

# Research note: the strategic use of digital learning solutions for employee development: implications for employee relations

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## Abstract

The move towards digital technologies for employee training and development is increasingly imperative for organisations in a globalised and digitally connected society. This trend has been accelerated by a Covid-19 work environment where employers grapple with training and development through remote technologies. Consequently, employees are increasingly expected to make multifaceted decisions about their personal development in an uncertain technological environment. Within this environment, organisations are also under pressure to leverage their digital offerings to be more innovative and strategic. The adoption of digital learning solutions (DLS) for employee learning and development strategy has profound implications for their development and relationship with the organisation. This research note explores the implications of moving towards DLS through strategic reflections from human resources managers in New Zealand. Our findings suggest three critical strategic tensions that dominate HR managers' thinking on adopting DLS: strategic rationales, organisational imperatives, and cognitive barriers. Finally, we discuss the implications of these critical tensions in technology adoption for employee development and employee relations.

**Keywords:** digital learning, strategic human resource management, organisational learning, learning and technology

## Introduction

With the increasing use of innovative technology for managing employees in many organisations, the human resource management (HRM) function has seen a shift towards the digitalisation of its essential functions and processes to become more innovative, dynamic, and strategic, such as for employee development (CIPD, 2015; Deloitte University Press, 2015). Scholars define the digitalisation of HR as the incorporation of digital technologies in the organisational business model along with the alignment of the organisational practices, processes and culture (Gartner, 2017; Bondarouk et al., 2017). In this context, digital learning solutions (DLS) are technology-laden learning tools that form a part of the broader umbrella

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term of e-HRM, referring to the applications and processes resulting from the overlap between HRM and IT (Beamish et al., 2002). These tools are expected to contribute toward building an organisation's intellectual capital, hence enhancing employee performance through their development, which may serve as a sustainable source of competitive advantage to the organisation (Karakas & Manisaligil, 2012; Beamish et al., 2002).

Recently, remote working and changing work conditions have changed dramatically sparking a noticeable increase in digital learning tools and technologies, despite their effectiveness remaining contested (CIPD, 2017). As DLS becomes more ubiquitous, education, skill development, and work-based learning are now seen as approaches to increasing an organisation's resilience spurred by the lessons learnt in the response to the Covid-19 pandemic (ILO, 2020). Therefore, implementing DLS has ranked as one of the key priorities of learning and development professionals (CIPD, 2017; Deloitte University Press, 2015; 2016). This imperative is in concert with greater demand for the workforce to become more "digitally native", alongside expectations for a more digital ecosystem for work highlighting greater emphasis on DLS implementation (Küpper et al., 2021; Zehir et al., 2020). Congruently, just-in-time, self-directed learning, which is collaborative and engaging, is also becoming a dominant discourse for employee development (Waldkirch et al., 2021; Bruck, 2012).

Digital learning solutions offer a critical opportunities for organisations and strategic human resources management (SHRM) to be more calculated and improve human resource potential. With the increasing use of social media for employee voice (Holland et al., 2016; Martin et al., 2015), a greater use of technology for employee surveillance (Tham & Holland, 2022; Holland et al., 2022), and the advent of artificial intelligence (AI) and big data analysis for automated decision-making and predictive hiring (Noack, 2019; Garcia-Arroyo & Osca, 2021), the implications and ethical considerations in employing innovative technology to manage employees are beginning to lag its swift deployment in organisations. This contemporary landscape has led SHRM scholars to recommend taking into account a greater range of stakeholder perspectives, including employees (Collings et al., 2021) and a broader conceptualisation of the partnership between employer and employee (Dachner et al., 2021).

Digital learning solution can serve as standalone training solutions or can be used in combination with other traditional learning methods. Pre-pandemic, they were utilised as supplemental training to build upon the existing organisational learning strategy to engage larger audiences (Göschlberger & Bruck, 2017). Subsequently, DLS is progressively ubiquitous in organisations' application of learning and development (Mrowinski et al., 2021; Budhwar et al., 2022). However, alongside the increased use of DLS, ' the strategic and ethical relevance of digital technologies has lagged behind managerial thinking and scholarly research (Harney & Collings, 2021; Cascio, 2019). A range of issues, including organisations' training and development responsibilities, digitalisation of functions and roles, and the consistency of practice around technology use, are becoming more pertinent to the use of DLS in organisations (Anlesinya & Amponsah-Tawiah, 2020; Burke & Saks, 2009; Wiblen & Marler, 2021; Cheng & Hackett, 2021).

