The strategic use of digital learning solutions: An HRM perspective

Munaal Abdali

A dissertation submitted to Auckland University of Technology in partial fulfilment of the requirements for the degree of Master of Business (MBus)

2019

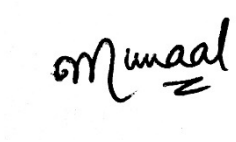
Faculty of Business, Economics and Law

Table of Contents

List of Figures and Tables

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any degree or diploma of a university or other institution of higher learning.



Munaal Abdali
Date: 31 January 2019

Acknowledgements

This dissertation has been a real learning curve – teaching me lessons that go far beyond my academic life. It has taught me to appreciate diverse perspectives, to be reflective and has given me a constant thirst for exploring and learning.

I would like to express my special thanks and gratitude to my supervisor Dr Marcus Ho for being my mentor throughout this journey and sharing his valuable learnings with me. With your guidance, I was able to realise my interest in this area in the first semester. And it was your support and encouragement that helped me discover my passion for it. I could not have done this without your timely constructive feedback.

To my parents, thank you for being with me at every step of this journey and for making this a reality. To my brother, you had your own commitments, yet you always supported and guided me. Sameed, thank you for always hearing me out and calming me down when I felt overwhelmed. I owe it to all of you.

I would also like to thank the research participants for their keen interest and sharing their valuable time and insights with me. You all have inspired me with your passion for learning and development to stay committed to learning and growing my understanding of the field.

Thank you to the entire faculty of the Department of Management for playing a critical role in inspiring me with your breadth of experience and knowledge. I am equally grateful to the Postgraduate Research Faculty of Business, Economics and Law for their constant support.

The ethics approval for this study was granted by the Auckland University of Technology Ethics Committee (AUTEC) on 7 August 2018, ethics application number 18/303.

Abstract

The fast pace of technological advancements coupled with globalisation has increased competition tremendously. It is imperative that organisations leverage their access to digital offerings to be more innovative and to make their business strategy more efficient. Human Resource Management (HRM) has experienced a similar shift towards the adoption of digital learning solutions by organisations to revamp their learning and development (L&D) strategy. This research thus aims to explore the reflections of human resources (HR) managers, in New Zealand, about digital learning solutions. The study takes a strategic lens to HRM and organisational learning (OL) to explore the perspectives of HR managers. The qualitative research design utilises an exploratory study involving interviews with the HR managers to understand how they conceptualise digital learning solutions. Research findings indicate that HR managers do see the potential in digital learning solutions and their contribution towards organisational goals. The just-in-time accessibility to learning inculcates a culture of learning, thus, enabling employees to perform better and be the source of organisation's competitive advantage. However, the uptake of these digital learning solutions is still slow due to contextual factors and HR managers' personal inhibitions. The onus falls on the HR managers to navigate their way through the tensions tactfully to realise the benefits of digital learning. At the theoretical level, the research gives direction to integrate the factors outlined by the TOP framework with the resource-based view (RBV) to develop a more holistic analytical framework of evaluating e-HRM initiatives. At the practical level, it brings attention to the unique features of digital learning solutions that the HR managers should adapt and refine as per their own organisational needs to stay competitive. The takeaway for HR managers is to develop a practice of systematically mapping employee goals against team and organisational goals for strategic validation of all initiatives.

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

Chapter 1: Introduction

This chapter presents an overview of the study with a brief background of the research area, the research aims and the structure of the dissertation. The aims and objectives section will introduce the overarching research question, the sub-questions and how they were developed to facilitate answering the overarching question. Proceeding from the basic introduction to the topic and research question, the dissertation structure would give a snapshot for easy navigation through the dissertation.

1.1 Background

Human Resources (HR) has seen a shift towards digitalisation of its key functions and processes which has made its role far more innovative, dynamic, and strategic (Chartered Instituted of Personnel Development [CIPD], 2014, 2015; Deloitte University Press [DUP], 2015). Scholars define 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 with this new business model such that new avenues of value creation and revenues emerge (Bondarouk, Parry & Furtmuellers, 2017; Gartner, 2017). Digital learning platforms are technology-laden learning tools that form a part of the larger umbrella term, e-HRM, referring to the applications and processes resulting due to the overlap between HRM and IT (Beamish, Armistead, Watkinson & Armfield, 2002; Bondarouk et al., 2017). These tools are expected to contribute towards building an organisation's intellectual capital, hence enhancing employee performance, which may serve as a sustainable source of competitive advantage to the organisation (Beamish et al., 2002; Bondarouk et al, 2017; Karakas & Manisaligil, 2012; Lee, Kim & Zo, 2015). Some of the popular digital learning solutions that this research would be exploring further may include gamification, massive open online courses (MOOCs), mobile learning, social media learning, digital simulations and micro-learning.

1.2 Research aims and objective

Research suggests that often the beginning point for qualitative research is 'an intellectual curiosity' or 'a passion for a particular topic' (Janesick, 2000, p. 382). From my first role in the learning and development department of a multinational bank in Pakistan, my interest in digital learning sparked. Later, I started my studies in New Zealand (NZ) and I interacted with several HR professionals as the Student Ambassador of the Human

Resources Institute of New Zealand (HRINZ). It made me realise that the uptake and awareness around digital learning solutions greatly varied. Therefore, I wanted to explore why the uptake is relatively slow, but also what are the thoughts and perceptions of the HR managers in NZ about digital learning technologies. Over the course of the study, the question was rephrased to ensure that it resonates with the main purpose of research. Creswell (2007, p. 107) described qualitative questions as 'evolving' and thus reflective of the change in understanding over the course of study. Therefore, the overarching question eventually developed into: "*How do human resource managers in New Zealand organisations conceptualise digital learning solutions?*". However, to facilitate answering the overarching question, two rather focused sub-questions were developed.

1. What potential do they see in digital learning solutions?
2. Which factors impact their decision to adopt digital learning solutions?

These two questions were developed to give direction for the indicative questions for the interviews. The overarching question focuses on 'conceptualisation' which can be broad and difficult to narrow down. Hence, it was dissected to cover the aspects pertaining to their thoughts about the potential that these digital learning solutions may or may not possess, the factors that ease their adoption and those that restrain them. The idea is to understand that if HR managers do see potential in them, then what are the factors that become a barrier? If they do not see potential in them, why is that?

The key objectives of this research are:

1. To identify the extent to which digital learning solutions are being used by HR managers in NZ
2. To understand whether they see any potential in digital learning solutions or not
3. To outline the factors that HR managers consider important with regards to the adoption of digital learning solutions as part of their organisational learning strategy

The conceptualisation of the various digital learning solutions will be based on the perspectives of the HR managers who participated in this research. This data would be positioned in the wider context using the analytical framework that transpires from the literature review.

1.3 Dissertation structure

This dissertation is structured in four chapters. The introductory chapter has briefly introduced the research area and the main objective we aim to achieve with this research. The second chapter provides a review of the relevant streams of literature in which the phenomena of interest finds its underpinnings. Preceding the literature review, some of the existing digital learning solutions will be presented to familiarise the reader. These digital learning solutions will then be understood in the context of the three main streams of HRM literature: strategic human resource management, organisational learning and e-learning. The key frameworks within each of these domains will be discussed. The literature review section will be concluded with a linkage between the three streams of literature and the research topic before moving on to the third chapter. The third chapter outlines the methodological approach taken for this dissertation research which was most appropriate to elicit the kind of responses from the respondents and given the time constraints. The data collection and analysis process will be explained in the same section along with a data structure map. The fourth chapter of the dissertation will present the findings of the research and briefly discuss them in the light of literature. And the last chapter will discuss them by anchoring the findings in overarching theoretical frameworks and conclude the dissertation with its theoretical as well as practical implications, and limitations. At the end of the dissertation, all the relevant references used across the research are appended.

Chapter 2: Literature Review

The fast pace of globalisation has increased competition across the globe. It is imperative that organisations capitalise on the evolving technological advancements to be more innovative and successful. The OECD (2005) report highlighted the importance of investing in 'knowledge enhancement' to stay competitive. It stated that organisations that are more knowledgeable and have more competent employees are the ones that perform better. Thus, the key is to invest in research and development which will benefit the organisation as well as the individual. It is critical for organisations to invest in their human capital to stay competitive. Although there has been a noticeable increase in the use of digital learning tools and technologies, still the effectiveness of this type of training ranks low (CIPD, 2017). This may be due to the inappropriate use of digital learning and poor design or delivery which will be explored in detail later. It cannot be overlooked that digital learning has constantly been ranked as one of the key priorities by L&D professionals (CIPD, 2017; DUP, 2016, 2017). The emerging trends have shown a shift towards just-in-time, self-directed learning which is collaborative and engaging (CIPD, 2017; Cornell as cited in Bruck, Motiwalla & Foerster, 2012).

The overarching framework for the following literature review would pertain to literature streams of strategic human resource management (SHRM), organisational learning (OL) and digital learning. However, a brief introduction of the existing digital learning solutions would precede these three streams of literature to develop a uniform, basic understanding of how each of these offerings differ. The first body of literature would introduce SHRM and its key theories to develop an understanding of how these digital learning solutions fit in with organisational strategic goals and the purpose they serve. The second stream would review some of the main frameworks in OL literature to gain perspective on how that interlinks with SHRM. It will also attempt to explore the influence of technology to set the tone for understanding the role of digital learning solutions. And the last stream would review e-learning literature and how that differs from digital learning and what each entail. A summary of the discussion and the theoretical background can be seen in Figure 1 to help visualise links between the streams.

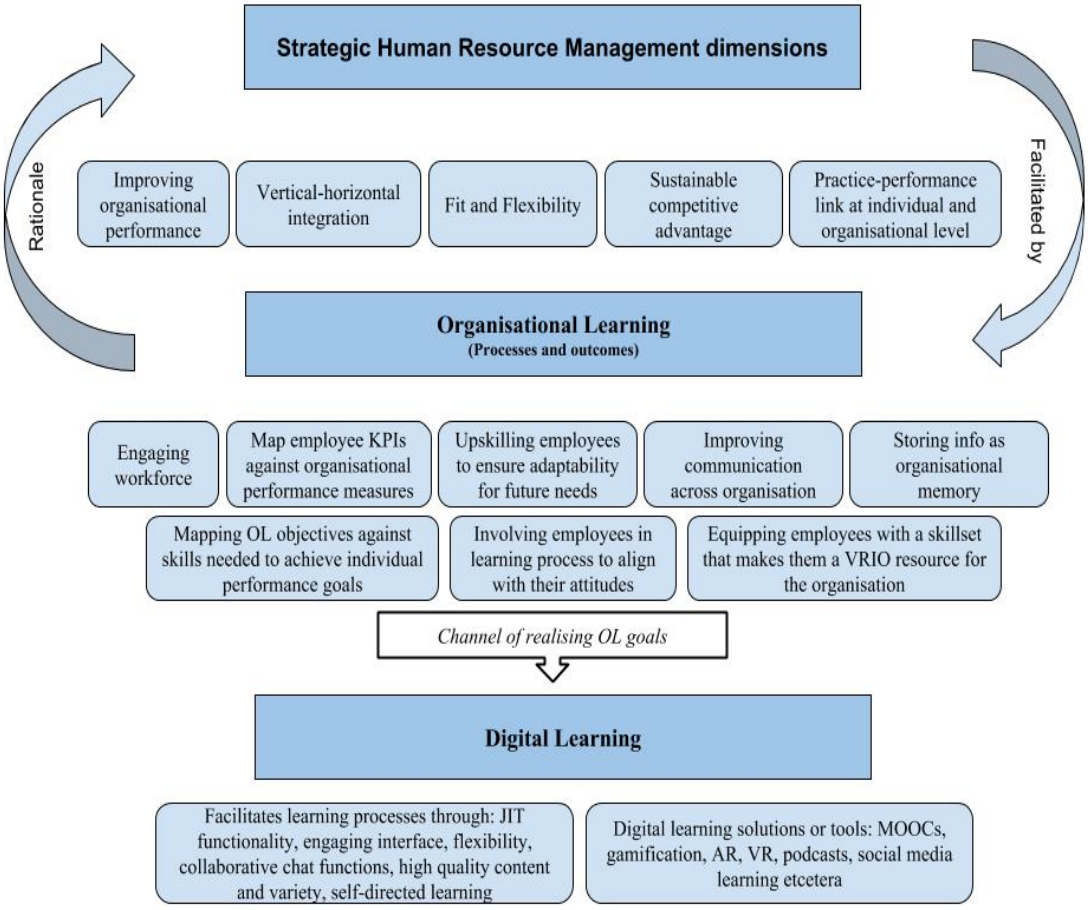


Figure 1: Integration of literature streams – Map

2.1 Introduction to types of digital learning solutions

With the fourth industrial revolution in place, most organisations have undergone some level of digital transformation which has led to the emergence of new learning solutions (Vey, Fandel-Meyer, Zipp & Schneider, 2017). These new ways of learning are not only used in the education sector but are also being utilised in corporate environments. They have in some cases replaced the conventional classroom training and revamped the human resource development programs by offering digitalised solutions for onboarding and continuous training (Vey et al., 2017). These could serve as standalone training solutions as well as be used in a combination. However, they are more popularly being utilised as supplemental training to build upon the existing OL strategy to reach out to larger audiences in a more engaging manner (CIPD, 2017; Göschlberger & Bruck, 2017). Several pieces of research have discussed the overlap between micro-learning, social media learning, mobile learning and gamification being used together to present a highly interactive, engaging, flexible learning solution (Bruck et al., 2012; Chou, 2015;

Göschlberger & Bruck, 2017). Others have also discussed the need for a collaborative element in a training tool to make it effective which is often supported by social media learning (DUP, 2016, 2017; Karakas & Manisaligil, 2012). Before diving into the three main streams of literature relevant to this area of research, it is imperative that the main digital learning solutions are introduced. There are major overlaps across these solutions that exist in terms of the technologies they use and the purpose they serve.

