimenez, D., & Maeso-Fernandez, F. (2021). The role of human resource practices in the implementation of digital transformation. *International Journal of Manpower*, 43(2), 1–26.
 70. Nicolas-Agustin, A., Jimenez-Jimenez, D., & Maeso-Fernandez, F. (2021). The role of human resource

- practices in the implementation of digital transformation. *International Journal of Manpower*, 43(2), 1–26.
71. Ogbeybu, S., Pereira, V., & Burgess, J. (2021). Responsible innovation in organisations – unpacking the effects of leader trustworthiness and organizational culture on employee creativity. *Asia Pacific Journal of Management*. <https://doi.org/10.1007/s10490-021-09784-8>
 72. Palmer, I., Dunford, R., & Buchanan, D. (2017). *Managing organizational change: A multiple perspectives*. New York: McGraw-Hill Education.
 73. Palumbo, R., Manesh, M. F., Pellegrini, M. M., & Flamini, G. (2021). Setting the conditions for open innovation in the food industry: Unravelling the human dimension of open innovation. *British Food Journal*.
 74. Parker, S. (2014). Beyond motivation: Job and work design for development, health, ambidexterity, and more. *Annual Review of Psychology*, 65, 661–691.
 75. Parry, E. & Battista, V. (2019). The impact of emerging technologies on work: A review of the evidence and implications for the human resource function. *Emerald Open Research*, 1(5), 1–6.
 76. Pastor, et al. (2010). Managing knowledge through human resource practices: Empirical examination on the Spanish automotive industry. *The International Journal of Human Resource Management*, 21(3), 2452–2467.
 77. Peteraf, M., Stefano, G., & Verona, G. (2013). The elephant in the room of dynamic capabilities: Bringing two diverging conversations together. *Strategic Management Journal*, 34(2), 1389–1410.
 78. Prakash, N., Krishna, G., & Mores, G. (2019). Digitalization of HRM practice in the present scenario. *International Journal of Research in Management Studies*, 4(1), 1–5.
 79. Prakash, N., Krishna, G., & Mores, G. (2019). Digitalization of HRM practice in the present scenario. *International Journal of Research in Management Studies*, 4(1), 1–5.
 80. Rajapathirana, R., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation & Knowledge*, 3(1), 44–55.
 81. Sankar, et al. (2021). Human Resource Digital Transformation of IT Sector in India. *Webology*, 18(1), 219–232.
 82. Sankar, et al. (2021). Human Resource Digital Transformation of IT Sector in India. *Webology*, 18(1), 219–232.
 83. Saunila, M. (2020). Innovation capability in SMEs: A systematic review of the literature. *Journal of Innovation & Knowledge*, 5(4), 260–265.
 84. Schallmo, D., & Williams, C. (2017). Digital transformation of business models-best practices, enablers and roadmap. In *XXVIII ISPIM innovation conference – Composing the innovation symphony, Austria, Vienna*.
 85. Schwab, K. (2016). *The fourth industrial revolution*. New York: Crown Business.
 86. Schwartz, S., Melech, G., Owens, V., Lehmann, A., Burgess, S., & Harris, M. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519–542.
 87. Schwartz, S., Melech, G., Owens, V., Lehmann, A., Burgess, S., & Harris, M. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519–542.
 88. Scott, S. (2020, March 31). The coronavirus and public service media: why digital transformation matters now more than ever. Retrieved from *The European Broadcasting Union*. <https://www.ebu.ch/news/2020/03/the-coronavirus-and-public-service-media-why-digital-transformation-matters-now-more-than-ever>.
 89. Silva, M. S. A., & Lima, C. G. d. S. (2017). The role of information systems in human resource management. *Management of information systems*. Intech Open. doi: 10.5772/intechopen.79294.
 90. Silva, M. S. A., & Lima, C. G. d. S. (2017). The role of information systems in human resource management. In *Management of information systems*. Intech Open. doi: 10.5772/intechopen.79294.
 91. Stephanie, C. (2021, July 7). Global retail e-commerce sales 2014–2024. Retrieved from *Statista*: <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>.
 92. Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Grounded theory procedures and techniques*. CA: Sage.
 93. Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management*, 34(3), 345–365.
 94. Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management*, 34(3), 345–365.
 95. Taherparvar, N., Esmailpour, R., & Dostar, M. (2014). Customer knowledge management, innovation capability and business performance: A case study of the banking industry. *Journal of Knowledge Management*, 18(3), 591–610.
 96. Tata Consultancy Report, 2020. Research: 40% of employees will work from home by 2025, Consultancu.eu. 20th November, 2020. <https://www.consultancy.eu/news/5273/research-40-of-employees-will-work-from-home-by-2025>
 97. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic*

- Management Journal*, 18(7), 509–533.
98. Thakur, M., Bansal, A., & Maini, R. (2018). Job sharing as a tool for flexible work systems: Creating opportunities for housewives in the Indian Labor Market. *Gender in Management: An International Journal*, 33(5), 350–366.
 99. Thomas. (2016). Disruptive technology and strategies for human resource management. *International Journal of Human Resource and Industrial Research*, 3(6), 67–78.
 100. Van Maanen, J. (1979). Reclaiming qualitative methods for organizational research: A preface. *Administrative Science Quarterly*, 24(4), 520–526.
 101. Varadaraj, A., & Mahmoud, B. A. (2021). A study on contribution of digital human resource management towards organizational performance. *International Journal of Management Science*, 7(5), 43–51.
 102. Wang, X., Qin, Y., Xu, Z., & Skare, M. (2022). A look at the focus shift in innovation literature due to Covid-19 pandemic. *Journal of Business Research*, 145, 1–20.
 104. Warner, K., & Wager, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52, 326–349.
 105. Wei, L. Q., & Lou, C.-M. (2005). Market orientation HRM importance and competency; Determinants of strategic HRM in Chinese firms. *International Journal of Human Resource Management*, 16(10), 1901–1918.
 106. Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. February 2015. Retrieved from: *MIT Sloan Management Review*, 18 <https://sloanreview.mit.edu/article/revamping-your-business-through-digital-transformation/>.
 107. Winters, E. (2001). Architecture, meaning and significance. *The Journal of Architecture*, 1 (1), 39–47.
 108. Zawislak, P. A., Cherubini Alves, A., Tello-Gamarra, J., BarbieuX, D., & Reichert, F. M. (2012). Innovation capability: From technology development to transaction capability. *Journal of technology management & innovation*, 7(2), 14–27.
 109. Zhang, Z., Zahid, Y., & Muhammad, Y. (2021). Nexus of digital organizational culture, capabilities, organizational readiness and innovation: Investigation of SMEs operating in the digital economy. *Sustainability*, 13(720), 1–15.
 110. Zhen, Z., Yousaf, Z., Radulescu, M., & Yasir, M. (2021). Nexus of digital organizational culture, capabilities, organizational readiness, and innovation: Investigation of SMEs operating in the digital economy. *Sustainability*, 13(720), 1–15.