## **Digital learning technologies and employee learning**

The emergence of digital tools, such as social media learning, massive open online courses (MOOC), and micro-learning (Chou, 2015; Göschlberger & Bruck, 2017), has transformed how learning is delivered; but it is critical to understand that digital learning cannot deliver results if not used appropriately. Most DLS research has explored its adoption and implementation issues, often from a practitioner's perspective (Deloitte University Press, 2015; 2016; Karakas & Manisaligil, 2012); and most of this research considering their strengths and weaknesses (Lee et al., 2015; Dodson et al., 2015; Savino, 2014). Studies have examined performance factors, such as interactivity (Armstrong & Landers, 2018), experiential elements (Karakas & Manisaligil, 2012), and feedback mechanisms (Göschlberger & Bruck, 2017; Strother, 2002) while others examined design factors that motivate employees (Dodson et al., 2015); for example, the level of personalisation DLS offers (Bruck, 2012), the frequency with which it updates to keep up with the speed of learning (Gassler et al., 2004), and the choice of platform and the field of learning (Lee et al., 2015).

Other research has considered the organisational and contextual factors of DLS, such as effectiveness and delivery (Armstrong & Landers, 2018; Bondarouk et al., 2017; Strother, 2002), rollout time (Savino, 2014), frequency of use (Armstrong & Landers, 2018), and costs of the resources (Armstrong & Landers, 2018; Gassler et al., 2004). Additionally, organisational factor studies have examined supportive contexts that enhance DLS use, such as culture (Sutherland Olsen, 2016), the sociocultural context (Bierema, 2002; Park & Wen, 2016) and the organisational infrastructure (CIDP, 2017). Ultimately, these studies provide insight into DLS' successful adoption and implementation.

Despite this, organisations continue to struggle with decisions to adopt and implement innovative technologies for learning and development (Göschlberger & Bruck, 2017). According to commentators, the emergence of AI and its ability to work with current DLS tools and future technology may disrupt how training and development are conceptualised and delivered in organisations (Maity, 2019; Bhatt & Muduli, 2023). While the fast pace of technological advancements has supported the introduction of digital learning tools in the workplace, it has also increased employment challenges; for example, learning and development professionals are also struggling to keep pace with the need to align training delivery with employees' rapidly changing organisational needs and technological literacy (Cabanero-Johnson & Berge, 2009). With increasing digital tools offering just-in-time, flexible, cost-effective, and engaging learning solutions that deliver consistent content, including AI or virtual reality, emerging technologies need to be considered by HR managers to revamp their organisational learning strategy (Strohmeier & Parry, 2014). Thus, by preparing employees for digital transformation in the business environment, they allow employees to build a competitive advantage for the organisation (Nimmi et al., 2021).

However, empirical research showing effects on financial/HR returns reveal mixed results (Minbaeva, 2017; Brynjolfsson & Hitt, 1996; Reddick, 2009). Wang et al. (2002) suggest that, to be effective, DLS should match HRM strategy while, others argue that such technological investments may damage employee interests and needs (Angrave et al., 2016). Academic research still lags behind practitioner practice and highlights a more cautious approach to using technology and its implementation (Rasmussen & Ulrich, 2015; Marler & Boudreau, 2017). Questions regarding how and why organisational decision makers adopt and implement technology remain, especially for organisations' learning and development strategies (Holland et al., 2022; Cascio, 2019). Thus, this research note investigates HRM managers' strategic thinking on digital learning to understand how DLS shapes learning and development and its implications for employee development and relations. Our research question asks "how do human resource managers strategically make decisions on adopting and implementing digital learning in New Zealand organisations?"