2.1.1 Social media learning

The move from Web 2.0 tools to Web 3.0 signals the move from a world of social media to a world of artificial intelligence. Boateng, Mbarika and Thomas (2010) used Web 2.0 as an umbrella term for all internet-based software applications or websites that could serve as personalized or collective learning solutions to organisations. They could include blogs, social networks, video sharing sites, podcasts and synchronous conferencing among several others. Boateng et al. (2010) classified them with the role they may play as part of the OL strategy. Social media learning generally refers to their use as tools for learning purposes which include learning from peer networks as well as their use as a platform to share knowledge and resources (CIPD, 2017; Karakas & Manisaligil, 2012). Most training tools are now striving to include a social, collaborative component to encourage informal learning and to strengthen the organisational learning memory (Göschlberger, 2017). With the increasing use of mobile, the focus has been on encouraging social learning by leveraging on the high levels of activity on social networking sites (SNS) (Göschlberger, 2017). In the world of Web 3.0, advanced technologies such as artificial intelligence go a step further to identify the learning patterns and recommend learning material that the learner might be more interested in (CIPD, 2017). However, it is more of a bolt-on to the existing Web 2.0 tools.

2.1.2 Mobile learning

The familiarity of learners with Web 2.0 technologies coupled with the growing use of constantly evolving smartphones have paved way for mobile learning (Bruck et al., 2012). Pimmer and Pachler (2014) defined Mobile learning (m-Learning) as an educational phenomenon that utilizes portable electronic devices such as smartphones, tablets and laptops for the purposes of becoming more aware and developing relevant competencies in the workplace. It includes both formal training programmes and informal learning that takes place. CIPD (2017) surveys indicate that mobile learning is one of the most

impactful digital learning methods as they have the potential to be targeted as well as interactive. M-learning contributes to making organisations innovative by facilitating informal learning that takes place as a result of the peer networks that can be easily sustained over mobile devices (Lee et al., 2015). It has the potential to offer the learners with a personalised, self-directed learning solution that provides specific knowledge in a timely manner by making use of micro-learning to effectively deliver it (Bruck et al., 2012). Lee et al.'s (2015) analysis of South Korean HRD managers indicated that there is a need to focus on learning contents which are developed specially for smartphone devices to make m-learning effective. The common limitations in this space identified by Bruck et al. (2012) pertain to mobile device limitations such as small screen-size and device compatibility. However, with the technological innovations and increase in screen sizes (GfK, 2018), that is not as much of a limitation now.

2.1.3 Massive Open Online Courses (MOOCs)

Massive Open Online Courses, commonly referred to as MOOCs, refer to self-directed, technology-based learning portals that allow learners from around the world to access high-quality content developed in partnership with reputable educational institutions (Dodson, Kitburi & Berge, 2015; Karnouskos, 2017). It is often delivered through different media such as videos, message boards and it tends to not restrict the number of enrolments, thus, catering to massive audiences who share similar learning interests (Dodson et al., 2015; Karnouskos, 2017). The acronym *MOOC* was first coined by Dave Cormier and Bryan Alexander in 2008 (Parr as cited in Dodson et al., 2015). Since MOOCs are online, generally free of cost, with little to no prerequisites – they welcome learners of all skill levels to explore and interact with the content, thus creating diverse peer learning networks (Dodson et al., 2015).

Some researchers have divided MOOCs into xMOOCs and cMOOCs (Downes, 2012; Siemens as cited in Dodson et al., 2015), the former being the traditional ones which are instructor-led, follow a formal syllabus and are regulated using assessments while the latter makes use of collaborative tools to encourage participants to interact within their peer network to learn. MOOCs picked up the pace in the year 2012 when MOOC platforms such as Coursera, Udacity and edX were founded and supported by world leading educational institutions (Dodson et al., 2015; Savino, 2014). These leading MOOC platforms are now developing corporate training programs to develop personalised MOOCs for them for a fee to develop organisational talent such that they

can better serve customer needs and contribute towards organisational goals (Savino, 2014). These customised MOOCs are tailored to suit the specific needs of the organisation.

2.1.4 Micro-Learning

Micro-Learning is an instructional approach that breaks the learning content into smaller yet comprehensive chunks that generally target a specific topic (Göschlberger & Bruck, 2017). They tend to be interactive, well-structured and are mostly delivered through digital media and usually last a minute or two. They offer flexibility to the learner as they acknowledge the reality of competing priorities (Göschlberger, 2017). It is often classified as self-regulated learning and hence it depends on the motivation of the learners (Bruck et al., 2012; Göschlberger & Bruck, 2017). It can be used in collaboration with embedded videos, m-learning or even gamified learning modules to offer engaging learning solutions to employees at their own convenience (Bruck et al., 2012). The concept of Micro-Content also signals its compatibility with small screens.

It is based on Baumgartner's model of a micro-learner which suggests that a learner must first understand the simple concept before they actively try to learn more about it and construct knowledge based on it (Baumgartner as cited in Göschlberger, 2017). Micro-learning plays the role of an effective trigger by developing the foundation and creating curiosity. Work is still being done to incorporate social elements and feedback mechanisms to weave them with organisational social networks to promote collaborative learning (Göschlberger, 2017). However, the primary idea is to integrate learning into daily work life, so individuals can access just-in-time, relevant learning content that addresses their immediate problems (Gassler, Hug & Glahn., 2004; Göschlberger & Bruck, 2017). Thus, micro-learning enables learners to target a knowledge gap without information overload through self-explanatory, time efficient resources (Bruck et al., 2012; Göschlberger, 2017).

2.1.5 Gamification

Deterding, Dixon, Khaled and Nacke (2011, para. 1) define gamification as "[…] the use of game design elements in non-game contexts." Göschlberger and Bruck (2017) used the Octalysis Framework by Chou (2015) and its adaptation by Decker, Wesseloh, and Schumann (2015) to identify the game elements that make them effective. These will be

discussed in more detail in the OL stream of literature to unpack the gamified learning process. The use of game elements such as points, badges, progress bar and leaderboards help in the "visualization of the learning progress" (Göschlberger & Bruck, 2017, Section 3.6, para 1). The spirit of competition within employees encourages participation and leads to more frequent interaction with the game.

Armstrong and Landers (2018) claim that scholarly research has blurred the distinction between game-based learning or serious games and gamification. Serious games usually refer to interactive, standalone game-based training modules while gamification refers to applying game elements to even existing training to make them engaging and effective. It is important to incorporate only those game elements that suit the organisational context, learning content and have a proven connection with the outcomes desired to be achieved (Armstrong & Landers, 2018). A lot of thought needs to go into identifying what should the game elements such as points and badges be linked to – to trigger the desired behavioural responses. In essence, gamification attempts to address the low levels of employee motivation towards training or learning (Armstrong & Landers, 2018; Göschlberger & Bruck, 2017). However, if the reason for training failure was not due to employee motivation but with any other aspect of training, for example, the content, then the training might still fail.

2.1.6 Digital simulations

Digital simulations in L&D refer to creating imitations of real-life work situations to allow individuals to experience the work setting in a controlled environment (Cabanero-Johnson & Berge, 2009). It can make use of virtual reality (VR) or augmented reality (AR) to create a virtual setting where the learner can make decisions, take risks and experience their impact without real, negative consequences. VR solutions create a computer-generated, digital environment where the individual feels their physical presence in their real work settings and interact with this simulation (Gavish, Gutiérrez, Webel, Rodríguez, Peveri, Bockholt & Tecchia, 2015). While AR makes use of the real environment but adds a computer-generated sensory element or virtual output to guide the learner (Gavish et al., 2015). It allows learners to make mistakes and learn from them so that they can avoid them in a real work setting. It posits on Nonaka and Takeuchi's (1995) perspective on learning more through sharing knowledge informally rather than through formal systems (as cited in Li, D'Souza & Du, 2011). This virtual setting allows individuals to interact simultaneously in a real-time setting with other individuals (Li et

al., 2011). These simulations may also be in the form of games such as Massive Multiplayer Online Role-Playing Games (MMORPGs) which enable collaboration between players who can chat and seek help to complete tasks (Ou, Felicia & Kane, 2017). These simulated games in workplace learning create similar work settings and tasks but are captivated by the game storyline and interactivity (Ou et al., 2017). These simulations are often used by professions that require specialised technical skills, for example, engineers, pilots and surgeons who can acquire the desired skills in a virtual environment that are transferrable.

This introduction to the popular digital learning solutions has been added to provide orientation about the existing offerings that exist. However, this is just the tip of the iceberg and the whole gamut of digital learning solutions is too broad. But this introduction is positioned here to familiarise the reader to be able to contextualise the main streams of literature.

2.2 Strategic Human Resource Management

2.2.1 Background

Strategic Human Resource Management (SHRM) emerged around 1980 following the line of historical developments from personnel management (PM), industrial relations, human relations, HRM to SHRM (Kaufman, 2014; Wright, Snell & Dyer, 2005). In the wake of the Industrial Revolution, large scale organisations came into being and with the vertical and horizontal diversification of business functions, the need to manage the personnel arose (Kaufman, 2014; Lundy, 1994). Elton Mayo introduced the human element in his work around human relations which was later revised by McGregor (1960) through his lens of viewing them as resources – individuals who are capable of assuming responsibility (as cited in O'Connor, 1999). But over time, the limitations of PM were noticed as it lacked an overall framework and did not account for the wider organisational level analysis. Boxall (1992, p. 60) stated that it was 'more prescriptive than analytical'. Then the concept of HRM appeared in literature in the 1970s but the development of the concept of SHRM soon afterwards made the line blurry between the two (Lundy, 1994; Wright & McMahan, 1992). The interest in 'strategic management' grew in the late 1970s and continued through 1980s which led to focus on the role of each business function in the bigger organisational picture (Wright & McMahan, 1992). However, to understand

SHRM, it is crucial to understand how the literature defines HRM so the two can be distinguished.

The field of HRM became more systematic in terms of the specific functional areas it has – managing recruitment and selection, training, salary and appraisal and organisational development (Fombrun, Tichy & Devanna as cited in Wright & McMahan, 1992). These functions were greatly influenced by the behavioural science movement led by Herzberg (1850s), Taylor (1880s), Mayo (1920s), Maslow (1950s) and McGregor (1960s). Their contribution was the linking of motivation to performance which was then incorporated as a key element in HR practices (O'Connor, 1999). However, Wright and McMahan (1992) criticised these HR practices for having developed in silos and lacking integration with the other business functions. This narrowed vision did not put HR practices into perspective. This gap was soon addressed by SHRM perspectives, which Wright and McMahan (1992) defined as an organised and structured way of positioning HR practices such that they contribute towards achieving organisational goals. This brought in a planned strategic orientation to HR practices rather than performing them in isolation, thus distinguishing SHRM from traditional HRM. Subsequent research has built upon this definition to come up with a more inclusive definition such as the one used by Jiang and Messersmith (2018) in their recent meta-review of SHRM. They used Jackson, Schuler and Jiang's (2014) definition of SHRM as "the study of HRM systems and their interrelationships with other elements comprising an organisational system, including the organisations' external and internal environments, the multiple players who enact HRM systems, and the multiple stakeholders who evaluate the organisations' effectiveness and determine its long-term survival" (p. 4). This definition provides a more thorough understanding of the key aspects that need to be accounted for to ensure that HR practices are aligned with organisational goals. It emphasised the importance of HRM communicating with the organisational systems, stakeholders and the environment to realign and resonate with them to be well-integrated with the context.

Two of the main models in SHRM literature are 'the matching model' developed by Fombrun, Tichy and Devanna, (1984) from the Michigan School and 'the Harvard model' developed by Beer, Spector, Lawrence, Mills and Walton (1984). The gist of the matching model is that the management of HR systems and organisational structure needs to be underpinned in the organisational strategy (Fombrun et al., 1984). The idea is to align or match the HR strategy and business strategy across the four processes of the HRM cycle

to boost organisational performance. The four processes identified were selection, appraisal, development and rewards. However, Boxall (1992) criticises them for being too simplistic in their understanding of the strategy-making process and for overlooking the human element along with disregarding other key HR practices pertaining to the organisation of work and management of labour relations. Nevertheless, it provided a baseline to SHRM literature with its emphasis on the coherence of internal HR policies with the organisational strategy to offer the 'best-fit'. On the other hand, the Harvard model (Beer et al., 1984) had a broader scope as it identified the role of employee involvement and the HR policy choices that can result in a number of HR outcomes: employee commitment, competence, congruence and cost-effectiveness. This may be one of the first models to bring attention to a multi-level analysis as it proposed an evaluation of long-term consequences in terms of individual well-being, organisational effectiveness and societal well-being. Boxall's (1992) evaluation of the Harvard model also appreciates the inclusion of the stakeholder interests and the alignment of the employee interests and the management objectives. It attempted to lay down the foundation of analytical framework required in the SHRM literature. Before moving further, it can be established that both Fombrun et al. (1984) and Beer et al.'s (1984) models highlight SHRM in the context of the linkage of HR systems and practices with the organisational strategic goals. With globalisation picking up the pace and affecting every industry and area of literature – Wright et al. (2005) brought attention to the need for having SHRM theory that has a global outlook. To account for the global context, the theory needs to have both the 'global universality' and 'local adaptability' components (Wright et al., 2005).

Recent work of Wright and Ulrich (2017) and meta-analytic review by Jiang and Messersmith (2018) are worth noting. Wright and Ulrich (2017) provided an in-depth overview of the evolution of SHRM and its models while highlighting the need for a multi-level, human-capital centric, global analysis which weaves together strategy and practice. The numerous theoretical and empirical studies from this domain have successfully established the link between HRM practices and performance (Wright & Ulrich, 2017). An even greater contribution of SHRM studies is towards evolving the traditional perception regarding the people of the organisation. Employees are no longer viewed as or to be treated as just a strategic resource but more importantly as human beings who are 'worthy of dignity and respect' (Wright & Ulrich, 2017, p. 61). With the technological advancements and the focus on 'big data', another important direction for further research in SHRM pertains to the use of HR analytics to provide stronger support

for the strategic decisions (Angrave et al., as cited in Jiang & Messersmith, 2018). However, no progress can be made without reviewing the existing SHRM frameworks and theories that have developed over the years. Regardless of their limitations, each of these frameworks has contributed to the growth of our understanding of SHRM.

2.2.2 Understanding SHRM frameworks in an HR technology context

SHRM has introduced a broader and long-term focus in comparison to the previous approaches to HR that primarily focused on performing the functional activities and resolving problems (Wright & McMahan, 1992). Most SHRM literature has still focused on the linkage between HRM practices and performance, despite SHRM's wider scope. Literature in this field has been dominated and developed on Huselid's (1995) work around high-performance work systems (HPWS) and linked with the competitive advantage concept (Pfeffer, 1994; Schuler & MacMillan, 1984; Wright & McMahan, 1992; Wright & Ulrich, 2017). This aspect focused on how greater employee involvement and commitment through effective HR practices can increase organisational performance, thus giving the organisation a competitive edge. In addition to this field, SHRM also aims to introduce a multi-level approach to analysing the HRM practices-performance relationship – at the organisational level as well as at an individual level (Wright & Ulrich, 2017). This aspect brings attention to analysing the impact of HR practices on not only organisational performance but creating a link with employee performance as well. It aims to explore the employee perceptions, attitudes, and behaviours towards HRM systems which ultimately determine the individual outcomes and thus their impact on performance (Jiang & Messersmith, 2018). Another interesting perspective that SHRM brings to HR is the vertical and horizontal fit or orientation. The vertical integration pertains to developing a connection between the HRM practices and the organisational strategic management while the horizontal integration refers to the cross-functional coordination in HRM practices (Wright & McMahan, 1992).

As mentioned earlier, majority research has been undertaken to prove the positive relationship between HRM practices and performance. However, the *multi-level analysis* domain has not been substantially researched, although, researchers such as Bowen and Ostroff (2004), Ostroff and Bowen (2000), and Wright and Nishii (2007) have attempted to contribute towards this field of SHRM. Their research suggested that transparent and internally consistent HR practices which are crafted keeping in mind the employee perceptions would have a positive impact on the performance. Thus, highlighting the

importance of not only linking organisational-level practice and performance in silos but also incorporating the individual's perceptions of these practices (Wright & Nishii, 2007; Wright & Ulrich, 2017). Moreover, the area of *fit and flexibility* has remained a consistent theme in the SHRM literature as has also been discussed by Huselid (1995), Wright and Snell (1998), Wright and Sherman (1999), Gerhart (2007), Chang, Gong, Way and Jia (2013), Wright and Ulrich (2017). Even though little empirical evidence was found for the fit effect, Wright and Sherman's (1999) research explains how it may exist but might not be observable due to the way these practices and their performance is defined (Wright & Ulrich, 2017). The construct of flexibility is understood in terms of a firm's ability to adapt its employees' skills, behaviours and HR practices to suit the changing needs of the business environment (Wright & Snell, 1998). Sufficient evidence for flexibility and its impact on performance has been found (Chang et al., 2013; Wright & Ulrich, 2017). Apart from these three main fields of literature, extensive relevant research has been conducted in the direction of the SHRM theories and frameworks.

To gain more perspective, three of the most ubiquitous theories in the domain of SHRM will be discussed: resource-based view, human capital theory and the social exchange theory.

2.2.2.1 Resource-based view (RBV)

The resource-based view offers the VRIO framework to analyse the resources and capabilities of the firm to identify sources of sustainable competitive advantage – where the acronym VRIO is for value, rarity, imitability and organisation (Barney, 1991). This approach to SHRM indicates that if HR and HRM systems contribute towards making an organisation's employees valuable, rare, inimitable and non-substitutable, then they are likely to have a positive relationship with the organisational performance and may as well serve as a source of competitive advantage (Jiang & Messersmith, 2018). It applies the economic concept of rent to HR; the value they provide to the organisation goes beyond their cost to the organisation (Wright & Ulrich, 2017). Literature suggests that competitive advantage often emerges over time by developing employee talent such that they give the firm an edge over their rivals (Prahalad and Hamel, as cited in Boxall, 1996). However, subsequent research has also criticised RBV-strategic HRM for 'no rules for riches', the value concept, neglecting the marginal decision rules, economic and employee relations consequences (Kaufman, 2015). These arguments suggest that the key concepts of economics have been disregarded, such as the factor price equalisation which

ignores the fixed labour cost and resource inflexibility (Kaufman, 2015). Moreover, it is hard to predict the value creation in cases such as a recession when the distinct value added by the HR department is hard to calculate. Nevertheless, the RBV has its own merits as it brings attention to the internal resources of an organisation and strategically positions HR in the organisation. It does so by giving direction through VRIO framework to upskill the employees and develop their capabilities and competencies required to make them unique. These competent employees then serve as an organisation's source of competitive advantage by being a valuable, rare, inimitable, non-substitutable resource that offers them economic rents. Thus, elevating the status of HR in an organisation as not only a supporting but also a value-creating business function. Therefore, this contribution of RBV is used and built upon by other SHRM theories and frameworks which better address the concerns raised by Kaufman (2015) (Delery & Roumpi, 2017; Wright & Ulrich, 2017).

2.2.2.2 Human Capital Theory

Human capital theory is another popular SHRM theory that pertains to mainly the practice-performance aspect and recently exploring the multi-level dimension as well. Human capital refers to key characteristics of individuals that are valuable to organisations, thus, developing your employees' competencies equates to investing in the organisational human capital (Becker, as cited in Wright & Ulrich, 2017). It is of the view that human capital is an organisational resource and it contributes to the performance of the organisation as well as adds to economic benefits (Wright & McMahan, 2011). However, the human capital is transferrable and can leave the organisation with the employees unless efforts are made to use HRM systems to make them stay (Jiang & Messersmith, 2018). This can be done by attracting talent, training, developing and retaining them or by effectively managing knowledge to store them as part of the organisational memory. Most research in this domain has treated human capital as a resource to the firm that has an impact on their performance which then creates economic value. However, Wright and McMahan (2011), Nyberg, Moliterno, Hale and Lepak (2014), and Ployhart, Nyberg, Reilly and Maltarich (2014) have approached it from the multi-level perspective – exploring human capital at the individual, unit and organisational levels contributing towards creating strategic value (as cited in Jiang & Messersmith, 2018). Ployhart et al.'s (2014) holistic multi-level approach and Wright and Ulrich's (2017) attempt to address Kaufman's (2015) criticism of RBV through human

capital theory have greatly contributed towards its development. Its most significant contribution is towards establishing the importance of HRM systems and practices in relation to organisational performance (Delery & Roumpi, 2017; Jiang & Messersmith, 2018).

2.2.2.3 Social Exchange Theory

Among other SHRM theories and frameworks, the social exchange theory has interested researchers as it builds on the behavioural perspective and the AMO framework by accounting for employee attitudes and behaviours (Wright & Ulrich, 2017; Jiang & Messersmith, 2018). The behavioural perspective focuses on the desired employee behaviours that better position them to address environmental challenges (Jiang & Messersmith, 2018). And the AMO framework goes further in identifying the role of HRM systems in contributing towards employee abilities, motivations and opportunity to perform (Gerhart, 2007; Jiang & Messersmith, 2018). This ultimately impacts employee performance and thus positively influences the organisational performance. While the social exchange theory explains the relationship between the HRM systems and firm performance by linking it to social exchange relationships of employees with their organisation (Jiang & Messersmith, 2018). The rationale is that when employees benefit from their organisation, they feel obliged to benefit the organisation too (Blau, as cited in Wright & Ulrich, 2017). It is primarily 'based on Gouldner's (1960) norm of reciprocity and Blau's work on social exchange relationships' (Jiang & Messersmith, 2018, p. 10). Wright and Ulrich (2017) explain how employees may honour this social exchange relationship with their employer by increasing their efforts and being more committed to their work and organisation.

Several other SHRM theories and frameworks have emerged but due to the scope of this study, only the more prominent ones have been discussed. These theories provide a contextual background to the research and the next section will have a narrowed focus on the overlap between SHRM, technology and learning.

2.2.3 Link with technology and HRM

SHRM has a positive impact on organisation's internal processes such as organisational learning, communication, knowledge management which then make the organisation more competitive (Delery & Roumpi, 2017; Wright & Ulrich, 2017). HRM has a significant role to play towards making organisations flexible and adaptable through

ongoing training and developing their human capital or through tapping external talent to acquire the required skills (Delery & Roumpi, 2017; Wright & Ulrich, 2017). SHRM theories such as RBV, human capital theory and the social exchange theory, have all linked value creation to learning and adapting ability of employees. Moreover, with the advancements in information technology, HRM systems have evolved and are playing an even more vital role. This is primarily due to its impact on the way communication is done – delivery channels, as well as the media, has drastically changed. Stone, Deadrick, Lukaszewski and Johnson (2015) highlighted the significance of just-in-time, engaging, collaborative and two-way nature of communication that technology has enabled which has facilitated HR processes. A trend towards streamlining the functional areas of HR online has been noticed, including but not limited to, using e-recruiting, social media, self-directed e-learning, and simulations. The increasing importance of 'big data' and emergence of HR analytics as part of SHRM domain has also been facilitated with the technological advancements (Stone et al., 2015; Jiang & Messersmith, 2018).

Bondarouk et al. (2017) have particularly focused on the need for 'strategic re-orientation' of HR departments in line with the increasing use of e-HRM. This overlap between SHRM and technology is deeply intertwined with an organisation's learning ability (Stone et al., 2015). Researchers have highlighted the crucial role that an organisation's learning mechanism and behaviours play in a time of external changes which enable the employees to adapt and learn faster than the competition – this is what serves as their source of competitive advantage (Hamel and Prahalad, as cited in Boxall, 1996). There has been a shift towards more diverse learning tools, mainly due to their ability to incorporate the learner preferences. Stone et al. (2015) identified that the features that employees look for in training are a degree of control, opportunities for practising, collaboration and immediate feedback. Moreover, the use of technology has made it easier to not only train and engage staff but also to transfer and store it as organisational knowledge, thus justifying the investment in human capital. Larkin's (2017) analysis of the chief human resources officer's (CHRO) role, in light of digitalisation, also suggested that the use of cloud technology has enabled not only easy access to information but also improved communication between management and employees. Stable, effective communication between management and employees has been noted for positively impacting the organisational performance and can also be viewed in relation to the social exchange theory. The TOP framework by Bondarouk et al. (2017) also offers a detailed framework that identifies the factors that are important to be considered when adopting

e-HRM and interestingly these factors are mostly strategy driven. Technological, organisational and people factors (TOP) identified by Bondarouk et al (2017) further emphasise the importance of critically assessing e-HRM applications and tools from the SHRM lens.