## **Method**

The study's research design aims to understand how strategic thinking of DLS and its adoption in New Zealand impacts employees; thus, we adopted an exploratory qualitative approach to understand HR managers' sense-making and strategic thinking around DLS strategy and adoption (Denzin & Lincoln, 1994; Glaser & Strauss, 1967). We utilised in-depth semi-structured interviews with six HR managers of various organisations and industries in New Zealand. Participants provided rich, in-depth insights about their perspectives on the strategy and adoption of digital learning solutions (DiCicco-Bloom & Crabtree, 2006). Semi-structured interviews included questions about strategy making and perceptions of DLS. The use of open-ended predictive questions gave room for exploring other relevant areas that may not have been anticipated earlier, thus leading to the exploration of new areas (Gray, 2013). Our criteria were HR managers with at least five years of experience in HR or learning and development. This criterion supported the selection of only those participants with sufficient experience to provide valuable insights for the research (Gray, 2013; Kothari, 2004). We report on our data showing how HR managers strategically think about the DLS. Our data analysis involved a grounded theory approach (Gioia et al., 2013; Strauss & Corbin, 1998), mapping the thematic dimensions of their strategic thinking and imperatives around DLS. Table 1 presents the role and industry experience of our participants, including their backgrounds.

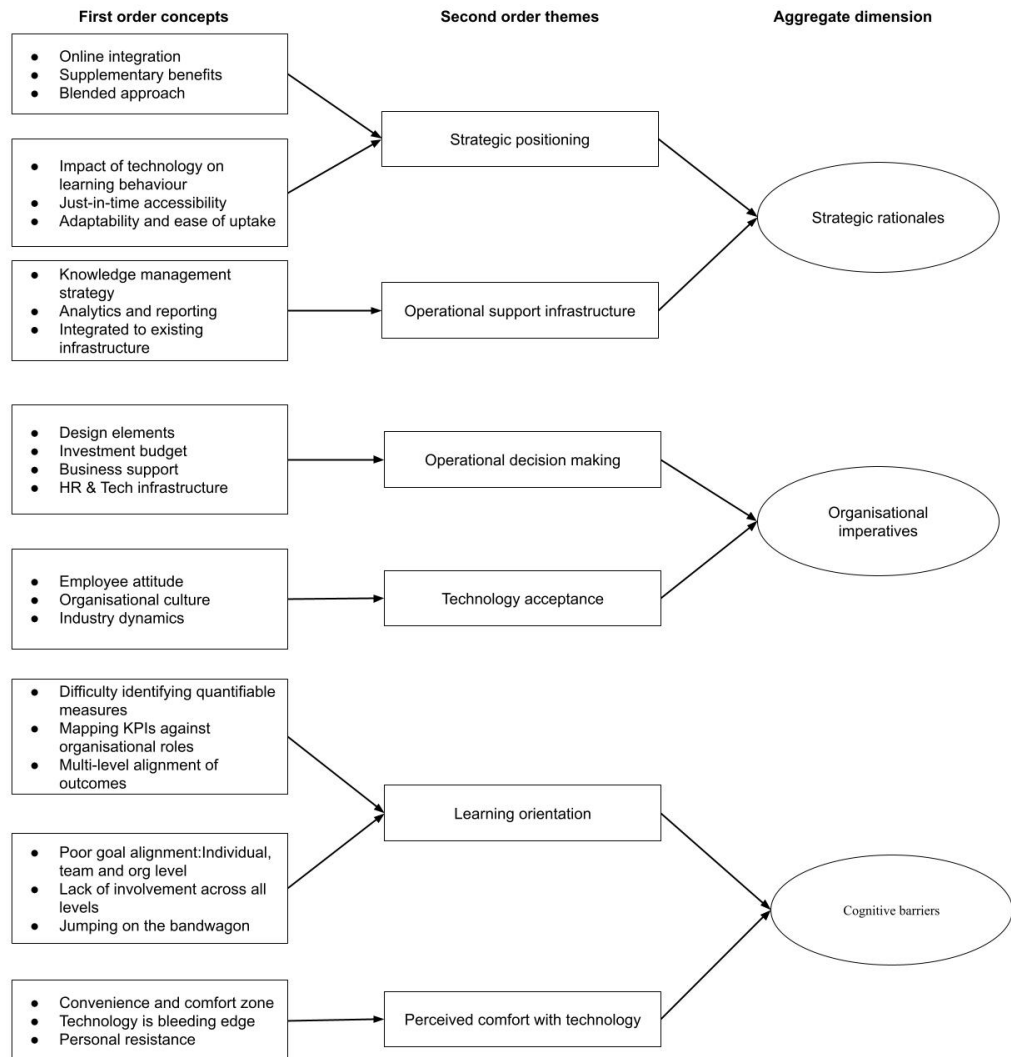
**Table 1. Participant role and industry experience**