Thite (2004) notes that to strategically position HRM, there is a need for strategic management of knowledge. He suggests moving away from regular organised training to 'action-based-learning'. This should aim to facilitate the learning process, instead of dictating it, by offering them support in proactive, self-directed, continuous learning. His emphasis on nurturing a learning orientation through 'organisation-wide learning policies' and a collaborative approach is also shared by others (Cabanero-Johnson & Berge, 2009; Stone et al., 2015). Boateng et al. (2010) also highlighted that the underlying goal of organisations is to come together to work towards achieving organisational goals, which has been facilitated by the technological advancements in HRM systems. Karnouskos (2017) discussed the use of massive open online courses (MOOCs) in the context of the dilemma of whether to invest in employee competency development or not and to what extent. He puts SHRM in perspective by linking the role that HR plays in pursuing organisational goals through competency development in employees such that they quickly adapt to the changes in the global business environment. Thus, this strategic role of knowledge can make employees' competencies the differentiating factor that serves as a source of competitive advantage. Karnouskos's (2017) positioning of e-learning within the realm of SHRM is in line with the view of the predecessors regarding training leading to enhanced productivity (Boxall, 1996; MacDuffie & Kochan, as cited in Delery & Roumpi, 2017). Researchers strongly recommend that these digital learning solutions must have a linkable contribution to the organisational goals otherwise the companies should not consider adopting them (Swink, as cited in Dodson et al., 2015).

2.2.4 Conclusion

The research question finds its theoretical underpinnings in SHRM literature; hence it was crucial to understand how SHRM has evolved and how it impacts the decisions of the HR managers with regards to adoption of digital learning tools. This section began with a brief historical background of SHRM and differentiated it from traditional HRM. It went on to outline the main fields of SHRM and the frameworks and theories that have been developed over time. We discussed the criticisms of SHRM as well to develop an objective view of their contribution. Based on our understanding of SHRM and its

application, we then put it into perspective by reviewing the studies that discuss its link with technology and OL. The overarching theme of SHRM linked HR practices to organisational performance and thus attempted to emphasise the value it created towards attaining strategic goals. Therefore, subsequent streams of OL and e-learning literature will have a solid theoretical foundation embedded in SHRM. Thus, addressing the key question of why there is a need for having these digital learning tools in the first place.

2.3 Organisational learning

2.3.1 Background

Organisational learning (OL) has been discussed in research since Cangelosi and Dill (1965), however, there is still no consensus on a specific definition of the term (Crossan, Lane & White, 1999). Early researchers in this domain viewed OL as a mechanism of learning from previous experiences of their own or other organisations to design frameworks that could interpret those experiences and guide future behaviours (Levitt & March, 1988). Dodgson (1993) identified the different meanings associated with the term organisational learning by researchers from different fields of study. For example, economists define learning in terms of quantifiable positive outcomes or improvements, while the management and business literature links it to competitive advantage, and the innovation literature views learning as a tool to promote innovative efficiency. The underlying theme of all these perspectives initially had a clear focus on the outcomes of learning and not the processes (Dodgson, 1993). Therefore, Dodgson (1993) and Crossan et al. (1999) included the learning processes aspect in their work while acknowledging the different perspectives of OL researchers.

Researchers such as Dodgson (1993) and, Basten and Haamann (2018) have conducted comprehensive review of literature to synthesise the OL literature and to identify areas of further development. Dodgson (1993) assessed the literature to collate it into three streams: the first, addressing the goals of OL; the second, making sense of the OL processes; and the third, exploring the factors that expedite or hinder the OL. However, Basten and Haamann (2018) identified 18 different OL approaches and consolidated them into three main categories: people, process and technologies. It is interesting to note the two very different approaches adopted by the authors. Dodgson (1993) explains that the management, business and innovation approaches have a narrowed focus on the motivations for OL and the ways to do it. These approaches posit that organisations indulge in learning, through their focus on research and development, to stay competitive.

However, they overlook the convolutions of the learning process which is why Dodgson (1993) recommends developing a multi-disciplinary approach to understand OL. He did give direction towards the role of technology in learning but could not account for it since not much had been done then in that domain. By the time Basten and Haamann (2018) conducted their literature review, technology emerged as one of the three main themes in OL literature. The authors mapped out the various approaches that HR managers can use in a combination to successfully design their OL strategy. Most approaches brought attention to encourage collaborative learning and transfer of learning to promote a learning culture. All of these factors are facilitated by technology through 'knowledge repositories' which offer long-term storage of digital knowledge and 'virtual worlds' which create a virtual space for employees to interact (Basten & Haamann, 2018, p. 13).

For the scope of this discussion, it would be useful to use a combination of the definitions provided by Dodgson (1993) and Popova-Nowak and Cseh (2015). Dodgson's (1993) broad-scoped definition of OL offers a solid foundation by encompassing both the processes and outcomes – 'the ways firms build, supplement and organise knowledge and routines around their activities and within their cultures, and adapt and develop organisational efficiency by improving the use of the broad skills of their workforces" (p. 377). However, this definition does not fully appreciate the multi-level nature of OL. Popova-Nowak and Cseh (2015) synthesised the various aspects of OL discussed across literature to define OL as "a learning process within organisations that involves the interaction of individual and collective (group, organisational, and inter-organisational) levels of analysis and leads to achieving organisations' goals". Therefore, a combination of these two definitions shapes a more holistic understanding of OL to explore its frameworks.

2.3.2 Understanding Organisational Learning frameworks

Some of the prominent OL frameworks and theories will be introduced in detail to develop a thorough understanding of the theoretical background of OL.

2.3.2.1 Huber's Organisational Learning Constructs and Processes

Huber (1991) identified 4 constructs and their subconstructs and processes that contribute to the concept of OL. These four constructs are knowledge acquisition, information distribution, information interpretation and organisational memory. Knowledge acquisition refers to the process of obtaining knowledge whether it is inherited learning,

experiential, learnt from the experiences of other organisations or may be learnt from the new employee's past experiences. Information distribution refers to the process of sharing information to create new information which is then given a common meaning during the information interpretation process, which may be unique to that organisation. The organisational memory process refers to storing information for future use which is facilitated by the use of technology. These four constructs outline the processes involved and the various sources of information that contribute towards laying the foundation of OL. Huber (1991) briefly discussed the multilevel dimension of organisations learning when any of its units learn. That is, when an individual acquires useful knowledge, they may discuss it within the department or team. The team may then interpret it in organisational context and share it further. Eventually the entire organisation may learn about this and perceive it the same way, thus making it a part of the organisational memory. However, Popova-Nowak and Cseh (2015, p. 306) criticise it for being too simplistic in their analysis across these units and for "anthropomorphization of OL". They argue that Huber's (1991) approach is functionalist in the sense that it centres around individuals and their role across the four processes, while disregarding the collective levels and their connection with the individual level learning. Nonetheless, Huber's (1991) constructs and emphasis on lack of research across the units of analysis was useful as subsequent research focused on learning across the individual, departmental and organisation levels.

2.2.2.2 Integrated Model of Organisational Learning: OADI-Shared Mental Models (SMM) Cycle

Kim (1993) introduced an integrated model of OL that builds on the learning cycle of observing, assessing, designing, implementing (OADI) and shared mental models (SMM). To understand his comprehensive framework, it is crucial to understand the OADI and SMM cycle. The OADI cycle of individual learning suggests that people actively observe their experiences and assess them at some level of consciousness by reflecting on their observations. They develop abstract concepts of how to respond to these situations and they test this crafted response by implementing it in real life situations which leads to a new experience and thus the cycle repeats itself. Kim (1993) linked this with the concept of mental models, which refer to the internal perceptions of individuals about the external world which ultimately shapes their views and how they learn and respond (Senge, as cited in Kim, 1993). He applied this concept to organisations and how the people working for an organisation contribute towards the organisational memory and

in building this shared mental model. These shared mental models ease the transfer of learning from individuals to the organisation by embedding it in the organisational routines. Based on his research, Kim (1993) defined OL as an organisation's ability to take more effective decisions and actions by leveraging on the cumulative individual learnings. The construction of OL as being dependent on individual learnings is a key criticism of Kim's (1993) integrated model. Klein (2008) argues that OL occurs in groups rather than solely at an individual level. He also criticises Kim's (1993) view of organisational memory as being "static" for treating it as a "repository of accumulated commodified knowledge" (Klein, 2008, p. 44). Klein's (2008) view postulates organisational memory as being interactive and dynamic as it keeps expanding due to ongoing learning activities thus making organisations more adaptable. Despite its criticism, Kim's (1993) integrated model of OL has found some empirical support as it gave direction for further research. For example, Palma and Pedrozo's (2016) case study on transformative learning and Ishitani's (2018) case study on developing sustainable organisational capability builds on Kim's (1993) OADI-SMM cycle.

2.2.2.3 The 4I framework of Organisational Learning

Crossan et al. (1999) viewed OL as a dynamic process which does not only occur over time but also across levels and moves in a feed-forward (exploration of new learning) as well as feedback direction (exploitation or leveraging on existing learnings). Crossan et al. (1999) built on the themes emerging from established OL frameworks to form four premises for their framework: strategic renewal tension, multilevel framework, process linking levels and cognition/action link. Crossan's et al. (1999) 4I framework of organisational learning discussed the four processes of OL as intuiting, interpreting, integrating and institutionalising. The intuiting learning process takes places at the individual levels and refers to their first-hand experiences, internal perceptions and can only be learnt when others interact with this individual. The interpreting process refers to an individual making sense of their own abstract thoughts by putting it into words to communicate it to themselves as well as others and often results in the creation of an organisational language. However, the integrating process requires the involvement of others developing that shared understanding hence it occurs at the group level. And the institutionalising process results in the creation of routines, rules and procedures that occur at an organisational level by building on the three Is of intuiting, interpreting and integrating. However, its simplistic notion of feed-forward and feedback direction of

learning is criticised. Lehesvirta (2004) argues that these processes take place concurrently rather than in a sequential manner (as cited in Popova-Nowak & Cseh, 2015). It is also criticised for not incorporating the role of organisation dynamics such as the organisational culture. Popova-Nowak and Cseh (2015) argue that individuals may not be as likely to share information as the framework suggests – thus disconnecting the apparent link created between the organisational goals and individual learning activities. Nonetheless, Crossan et al.'s (1999) framework encapsulates the multi-level nature of OL by weaving it together with the learning processes occurring at each of these levels. Moreover, by balancing the strategic renewal tension, the interactive relationship between cognition and action is also acknowledged. OL is the bridge between the cognition-action link as it facilitates the development of understanding which guides actions, and the actions, in turn, deepen the understanding.

To sum up, these are some of the most ubiquitous OL frameworks in academic literature. Each of these are built on the work of preceding one and are all linked by their focus on individuals contributing towards organisational memory. The concept of organisational memory is deeply intertwined with that of OL as literature often focuses on the learning processes that are involved in this conversion (Levitt & March, 1988; Huber, 1991, Kim, 1993). However, Crossan et al. (1999) skilfully mapped the OL processes across the individual, group and organisational levels – appreciating the multi-level nature of OL and SHRM. Crossan et al.'s (1999) framework has also found the maximum empirical support among these three (Jain & Moreno, 2015; Matthews, MacCarthy & Braziotis, 2017; Stevens & Dimitriadis, 2004; Swart & Harcup, 2013). However, the first two are criticised for being functionalist in their approach for not explaining in detail the actual connection between collective and individual levels of learning (Popova-Nowak & Cseh, 2015). But Crossan et al. (1999) does take a slightly constructionist approach by valuing the role of organisations in shaping individual learning behaviours, experiences and learning processes (Popova-Nowak & Cseh, 2015). Despite their naïve approach towards explaining OL processes, their contribution towards linking human cognition to OL processes and establishing the multi-level nature of OL is valuable. Based on our understanding of OL and its prominent frameworks, the next section will discuss the overlap between OL and technology.

2.3.3 Organisational learning in the HR technology context

Levitt and March's (1988, p. 319) interpretation of OL was derived from behavioural studies of organisations which claimed that it is 'routine-based, history-dependent and target-oriented'. This view about OL changed over time as it is no longer viewed as being based on interpretations of the past and are rather forward-looking. OL's approach now is to anticipate the needs of the future and upskill their workers accordingly (Johnson as cited in DUP 2018; Payton, 2017; Seet, Jones, Spoehr & Hordacre, 2018). This is where the role of technology comes into play. Technological advancements have introduced digitalised ways of learning which enable organisations to offer just-in-time training that sits perfectly with the strategic goals of making employees more efficient (Payton, 2017; Stone et al., 2015; Seet et al., 2018). The recent developments in the space of e-learning indicate a shift towards a collaborative approach to learning which ensures that the modern technologies are leveraged to support the OL strategy at all levels – individual, team, and organisational (CIPD, 2017). Moreover, both academic and practitioner literature indicate that digital learning techniques are to be positioned with the OL strategy such that they are used in conjunction with other learning methods and not as a replacement (CIPD, 2017; Servage, 2005; Welsh, Wanberg, Brown & Simmering, 2003). Pimmer and Pachler (2014) argue that new learning technologies have the potential to enrich existing OL practices, however, they are not fully utilised. Often the same content is adapted to be made available through the new technologies even when the new technologies can offer a lot more functions (Boateng et al., 2010; Pimmer & Pachler, 2014).

To gain more perspective, the example of one of the learning tools can be considered, for example, massive open online courses (MOOCs). Given the flexible orientation of MOOCs, that aim to serve the learning needs of masses, it offers generic content which may not be ideal for corporate training. Traditionally, corporate training is customised to specific learning needs of each organisation and is well aligned to their business values and practices and usually targeted towards a single job role (Dodson et al., 2015). Despite these potential areas of conflict, organisations can leverage MOOCs to supplement their existing OL strategy. For example, L&D advisor or the manager can select specific existing MOOCs for their staff to build onto previous training or supporting in-house training (CIPD, 2017; Dodson et al., 2015). It is an effective way for organisations to train staff for free, without curating their own content. Moreover, MOOCs offer the

opportunity to gain formal accreditation against a small certification fee which validates their staff's competency development and adds on to their professional credentials (Dodson et al., 2015; Karnouskos, 2017). Similarly, other digital learning tools can also build onto the existing learning mechanisms and enrich the existing learning strategy.

The OL literature has been extensively used to support the case of e-learning and their strategic importance (Boateng et al., 2010; Zhao & Kemp, 2012). Boateng et al. (2010) discussed the knowledge conversion process in his research on the Web 2.0 tools. He presented four modes across which the knowledge conversion process takes place: socialisation, externalisation, combination and internalisation. These four modes then determine which learning tool may be most suitable to serve the purpose. Socialisation refers to experience sharing which generates tacit knowledge such as technical skills of individuals. While externalisation takes a step further in making it explicit by documenting and publishing it. The combination mode pertains to the accumulation of explicit knowledge from various sources to integrate them and make them available for all. And the internalisation stage is where the explicit knowledge becomes tacit again by being a part of the collective knowledge of the organisation. An understanding of these modes of knowledge conversion process facilitates in choosing the right digital learning tools and platforms. This, in turn, leads to the development of an effective OL strategy that is in line with the organisational goals. The Web 2.0 tools are more versatile in terms of offering various functions through a single application, for example, Workplace by Facebook. The same application could serve the purpose of communication, collaboration, generation of new information or exchange of it while storing all the data (Zhao & Kemp, 2012).

In relation to the knowledge creation process (Boateng et al., 2010), xMOOCs tend to duplicate the knowledge (Siemens as cited in Dodson et al., 2015) and thus serve the purpose of exchanging and storing the knowledge while cMOOCs focus on creating knowledge but also communicating, storing and sharing it using its collaborative features. Other researchers such as Chou (2015) and Decker, Wesseloh, and Schumann (2015) presented the Octalysis Framework to link the game design elements with the OL literature. It discussed the game design elements through these eight categories: "epic meaning & calling, development & accomplishment, empowerment of creativity & feedback, ownership & possession, social influence & relatedness, scarcity & impatience, unpredictability & curiosity, and loss & avoidance". The 'epic meaning and calling' in

games refers to the storyline which emotionally involves the user. The missions and challenges embedded in the game, that are linked to the reward system, fall under the category of development and accomplishments. They are often self-regulated and hence empower the employee. The effective feedback mechanism helps in progression to the next level and accomplish milestones. These game mechanics along with the social element of competition encourage the user to keep playing to compete with the fellow staff members. Moreover, these games utilise the element of scarcity, for example, most games are timed and require the user to make quick decisions. Furthermore, some games make use of the element of surprise to instil curiosity among the users. The last category of the Octalysis Framework (Chou, 2015) discusses the use of loss and avoidance in the form of loss of player lives or reduction in points earned which completes the game. All these elements serve the purpose of preparing the individual for real-life work settings so that they can work more efficiently. The competition element also encourages knowledge transfer within teams. These interactive learning tools contribute heavily towards creating shared mental models and thus in supporting the OL strategy.

Researchers in the e-HRM domain, such as Bondarouk et al. (2017) developed a 'TOP' framework to ease the transition of organisations to e-HRM. They identified three key aspects to be considered with regards to switching to e-HRM: technological factors, organisational factors, and people factors. These three factors identified for switching to e-HRM are also very valid in the context of switching to or adopting technologically empowered organisational learning. Bondarouk et al. (2017) discussed the technological factors such as customisation of human resources information systems (HRIS), technological infrastructure, system integration, in-house capability, and organisational factors such as the organisational size, policies, procedures, planning, controls and budgets. While the people factors pertain to integration of the human aspect in terms of managerial support, user involvement, organisational culture, HR expertise, communication between HR and the rest of the organisation. Strother (2002) found that the integration of technology and human factors in e-learning can speed up the learning process among employees. Karakas and Manisaligil (2012) reiterated the significance of the interplay between human and technological factors to fulfil the social need for collaborative learning and networking by providing social digital learning solutions. Dodson et al.'s (2015) research on MOOCs also found that tailoring the learning content to employee needs can be less costly via the digital platform and also increase productivity by filling the knowledge gaps effectively. All the above studies suggest that

the mix of technological and human factors make digital learning platforms engaging and hence are crucial for continued organisational learning.

2.3.4 Conclusion

This section offered a background to OL by discussing the three most popular frameworks which have significantly contributed towards clarifying the processes, outcomes and levels at which OL takes place. It can be deduced that OL is becoming focused towards simultaneous learning happening across all levels. The role of technological advancements in influencing OL is elucidated by e-learning/technologically empowered learning solutions. Technology has enabled OL to be more innovative, dynamic by facilitating easy communication, collaboration, information sharing and storing through Web 2.0 tools and unique offerings such as MOOCs and gamification among many others. The just-in-time functionality enables learners to improve faster and continuously, thus contributing towards making organisations more efficient. This link between individual learning and its impact on their performance which improves organisational performance is how the overlap with SHRM occurs. Huselid's (1995) work on HPWS incorporated the role of OL as one of the key areas which can impact organisational performance by enabling employees to perform their job better. The theme of making organisations more effective and competitive through facilitation of individual and collective learning is central in OL literature and thus aligns with SHRM's emphasis on vertical and horizontal integration discussed by Wright and McMahan (1992). Moreover, Crossan et al.'s (1999) acknowledgement of the multi-level nature of OL is also well aligned with SHRM's emphasis on individual, group and organisational level analysis of the practices and performance. Furthermore, Kim's (1993) emphasis on the development of shared mental models based on individual mental models is aligned with the overarching SHRM theme of finding the 'fit'. Also, with reference to Fombrun's (1984) matching model, OL provides the mechanism through its processes to train individuals such that they become the 'best-fit' for the organisation's competency and talent needs. Moreover, OL has a major role to play in helping organisations be more flexible by training their staff to meet the changing demands of the business environment.

The overview of SHRM and OL literature and the brief discussion on their integration provides a foundation to engage and interact with e-learning literature, having understood the purpose and processes involved.

2.4 From e-learning to digital learning

2.4.1 Background

The definition of e-learning has been an area of confusion across literature, perhaps due to the increasing technological advancements that make it difficult to encompass the evolving aspects. The definitions of the term vary from the very narrowed to the over-generalised ones and the variances in its key differences in objectives, audience, instructional design, content and evaluation mechanisms (Servage, 2005). Welsh et al. (2003, p. 246) define e-learning as 'the use of technology, through internet or over intranet, to deliver information and instruction to individuals' which overlaps with other definitions with minor additions such as Sun, Tsai, Finger, Chen and Yeh's (2008) addition of the time and space factor. Most definitions have established the obvious link between learning activities and technology, however, that is quite superficial (Servage, 2005). Others define it as an 'instructional strategy' that uses a wide range of applications to deliver training content to promote the development of required skills, attitudes or knowledge (DeRouin, Fritzsche & Salas, 2005, p. 920). Servage (2005) suggests that e-learning is not to be considered a training tool, rather it 'must be understood as a social phenomena' (Servage, 2005, p. 305). Servage (2005) identified the need to move beyond the functional meaning by incorporating the role of organisational culture and contexts that shape the e-learning experience. She recommends developing frameworks to understand the type of learning experiences that are a consequence of adopting different learning practices. The specific learning applications may vary in their degree of structure, type of content, interactivity, job-embeddedness and the delivery tools that may be used to implement them, however, they may all fall under the umbrella term of e-learning (DeRouin et al., 2005; Servage, 2005; Welsh et al., 2003).

As Welsh et al. (2003, p. 246) noted, there have been several alternative terms including 'computer-based learning, online learning, distributed learning or web-based training' that have been used but the dominant choice has still been 'e-learning'. However, an emerging term in practitioner literature is 'digital learning' that is replacing the previous terms of online, virtual, hybrid, blended, and even e-learning in some cases as it includes both online and offline learning data that may have been generated and stored electronically (CIPD, 2017; Hogle, 2018). Hogle (2018) suggests that digital learning is fast replacing face-to-face training due to the fast pace of

technological advancements. However, that can be argued as e-learning specialists have also indicated a need for having a human element or live interaction component in e-learning (Ferriman, 2014; Richards, 2018). This is because the employees still value the interpersonal communication with a trainer and believe that it gives a holistic experience which is more engaging than online training alone (Ferriman, 2014; Richards, 2018). In recent years, the digitalisation of HR has been a focus of practitioner literature as has been noted in Deloitte's human capital trends reports from 2016 to 2018 (DUP, 2016, 2017, 2018) as well as in the CIPD digital learning factsheet (CIPD, 2017). CIPD (2017) defines digital learning as being broader than e-learning in which it delivers through or makes use of electronic technology for training or learning purposes. However, it is worthwhile to note that Servage's (2005) fluid and analytical explanation of e-learning is quite in line with the use of the term 'digital learning' in practitioner-oriented literature. Therefore, it is crucial to build a thorough understanding of e-learning and what it entails before attempting to understand digital learning.

2.4.2 Making sense of e-learning and digital learning

E-learning literature is traditionally divided into those that have an *asynchronous* or a *synchronous* learning network model (Servage, 2005; Sun et al., 2008; Welsh et al., 2003). Asynchronous delivery tends to be one-way as it does not require live feedback from the learner and is usually 'pre-recorded' and available to learners at all times (Rosenberg as cited in Welsh, et al., 2003, p. 246; Servage, 2005). Whereas, synchronous refers to two-way delivery where all the learners are engaged with the training in real time (Servage, 2005; Welsh et al., 2003). Due to the flexibility that asynchronous model offers, it is often used more by organisations. However, there has been a growing interest in using a mix of the two ways of delivery which offers a balanced combination of the two that best serves the needs of the organisation. Such a combination of both synchronous and asynchronous delivery is fulfilled by blended learning (DeRouin et al., 2005; Welsh et al., 2003). This is where digital learning offers a more inclusive definition by accounting for both asynchronous and synchronous delivery options, as well as online and offline components (CIPD, 2017). Sousa and Rocha (2018, 2019) define digital learning as an arbitrary, voluntary, unprompted learning process that is embedded in daily employee lives. They suggest that it may not have any predetermined learning objectives thus indicating that Sousa

and Rocha (2018, 2019) view digital learning as being informal. But it is interesting to note how research has indicated that well-integrated blended learning with a collaborative element is the future of learning (Sousa & Rocha, 2018, 2019; Welsh et al., 2003). These directions for future were tied with technological advancements, hence, it is consistent with the emerging technology-driven learning tools that are constantly evolving (CIPD, 2017; DUP, 2018).