<b>Participant</b>	<b>Role</b>	<b>Industry</b>	<b>Industry experience</b>
Kate	HR Manager	Aged Care (New Zealand based)	30+ years of experience in diverse HR roles spanning hospitality, legal & professional services, accounting, engineering and healthcare firms.
Kimberley	HR Business Partner	Information Technology (Global organisation with headquarters in New Zealand)	15+ years of experience in diverse HR roles spanning healthcare, media electronics, energy, telecommunications, and banking industries.
Steve	Capability Manager	Food (Global organisation with headquarters in New Zealand).	12+ years of experience in learning and development (L&D) roles spanning across telecommunications, financial services and food industries.
Rebecca	Manager – Learning and development	Legal (New Zealand based).	18+ years of experience in HR roles, predominantly L&D roles within local and international law firms.
Susan	HR Business Partner – L&D	Telecommunications (Global organisation with Headquarters in New Zealand).	10+ years of experience in HR roles, predominantly L&D roles within the telecommunications industry.
Mona	Learning and development	Specialist business consulting services (New Zealand based).	35+ years of experience in senior HR generalist roles before becoming an L&D specialist. Mostly worked for governmental organisations before becoming a L&D tools and service provider.

## Research findings

Figure 1 below summarises the data structure of participants' strategic thinking around DLS. As described above, our findings demonstrated the translation of raw data (first-order concepts) to abstractions based on the existing literature (second-order themes and aggregate dimensions). This visual structure makes it easier to understand the context of these themes

and the dimensions of HR managers' strategic thinking. Our analysis reveals three important aggregate dimensions from the interviews: strategic rationales, organisational imperatives, and cognitive barriers.



**Figure 1. Data structure of HR managers' strategic thinking of DLS adoption and implementation.**

*Strategic rationales*

Strategic rationales comprise the strategic positioning of DLS in the overall organisational learning strategy and the organisation's operational support infrastructure. Strategic rationales identify how and where DLS fit within the organisational learning strategy and the sustainability of these DLS overall. Given the context of technological advancement and the

organisation's strategic positioning, HR managers weigh the value of DLS concerning the organisation's existing operational capabilities and infrastructures.

Strategic rationales align with strategic HRM's views of competitive advantage and resource considerations (Barney, 2001; Boxall, 2014). The HR managers often mentioned the concepts of "*self-directed learning*" and "*promoting a culture of learning*". It was evident that the HR managers interviewed were endeavouring to strike the right balance between focusing on strategic and operational imperatives. Given the managerial nature of their role, this also explains why establishing a link to organisational strategy and organisational outcomes is of utmost importance to the HR managers because the onus is on them to create value. However, balancing the needs of the business and the employees highlights a need to reconcile sometimes competing needs. This tension between strategic and operational requirements often results in a lack of planned strategic orientation and poor integration with HR systems and the organisational culture.

### *Organisational imperatives*

Organisational imperatives identified critical organisational issues when considering the adoption of DLS. These included the tensions between the benefits of a particular type of DLS and the impact on day-to-day organisational functioning. For example, it is important to ensure that the introduction of DLS does not alter the fundamental ways people interact with existing technology and familiar practices. These organisational imperatives include the degree to which organisational members resisted or supported the use of technology, which can affect the likelihood of success or failure of the DLS (as documented in the literature above). Organisational imperatives also include resource constraints. All HR managers said they must use their limited resources carefully to ensure they "*contribute to organisational performance and goals*". Thus, the desired innovative learning solution must fall within budgetary constraints. Concurrently, HR managers must also assess the support or resistance they may receive from management and business support functions.

Organisational imperatives highlight tensions between organisational work and employee development, making HR managers wary of the worth of DLS implementation and use. Moreover, the organisation's HR and IT infrastructure strength adds to the HR managers' resource allocation dilemma – whether it is wise to adopt a learning platform with added integration costs to existing internal processes and systems. Furthermore, HR managers are also responsible for working through the employees' "*time constraints*". The adoption and implementation of DLS also carry the costs of non-uptake of the DLS. HR managers must devise a learning strategy that balances this tension while accounting for the diverse types of learners and job role dynamics, a significant decision with profound implications for the organisation.