Digital learning has revolutionised the way of learning by offering flexible learning practices – much like e-learning, they are all steered towards generating and sharing information that is likely to improve employee performance (CIPD, 2017; Hogle, 2018; Rosenberg, 2001). Sousa and Rocha (2018) see value in digital learning as it capitalises technologically empowered tools to improve employee learning experience, access to high quality content and offer flexibility to the learner to develop competencies in a personalised manner. Thus, giving learner the autonomy in the learning process to be critical, reflective and work collaboratively. A focus on improving end user experience has been central to digital learning and it does so by blending the different technologies to generate, share and manage knowledge (CIPD, 2017; Hogle, 2018). Prior research in e-learning had already indicated the need to shift towards more complex applications that encourage learner involvement through interaction (Welsh et al., 2003). CIPD's (2017) factsheet on digital learning highlighted the same, specifically identifying the tools that have emerged that are so interactive that they develop peer learning networks that create opportunities for global collaboration. Technological advancements have further created three categories within digital learning in terms of practice – formal, informal and blended learning (CIPD, 2017). Formal digital is generally synchronous, structured and may or may not require an instructor or peer to guide through. Informal digital aims to encourage informal learning generally through tools or media that are collaborative in nature to support the sharing of knowledge and networking – this may include social media learning. While the blended learning may use a combination of the formal and informal ways by delivering content through face-to-face sessions, instructor-led or collaborative, and adding an online component like peer networking or access to online learning material.

Digital learning has a range of tools and offerings including but not limited to online courses, web portals, eBooks, webinars, podcasts, blogs, MOOCs, mobile learning, gamification, digital storytelling, AR, VR, social media learning, and micro-learning

(CIPD, 2017; DUP, 2016, 2017, 2018; Sousa & Rocha, 2018). It encompasses e-learning packages as well as complementary e-learning techniques that allow creation, sharing as well as interaction with the information (CIPD, 2017). With the rising interest in online learning to facilitate learning beyond temporal boundaries, these solutions are disrupting traditional corporate training methods. MOOCs are an ideal example of this trend (Dodson et al., 2015; Karnouskos, 2017). The way these solutions are packaged may be new, but some of its elements have been there for a while. For example, internet-based courses, video and computer-mediated courses can be considered predecessors of modern-day MOOCs (Dodson et al., 2015). These options supported distance learning and open education but were not as collaborative or easy to use and did not offer a seamless, streamlined learning experience as a MOOC. MOOCs are increasingly being adopted by large organisations that organise their own while others may be directing their employees to these platforms through internal communications (Karnouskos, 2017). Cabanero-Johnson and Berge (2009) discussed the importance of adapting corporate learning to align with the characteristics and competencies of the 'digital natives'. They define them as technologically savvy students who "live, breathe, work, and play with the tools and products of the digital age" (Cabanero-Johnson & Berge, 2009, p. 291). These changes signal a shift in the trend of moving towards digital learning which can be customised by organisations to best suit their specific needs. Moreover, in the context of the fourth industrial revolution of digital transformation, digital learning can drive skills development to cope with the increasing competition in the business environment (Sousa & Rocha, 2019). The next section identifies the factors that literature has outlined as crucial in making the choice of switching to a digital learning solution.

2.4.3 Factors of consideration

The emergence of digital tools has transformed the way learning is delivered but it is crucial to understand that digital learning cannot deliver remarkable results if it is not used appropriately. There are a range of factors that need to be considered before deciding to have digital learning onboard – whether to adopt digital learning tools or not and if so, then which elements should it possess. The management needs to make choices regarding the features that are needed in their digital learning solutions such that it is well aligned with their industry, employee needs and IT & HR infrastructure (CIPD, 2017). For instance, the level of personalisation they would offer (Bruck et al., 2012), the frequency of updating it to keep up with the speed of learning (Gassler et al., 2004), the choice of

platform and the field of learning (Lee et al., 2015). While the fast pace of technological advancements has supported the introduction of a digital learning tool in the workplace, it has also increased the deployment challenges. New technologies are introduced continually, making the previous ones obsolete – thus, organisations with large structures struggle with keeping pace with it (Göschlberger & Bruck, 2017). Moreover, every platform has its own strengths and shortcomings. Mobile learning has its own limitations in terms of the impact on mobile storage, battery life, software issues (Lee et al., 2015) and MOOCs pose the challenge of not being customised enough as per the organisation's training needs (Dodson et al., 2015; Savino, 2014). Therefore, organisations need to take careful decisions pertaining to the adoption of the digital learning tool considering the operational factors and the contextual considerations.

The contextual considerations are crucial which if overlooked when adopting an e-learning solution, can lead to their failure or poor performance (Armstrong & Landers, 2018; Bondarouk et al., 2017; Strother, 2002). It could be linked to the lack of organisational focus on these factors that determine the performance of these e-learning solutions (Bondarouk et al., 2017; Rosenberg, 2001). Some organisations do not adapt as per the organisational culture (Olsen, 2016), or do not account for the socio-cultural context which fails to create resonance with the learner (Bierema, 2002; Park & Wen, 2016). Technology and communications infrastructure play a key role in supporting a new learning solution by making it easier for learners to transition (CIPD, 2017). The supporting factors of a digital learning tool such as interactivity (Armstrong & Launders, 2018), experiential element (Karakas & Manisaligil, 2012) and feedback mechanisms (Göschlberger & Bruck, 2017; Strother, 2002) make them more effective. The significance of the presence of these factors may vary across cultures, industries, organisations and roles (Park & Wen, 2015). But there are some generic factors that are to be considered by an organisation when adopting any learning tool. These factors may include clarity of training objectives and alignment with employee needs (Bierema, 2002), content quality (Karakas & Manisaligil, 2012), whether to administer it during or outside work hours and whether to use push or pull strategy. Dodson et al. (2015) also emphasised the importance of having an interactive design that motivates the employee to continue learning. Other operational factors may include the rollout time (Savino, 2014), frequency (Armstrong & Landers, 2018), and costs of the resources (Armstrong & Landers, 2018; Gassler et al., 2004).

Since these digital learning tools are more dependent on the learner's motivation; therefore, employee participation may vary (Gassler et al., 2004; Savino, 2014). Therefore, if these critical factors are not addressed tactfully, they may serve as a barrier in reaping the desired benefits. Most of these issues can be addressed by planning, communication and embedding it in the OL strategy. Bogdan, Holotescu, Andone and Grosseck (2017) suggested facilitating the rollout through learning representatives and powerful branding and promotion of the learning tool being introduced. Research has indicated that better communication amongst learners and the trainer has had a powerful impact on improving the learning outcomes (Bogdan et al., 2017; Park & Wen, 2016). While others supported a participatory approach, recommending staff involvement in the planning stages to align the tool with their learning needs (Karakas & Manisaligil, 2012; Olsen, 2016). Cabanero-Johnson & Berge (2009) emphasised the importance of having an engaging user interface for 'digital natives' to hold their attention. At the same time, with the impact of globalisation on businesses, it is important to incorporate culture-specific features in the learning tool such that it is well adapted for the diverse group of audience (Bierema, 2002). While these issues can be addressed at the planning stage and by communicating them appropriately, it is imperative that learning analytics are utilised to continuously improve on them and stay relevant (Bogdan et al., 2017).

2.4.4 Conclusion

Given the pace of technological advancements and its impact on all industries, the L&D professionals would have to better align their training delivery to the needs and learning patterns of the digital natives (Cabanero-Johnson & Berge, 2009). They can make use of digital learning tools to offer personalised, immersive learning experiences. The digital tools have been cited across literature for offering just-in-time, flexible, cost-effective and engaging learning solutions that deliver consistent content. The use of artificial intelligence, VR and emerging technologies is no longer a part of the future and needs to be considered by HR managers to revamp their OL strategy. The terms e-learning and digital learning have been used alternatively in some cases, but their usage varies across the academic and practitioner literature. However, in essence, both serve the purpose of strategically using technology to facilitate employee learning and performance. It is through the digital learning offerings that overlap between technology and, learning and development occurs. These digital tools contribute to the field of OL by enriching the OL strategy through blended learning approaches. Digital learning tools offer seamless, well-

integrated learning solutions that strengthen the learning processes across each level. Thus, by preparing the employees for digital transformation in the business environment, they give employees the power to bring that distinguished advantage to the organisation. This impact on organisational effectiveness and performance due to digital learning solutions supplementing the OL strategy signifies the connection through which the organisation earns a competitive edge.

2.5 Conclusion

Figure 2 summarises the flow of our discussion in this chapter. The three streams of literature reviewed linked directly to the research area of digital learning solutions. The SHRM literature sets the tone for the research context – as the participants are HR managers, who are often the strategy makers for their domain. Thus, their role as strategy makers shapes their views and leads to a greater focus on HR initiatives' contribution towards reaching strategic goals. Moreover, SHRM also provides the justification and rationale for why L&D is important for organisations to achieve their organisational goals. It establishes the link between organisational performance and the upskilling of employees through L&D, given that the individual goals are aligned with those of the organisation. Thus, this link emphasised the role of HR as a value-creating function of an organisation. In this context, OL becomes the means to support SHRM by making organisations more effective by upskilling their employees to perform better despite the changes in the business environment. However, with the changing dynamics and pace of digital disruption, it is inevitable for organisations to succeed without familiarising their employees with digital tools. This overlap of technology with OL is elucidated by digital learning. Digital learning supports OL often as part of a blended approach to make learning more dynamic through its facilitation of knowledge generation, communication, collaboration, information sharing and storing. In a nutshell, SHRM is the rationale behind OL, while OL is the driver that reinforces SHRM goals of fit, flexibility, organisational effectiveness and competitive edge. Positioned in this premise, digital learning solutions become a channel to support OL in ensuring strategic orientation of HRM.

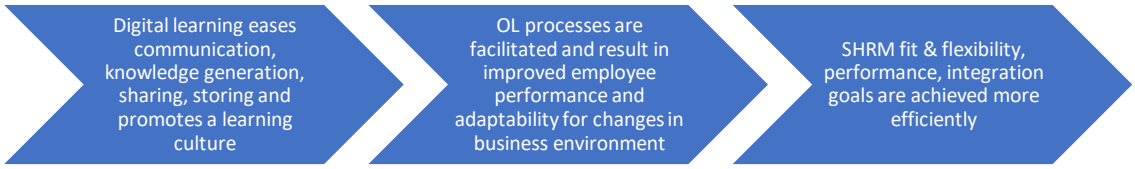


Figure 2: Literature integration – flow

Chapter 3: Research Methodology

This chapter will describe the research methodology that guided this study which will help understand the theoretical underpinnings of the approach used. The research design outline contextualises the research by describing the kind of data that the researcher is looking for while answering questions pertaining to what they intend to find out, through whom, when and how they would gather this data and interpret it (Crotty, 1998; Guba & Lincoln, 1994; Scotland, 2012). It is influenced by the chosen research paradigm, and hence the respective epistemology and ontology (Gray, 2013; Guba & Lincoln, 1994; Scotland, 2012). The research question identified can be approached through different paradigms; the choice of paradigm may determine the methodology (Crotty, 1998; Grant & Giddings, 2002; Gray, 2013). In this case, the question of how HR managers conceptualise digital learning solutions will be approached from a relativist ontology, constructivist epistemology within an interpretivist paradigm using interview research.

3.1 Methodology and method

The purpose of the research is to learn more about how HR managers in New Zealand organisations conceptualise and understand digital HR learning solutions. Referring to one of the four typologies discussed by Marshall and Rossman (2014), the research took the form of an exploratory study to explore this relatively unexplored research area (Agee, 2009; Gray, 2013; Kothari, 2004; Vaismoradi, Turunen & Bondas, 2013). The exploratory nature of qualitative studies is useful in developing an understanding of differing views of the participants (Agee, 2009; Kothari, 2004; Marshall & Rossman, 2014). Thus, not only reporting on the views of HR managers about digital learning solutions but also attempting to explain why and how they have formed these views. For that, theoretical evidence previously outlined in the literature review would be used to support the findings by exploring what may have influenced the perceptions of the participating HR managers. Thus, an inductive approach guided this exploratory research, by planning for the use of qualitative data collection and analysis tools, to conduct this study (Gray, 2013; Vaismoradi et al., 2013). The flexible research design of an exploratory study allows the emergence of valuable insights using the rich qualitative data gathered during interviews of HR managers.

To understand the theoretical underpinning of the research methods used, it would be useful to review the concepts of ontology, epistemology and research paradigm. Ontology refers to the study of the standpoint of an individual towards the existence of reality around them and how they define it (Grant & Giddings, 2002; Gray, 2013; Scotland, 2012). The relativist ontological position proposes that there could be multiple perceptions of reality while the realist position believes in a separate, discrete reality that exists per se (Gray, 2013; Scotland, 2012). The epistemology refers to the understanding of knowledge and elucidating how this meaning is associated to it (Bryman & Bell, 2011; Crotty, 1998; Grant & Giddings, 2002; Gray, 2013; Scotland, 2012). And paradigms or theoretical perspectives refer to the set of beliefs that guide the researcher in determining the methodology and methods in terms of what to research, how to conduct it and how to analyse it (Bryman as cited in Bryman & Bell, 2011; Crotty, 1998). It comprises of ontology, epistemology, methodology and the research methods (Scotland, 2012). It aims to contextualise the research methodology and the underlying assumptions (Crotty, 1998).

The research question at hand acknowledges the existence of variance in the perspectives of the HR managers. It aims to analyse the digital learning solutions by constructing meaning by drawing on the distinct first-hand experiences of the HR managers. This multi-perspective approach to reality and creation of contextual meaning based on the varying perceptions of the subjects, that is the individual HR managers, regarding the object, the digital learning solutions, is in coherence with the relativist ontology and constructivist epistemology. The choice of ontology influences the epistemology which in turn determines the choice of research paradigm (Crotty, 1998; Grant & Giddings, 2002; Gray, 2013). The interpretivist paradigm is often associated to a constructivist epistemology and a relativist ontology because of its multi-perspective view of social reality and creation of knowledge based on experiences (Grant & Giddings, 2002; Gray, 2013; Rubin & Rubin, 2011). This individualistic approach, to constructing a view of the digital learning solutions based on the differing perspectives of the HR managers involved, is reflective of the interpretivist paradigm which is consistent with the previously identified relativist ontological and constructivist epistemological positions (Creswell, 2009 as cited in Scotland, 2012; Crotty, 1998; Gray, 2013; Rubin & Rubin, 2011). The alternative positivist paradigm is more objective in nature and driven by empirical testing, while critical theory aims to question the values and social structures in an effort to transform them (Bryman & Bell, 2011; Gray, 2013, Scotland, 2012). Thus, the chosen paradigm is more relevant and better aligned with the purpose of this study

which is to explore how the HR managers strategically make decisions regarding employing digital learning solutions.

3.1.1 Interview Research

Rubin and Rubin (2011) defined qualitative interviewing as a directed conversation between the researcher and the participant. The purpose is not to simply derive factual information, rather it aims to extract the interpretations of the participants regarding the phenomenon of interest (Warren, 2002). The constructivist epistemology encourages the researcher to conduct open-ended interviews (Warren, 2002). This is to enable the researcher to understand how the participant defines their experiences and makes sense of their social reality. Kvale (1996) has outlined the seven stages of qualitative interviewing as thematising, designing, interviewing, transcribing, analysing, verifying and reporting. Kvale's (1996) explanation of thematising revolved around the alignment of the researcher's phenomenon of interest with their chosen research method; to determine its role in facilitating the understanding of participants' experiences. Thus, to ensure that the qualitative interview study at hand would make valuable contributions, it is to be designed such that the existing literature is first reviewed while also accounting for the resources required for the research. This includes the selection of knowledgeable participants who can add value to the research question at hand. Thus, using an appropriate sampling technique, the data is collected which has been outlined in the following section.

3.2 Data Collection

The qualitative data was gathered through conducting semi-structured interviews with HR managers of organisations in NZ. These were used to collect rich, in-depth insights about perspectives that may not have been achieved otherwise (DiCicco-Bloom & Crabtree, 2006; Rubin & Rubin, 2011). Semi-structured interviews included predictive questions enquiring about their thoughts and perceptions about digital learning solutions. The use of open-ended predictive questions gave room for exploring other relevant areas which may not have been anticipated earlier thus leading to exploration of new areas (DiCicco-Bloom & Crabtree, 2006; Gray, 2013).

Research supports the use of semi-structured interviews in conjunct with exploratory qualitative studies since they allow exploration of direct individual experiences, opinions, attitudes and allow access to personalised information (DiCicco-Bloom &

Crabtree, 2006; Gioia, Corley & Hamilton, 2013; Rubin & Rubin, 2011). It allows probing which enabled eliciting detailed descriptive and interpretative responses from the HR managers which is also consistent with the objective of semi-structured interviews. The critical reflections of the HR managers led to new areas of focus which were not initially planned and hence was also in line with the inductive approach of the research discussed by Gioia et al. (2013). This flexibility is unique to interpretive research through the use of semi-structured interviews (Gioia et al., 2013). Subsequent interviews gave rise to some new questions which in some cases led to contacting participants already interviewed to further enrich the research. This process of revisiting the 'prior informants' to address the new domains emerging from subsequent research is referred to as 'backtracking' by Gioia et al. (2013).

Purposive criterion sampling method was used to contact the HR managers who possessed a minimum of 5 years of experience working within HR or L&D. This criterion supported selection of only those participants who had sufficient experience to provide valuable insights for the research (Gray, 2013; Kothari, 2004). The research involved interviews of six HR managers from different NZ organisations to understand how they strategically think about the digital learning solutions that have emerged overtime. These HR managers were recruited using connections developed being the Student Ambassador of the HRINZ and through the professional work network. The participants were chosen irrespective of their prior experience of designing or implementing a digital learning solution. The reason for not limiting it to the ones who had interacted with one before, was to not restrict the perspectives of the HR managers that did not employ them. This enabled the research to explore both views around the area of usage of digital learning solutions as part of the OL strategy. It led to a broader base of data which not only provided insights from those who have employed or interacted with them but also highlighted the reasons why some HR managers have not. The responses of the participants were audio recorded, with their consent, and were used along with field notes for data analysis. All the interviews were conducted at the main offices of the participants' organisation; each interview lasted between 50 to 60 minutes.

The table below presents the participant profiles to give a broad overview with the pseudonyms used for each, their role, industry, business ownership and industry experience outline.

Pseudonym	Current Role	Current Industry & Ownership	Participant's Industry experience
Kate	HR Manager	Aged Care (NZ based)	30+ years of experience in diverse HR roles spanning across hospitality, legal & professional services, accounting, engineering and healthcare firms.
Kimberley	HR Business Partner	Electronics (Global organisation with Headquarters in NZ)	15+ years of experience in diverse HR roles spanning across healthcare, media electronics, energy, tele-communications, and banking industries.
Steve	Capability Manager	Food (Global organisation with Headquarters in NZ)	12+ years of experience in L&D roles spanning across tele-communications, financial services and food industries.
Rebecca	Manager – L&D	Law (NZ based)	18+ years pf experience in HR roles, predominantly learning & development roles within local and international law firms.
Susan	HR Business Partner – L&D	Tele-communications (Global organisation with Headquarters in NZ)	10+ years of experience in HR roles, predominantly learning & development roles within tele-communications industry.
Mona	L&D specialist	Consulting services (NZ based)	35+ years of experience in senior HR generalist roles before becoming an L&D specialist. Mostly worked for governmental organisations before becoming an L&D tools and service provider.

Table 1: Participant profile

3.3 Data analysis

The qualitative data collected through semi-structured interviews provides a wide array of data, presenting detailed narrations of varying experiences and perspectives of the HR managers. Since the qualitative data collected was in the form of lengthy interview transcripts and field notes, Gioia et al.'s (2013) methodology of conducting inductive research was appropriate. It is ideal for analysing inductive research conducted using detailed interviews.

It began with identifying 1st-order concepts in our initial analysis through manual open coding – grouping the 1st-order concepts into categories. This gave rise to around 28 categories. These categories were defined using the participants' terms to stay as true to their essence as possible. The 2nd-order analysis took a step further by searching for common patterns across these concepts – thus clustering the similar ones together using descriptive labels. This resulted in reducing the initial 28 first-order categories of concepts to a relatively manageable number of 9. However, to give rise to 2nd-order themes, it was crucial to understand the purpose that each of these clustered 1st-order concepts were serving in answering our main research question. As Gioia et al. (2013) suggested, the main idea was to ask myself that "What's going on here?", to be able to identify the link between these themes that would eventually answer the research question. Therefore, retaining the themes based on concepts that were contributing towards describing or explaining the phenomena – that is the thoughts of HR managers around digital learning solutions. This meant that those concepts that have been already discussed in literature review were also accounted for, but the emphasis and focus remained on the new concepts and themes that emerged during data analysis. Then to put things into perspective, the 2nd order themes were categorised into 3 broad aggregate dimensions. The sorting of the 1st order concepts and 2nd order themes in relation to the aggregate dimensions gave rise to a well configured data structure as used by Corley and Gioia (2004). This visual data structure makes it easier to understand the context of these themes and dimensions and in this case provides an overview of the three main dimensions of HR managers' perceptions about digital learning solutions. See *Figure 1* below for the data structure created based on the research's twenty-eight 1st-order concepts, nine 2nd order themes and three aggregate dimensions.

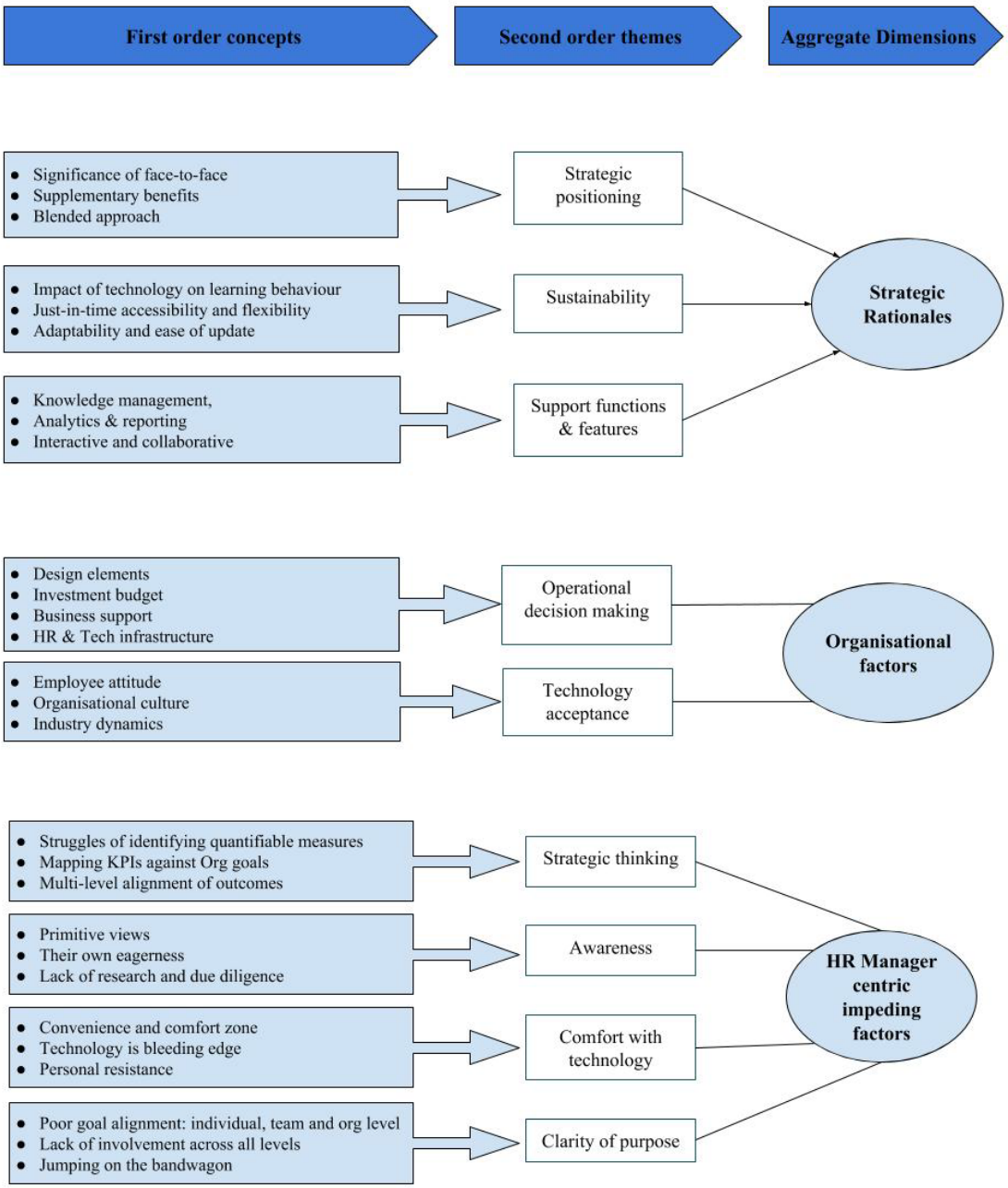


Figure 3: Data structure

3.4 Ethics Approval

Ethical approval was required since the research involved human participants, the interviews with HR managers. The ethics approval ensures that neither the researcher, nor the research participants or their organisations are harmed or disadvantaged in any way. The research topic is not of a sensitive nature, nor targets a specific group hence minimal or no discomfort to the participants was expected.

An information sheet was sent to the potential research participants to give them a basic orientation of the key components of the study. A consent form was then signed by those who voluntarily chose to participate in the research. Pseudonyms were used at all stages of the research process to offer confidentiality and privacy to the research participants and their organisations.

The data collected as part of the research will be stored securely in an external hard drive that will only be accessible to the primary researcher and will be destroyed after a period of six years, as stipulated by Auckland University of Technology Ethics Committee (AUTEC).