*Cognitive barriers*

Cognitive barriers highlight HR managers' perceptions of organisational decision makers' impact on DLS decisions. Cognitive barriers demonstrate the uncertainty associated with adopting innovative technologies and include issues such as DLS uptake, alignment with organisational learning strategy, level of awareness of the technology, comfort with technology, and goal clarity. Central to this aggregate dimension are the decision makers' cognitive limitations and biases. Decision makers must understand how the technology will work and how it should be embedded into the organisation. HR managers said they might tend to "*stay in their comfort zones*" and give "*lame excuses*" when explaining how a technology will be used or how it might be adopted.

Cognitive barriers demonstrate the tension between HR managers' understanding of learning versus their understanding of technology. These tensions can lead to a slow uptake of DLS and limit the successful implementation of DLS in the organisation. Cognitive biases may also permeate the organisation through prior experiences with other technology implementation, discouraging employee or peer feedback, lack of support from management or support functions or HR and IT system issues and can profoundly influence the decision to use DLS in organisations.

### **Discussion: implications for employee development and employment relations**

With the increasing impact of digital technologies on organisations, this article investigated HR managers' strategic thinking on digital learning to understand how DLS shapes learning and development and its implications for employee development and relations. The consideration of DLS for organisations by HR managers provides an opportunity to uncover the potential implications for considering the impact of technologies on the shape of employee development and employment relations for organisations. In this stead, the fourth wave of the industrial revolution has profoundly impacted organisations, industries and countries alike (Zehir et al., 2020). Consequently, new technologies replacing traditional systems and processes have already begun to shape a divergence of most organisations' current work conditions and contexts (Harney & Collings, 2021; Hodder, 2020; Kniffin et al., 2021). Butterick and Charlwood (2021), in a recent indictment of HRM for workplace inequalities exposed by the pandemic, suggested that adopting technology to monitor and control worker behaviour, such as DLS, may have profound long-term negative consequences such as deep-labour market and workplace inequalities. These deep-rooted inequalities include the unfair distribution and perpetuation of society's access to technology and digital literacy (Bejaković & Mrnjavac, 2020; Journell, 2007). Consequently, digital inequalities may limit labour mobility and create a more stratified society (Lutz, 2019). Holland et al. (2022) cast these emerging issues as 'smart' or 'dark' side effects of technology, where implications have both advantages and adverse outcomes. As such, organisations should not be complacent in responding to the negative consequences that DLS can bring.



Our participants highlight that DLS will be increasing in terms of its strategic and operational importance due to contemporary trends in the workplace. Their strategic decision making, which evolves around three tensions, strategic/operational, work/learning, and learning/technology, demonstrates HR managers' critical thematic decisions regarding adopting and implementing DLS in their organisations. We detailed how these tensions significantly affect employee development and employment relations in the organisation, above. First, we identify the implications for employee development; with the strategic/operational tension, implications for employee development include setting the balance between control and autonomy. Past research suggests that with more flexible delivery methods, an individual's work-life balance, relationships with managers, and job characteristics can influence the relationship with employee learning and development (Dachner et al., 2021; Tews et al., 2016). As this new workplace context begins to question the onus of responsibility for learning and development, organisations will begin to consider control and surveillance issues (Holland et al., 2022); whilst considering the freedom of autonomy such technology entails.

Second, regarding the employment relationship, such decision tensions point to the burgeoning encroachment of time and resource constraints for employees as technology permeates work and personal boundaries (Butterick & Charlwood, 2021). This leads to important implications for employee wellbeing. This tension highlights organisational versus employee expectations of productivity and performance. This tension between strategic/operational tension and the blurring of time and resource constraints on individuals poses a challenge for organisations and their employees in balancing their workloads. Without adequate attention to employees' health and safety and ways of collaboration in organisations, redefining organisational performance may need to be reconsidered in this new context (Caligiuri et al., 2020; Minbaeva & De Cieri, 2015).

Alongside the above strategic/operational tensions, organisational imperatives suggest that DLS adoption and implementation may also lead to tensions between *doing* work and an increasing expectation for ongoing preparation for future knowledge, skills and personal development needs. As a result of this tension, it is apparent that benefits from DLS implementation may not benefit all employee groups, as digital literacy and access to digital technology are not evenly distributed throughout organisations (Strohmeier & Parry, 2014; Bejaković & Mrnjavac, 2020). Bejaković and Mrnjavac (2020) demonstrate that an individual's social and digital inclusion profoundly influences their employability and enhances economic growth, suggesting that moves towards DLS favours particular privileged groups. Scholars warn that profound labour market and work segregation can result from this access to technology and digital literacy if organisations and managers do not consider the needs of particular groups (Halteh et al., 2018; Duggan et al., 2020). Additionally, digital inequality may be exacerbated or sustained without adequate addressing of this issue in organisations.

Finally, the tension between learning and technology resulting from cognitive barriers highlights significant issues for employee engagement and employee voice. As HR managers

consider the types of DLS to implement for learning and development, their limitations in understanding the learning style and preferences of the labour market will evolve with the rapid evolution of learning technologies, an area of concern also for the education sector (Mayes, 2018; Urbina et al., 2021). Learning and development receivers' participation in DLS's design, development and implementation is recommended to improve their psychological motivation (Rosli & Saleh, 2022). Therefore, employee engagement issues with using DLS may be a central feature of managing organisational learning and development (Heo et al., 2021; Chiu et al., 2021). Aside from who benefits from employee development in the organisation, this tension is also associated with employee voice in learning and development. As learning and development become more personalised and customised, how would collaboration in learning and development appear with the advent of DLS adoption and implementation? One recent study suggests that employee voice has more to do with technology channels than managerial responses (Ellmer & Reichel, 2021). Table 2 summarises the findings of this research note.

**Table 2. Strategic tensions for digital learning platform adoption and implementation and their implications**

<b>Aggregate Dimension</b>	<b>Strategic tension</b>		<b>Implications for employee development</b>	<b>Implications for employee relations</b>
Strategic rationales	Strategic	Operational	Development responsibility	Employee wellbeing
Organisational imperatives	Work	Development	Productivity	Digital inequality
Cognitive barriers	Learning	Technology	Employee engagement	Employee Voice

This research note provides preliminary evidence that HR professionals are increasingly adopting innovative technologies to deliver on their core activities, such as training and development. As more DLS implementation occurs in organisations, organisations are poised to not only adapt to a rapidly changing digital workplace, but can also enable organisations to enhance employees' professional growth and skill enhancement. The advantages of DLS are manifold with their flexibility, customisability and responsiveness, offering employers and employees the means to be adaptable and responsive to their environments. By taking a strategic approach to DLS, the benefits may include fostering a sense of empowerment and engagement among employees (Blayone et al., 2017), promoting a culture of learning

(Nachmias & Hubschmid-Vierheilig, 2021), and offering HRM a valuable insight through the digitalisation of knowledge and skills (Williamson, 2016). It is, however, necessary to conduct more research in light of the nascent nature of this field. Future research, for example, could examine DLS and its alignment with organisational strategies, the effectiveness of various DLS formats, barriers to adoption and implementation, and the long-term impact of DLS on career development. Such research can enhance the strategic and effective use of DLS in HRM.

## Conclusion

As technological advancements for DLS see greater uptake in organisations, the issues arising from adopting and implementing DLS have significant implications for employee development and employee relations. So far, we know little about the long-term implications these strategic decisions have on the nature of employees and the employment relationship as research lags. This research note briefly explores how HR managers tasked with adopting and implementing DLS consider the strategic and potential employment implications of their decisions. Our findings help identify future research questions and methods for empirical study. For example, future research could help map the context and patterns of learning development behaviours using DLS. Additionally, traditional HRM and employment relations topics, such as work-life balance, relationships with stakeholders, and benefits and costs associated with DLS but in the context of technology adoption and implementation in organisations, will broaden the insights for HRM and employee relations. Last but not least, we agree with others that the changes emerging from the fourth industrial revolution should aim to avoid societal inequalities and worsening of employment relations and strive towards a more thoughtful way to balance the strategic requirements of organisations (Butterick & Charlwood, 2021; Collings et al., 2021; Holland et al., 2022).

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