The ethics approval for this study was granted by the Auckland University of Technology Ethics Committee (AUTEC) on 7 August 2018, ethics application number 18/303.

Chapter 4: Findings

This chapter aims to present and discuss the findings of this research gathered across the six interviews with HR managers in NZ. The emerging themes are all directed towards answering the overarching research question of how HR managers conceptualise digital learning solutions in their organisations. The three sub-questions that were developed in the beginning enabled me to dissect the overarching research question and were helpful in structuring the findings. The views of the HR managers around the rationale for adopting digital learning solutions, their positioning in the OL strategy and the critical factors of consideration were generally similar. However, their personal awareness of digital learning solutions greatly varied. The research findings offer detailed insights into the themes outlined above. These are critically analysed from the strategic point of view since the respondents were senior HR managers who are in most cases the key decisionmakers in this domain. Relevant theoretical frameworks that transpired from the literature review are discussed and contrasted with the findings wherever necessary.

4.1 Strategic rationales

One of the most common occurring themes, across all the interviews, was HR managers' thoughts about why digital learning solutions need to be embraced and their fit within the OL strategy. Some attributed this need to switch to digital learning solutions more due to the increasing use of phones which is changing employee learning patterns and preferences. Göschlberger (2017) elucidated this change by linking high usage of mobile phones to increased levels of engagement on SNS which has shaped their preferences for communication, interaction as well as of accessing and sharing information. While others associated it more to the innovative features and functions which can make learning more effective by improving learner experience. However, all of them did acknowledge that the increasing interaction with technology during our daily lives would require realigning the training delivery channel to stay relevant. There is an increasing thirst for accessibility to learning which can only be facilitated by platform agnostic digital learning. Thus, digital learning will play an even more crucial role in supplementing the OL strategy.

The first aggregate dimension of 'Strategic Rationales' comprises of three themes: the strategic positioning of digital learning solutions in the OL strategy, their sustainability and their supporting innovative features. The three themes are linked together as they justify how digital learning solutions are used, and why it makes sense to use them. The

strategic positioning theme identifies how and where digital learning solutions fit in the OL strategy. The sustainability theme discusses the value of digital learning solutions in the long-run, given the context of technological advancement and globalisation. And the last theme presents the support functions that make HR managers consider switching to digital learning solutions.

4.1.1 Strategic positioning

The HR managers were unanimous in their supplementary positioning of digital learning solutions as part of the OL strategy. They do not see it as a replacement of face-to-face training as it has its own merits in terms of bringing people together which builds networks that last longer beyond the days of training (Göschlberger & Bruck, 2017; Welsh et al., 2003). The significance of human interaction was highlighted time and again as the shared experiences together and open discussions are not as easy to replicate in digital learning solutions (Ferriman, 2014; Richards, 2018). Some of the comments from HR managers were:

"It's [L&D] never perfect. It never works as you want, but if the manager takes the time to care about that person that's a human touch that you can never replace with a system." – Kimberley

"...it [digital learning] doesn't have a human touch. It's really good for imparting information, but for the connection piece…that I find missing." – Rebecca

"you can do that [develop soft skills] a little bit with scenario-based stuff online, but it's not quite the same as a human interaction..." – Mona

Moreover, in terms of usage, most organisations use it for sending out compulsory modules to reach larger audiences.

" ...a firm of our size, if you're trying to get a consistent message out eLearning is almost the only way you've got to go" ... "One generic module for everybody – Rebecca

"...I use it for compliance sort of mandatory courses that an employee of a company of this size would be expected to go through, so like your anti-bribery, your anti-fraud, health and safety and all that sort of stuff. So, we have implemented that and that's across the whole company." - Susan

As can be noted, HR managers in NZ are generally using it to deliver mandatory training which is aimed at wider audiences, thus the content is generally not tailored or well adapted. The missing collaborative element due to lack of human touch, along with the generic nature of trainings are some limitations of digital learning identified by

participants. However, it can be argued that there are digital learning solutions that have incorporated the collaborative element. For example, Dodson et al. (2015) brought attention to MOOC's role in creating diverse peer learning networks as it invites learners from around the world who share similar learning interests to interact on its discussion forums. Moreover, Karakas and Manisaligil (2012) also highlighted the collaborative aspect of digital learning solutions in their discussion of social media learning and its contribution towards encouraging informal learning. But they had a consensus that digital learning solutions can only supplement existing strategy to support learning but not be the only source of training. Consequently, there was a lot of support for a blended approach where live training and online training go together complementing one another:

"...so, you can't do everything via eLearning. Well that's my opinion anyway...so that they get a mix of both of those elements, so that it's not just eLearning, so that they do not feel that they've lost all human touch, they've lost all contacts and networks that they could have developed otherwise through classroom trainings and platforms like those. So, it has to be a balanced approach..." - Rebecca

"...humans just create connections." ... "We want to use blended learning for everything. Currently because as I mentioned before our leadership program is done face to face and it's 100 per cent done face to face. That needs to change, because it excludes anyone from outside of New Zealand and excludes anyone who hasn't got a budget to transport someone from - all the time. Anything that reaches a critical size in terms of the number of people it needs to reach, we start to look at more effective ways of delivering the information. And we start to look at the number of workshops you need for 20 people's fine, but if it becomes 200 or 1000, then pulling people into a classroom is not the best way of doing it." - Steve

This has been identified by literature as the future of learning as it utilises the delivery channels efficiently (CIPD, 2017; Sousa & Rocha, 2018, 2019; Welsh et al., 2003). Although the extent to which digital learning solutions will be used will vary from one organisation to another and across roles. As Susan said,

"Well we've still got engineers who need to work with a buddy doing stuff to learn the machine. They can't sit in a class and look at a video and go oh that's how you do that machine. They've got to get in about it and they might need a supervisor with them, like a buddy, to mentor and guide what they're doing, because they're learning about electrical equipment. So there still has to be that live element to their training".

This response may be myopic due to lack of awareness of the complete gamut of digital learning which will be discussed in detail later.

The support for digital learning is deep-rooted in its ability to efficiently fill knowledge gaps. Scholars also highlighted this as one of the main reasons for utilising digital learning solutions such as MOOCs and micro-learning to offer cost effective and time efficient

training (Bruck et al., 2012; Dodson et al., 2015). Similar views are shared by the participants too:

"...more and more people are looking for solutions where they can actually offer learning to their employees on a just in time, as required basis" – Mona

"it's not that we aren't doing any training - but there was the need, well-defined areas of need, where this could slot into and they were being partially met or not particularly well met, or met in a much more expensive and labour-intensive way in the past" - Kate

Thus, digital learning solutions enable the HR managers to save time, costs and provide employees with accessibility to learning resources. That being said, most HR managers have still not utilised the functionality of digital learning solutions. They still mostly use it for mandatory compliance or health and safety trainings which cannot be offered face-to-face due to the substantial number of employees spread across the country. Pimmer and Pachler (2014) also criticised organisations for having a limited use of digital learning solutions while they possess the capability to enrich training.

Susan's comment on its positioning in the OL strategy:

"...eLearning is not a major part of my organisational learning strategy. It is ad-hoc."

This indicates that they may not have put in a lot of thought into it – this will be discussed in detail in the section pertaining to the impact of HR manager's personal attitude. Kimberley saw it as being *"more appropriate for offering ongoing training"* and not for onboarding as she believes that "*the human interaction is more critical at that stage*". This could indicate their disbelief in the versatility of digital learning solutions. However, Kate felt if you have tailored your digital learning solution to resonate with the organisational culture then it's ideal for ongoing as well as induction training.

"...we've utilised these resources for our induction program and we've got a core induction which covers some of the Altura videos, as well as some other resources that we've developed as part of our induction. So, a video introducing our organisation and with a voiceover from our CEO and just touching on various aspects of the company by way of introduction."

In a nutshell, there has been support for it to be a part of the blended learning strategy across literature and the interviews conducted. The popular view is to use them such that both live and digital training are used to leverage on the technological advancements to facilitate staff professional development.

4.1.2 Sustainability

Being in a strategic position, HR managers have the responsibility of ensuring that their initiatives are sustainable – that is, they can continue to play a role in the long-run. The idea of sustainability is central in SHRM literature as HR practices are expected to contribute towards giving organisation a sustainable competitive advantage (Schuler & MacMillan, 1984; Wright & McMahan, 1992; Pfeffer, 1994). In this case, OL initiatives can be sustainable if they can continue to support employee learning and professional development such that it translates in improving organisational performance. HR managers rationalise their support for digital learning solutions due to their sustainability. The idea of their sustainability is grounded in the way it is aligned with technological changes, their easy accessibility and scalability. The changes brought about by the digital revolution has influenced the way people interact with technology and learn, thus digital learning solutions are aligned with that (Cabanero-Johnson & Berge, 2009). Secondly, they are highly accessible across temporal boundaries which makes them cost-effective and facilitates uniform roll-out (Armstrong & Landers, 2018; Göschlberger & Bruck, 2017; Savino, 2014; Stone et al., 2015). Thirdly, they are highly adaptable when catering to the needs of a diverse workforce and constantly changing learning needs (Bierema, 2002; Dodson et al., 2015; Karnouskos, 2017). These factors make them very sustainable in today's globalised and technologically advanced world.

4.1.2.1 Technological advances

With the increasing usage of phones and everything available at one click, employees now prefer having a "quick fix". Therefore, Mona thinks it is the perfect time to leverage on these technologies to keep people-up-to-date, the way today's digital learners need to be. The general perception is that the direction in which technology is progressing, digital learning will continue to have a significant role. Some of the views of the HR managers in this regard are:

"it [digital learning solutions] certainly is [in line with] the way that technology is moving" - Rebecca

"It's a transition to where you need to be for the future" – Mona

"it is the first step towards adopting these software systems". - Kate

These views are reflective of how HR managers envision the future of HR and the tremendous role that HR and specially L&D has to play by leading this automation. This

is reflected in studies by Palma and Pedrozo (2016), Sousa and Rocha (2018), and Stone et al. (2015) who highlighted the role technology will play in the future of OL due to digital transformation occurring worldwide. Stone et al. (2015) discussed how technology is changing all departments such as e-recruitment and HRIS software systems that support payroll; L&D has to go hand-in-hand to prepare the organisational talent to survive in these times.

4.1.2.2 Accessibility

All HR managers emphasised that the accessibility is the most important reason for adopting digital learning because employees want to be able to learn whenever and wherever they want. This is quite aligned with digital learning solutions' ability to offer just-in-time and self-directed learning options which enhance employee productivity (Beamish et al., 2002; Cornell as cited in Bruck et al., 2012; Stone et al., 2015). There is no denying of how time-saving and cost-effective they can be when it comes to training a large number of employees in diverse location. Göschlberger and Bruck (2017, December) also found their outreach to be commendable and for being more engaging. Dodson et al. (2015) prioritises their cost-effectiveness and time efficiency as the most valuable offering. This is where the HR managers see the maximum value of technology too as compulsory modules are difficult to administer. However, they believe that the digital learning solutions have facilitated it through their uniform roll-out which also ensures the consistency of the message which was otherwise compromised due to human element.

"it is so hard to get people in the same room – their availability then trainer's availability – and with all the travel expenditure involved and the time wasted during breaks…this is where technology facilitates our growing business to reach our employees far off" – Steve

Digital solutions like micro-learning can supplement the existing OL strategy by nurturing a learning culture that is sustainable. Gassler et al. (2004) and Göschlberger and Bruck's (2017) work on micro-learning builds on the just-in-time functionality to embed learning into daily work lives to assist them in problem-solving. Sousa and Rocha (2018) also built their case for digital learning based on the accessibility it provides to its users and the autonomy it gives them to manage their learning. Some participants incorporated this element by offering their employees 24/7 accessibility to an online learning library or through mobile apps with learning resources. Some exemplar quotes presenting their views on accessibility of digital learning solutions:

"they've [employees] wanted something that's here and now; I need to do a task in my role to do with leadership…I need the information right now. I don't want to jump on a program that takes six months for me to get to the topic on running a team meeting or building a strategy, so I want that here and now." – Steve

"…great for getting messaging out really quickly, short and sharp and I think that appeals to people because people are ultimately quite busy" – Rebecca

"So, I think that anything that allows you to get the information they need to them and quickly is a good thing, so the way you set up your platforms to allow access is a big part of it. But I think it's got to be short and sharp and to the point. We don't want to see a 30-minute module on how to do something. We want a two minutes or less module on how to do it if you can swing it, or least give an overview and say if you need more on this go here, if you need more on this go here." – Mona

"…you can't get away from that [digital learning] – the emphasis now being on the eLearning, 'the get it when you need it Mr Google search', however, the LinkedIn Learning type style people look for." – Susan

The just-in-time functionality also enables learners to study at their own pace and convenience. For example, Susan remarked:

"it has the extra functionality of being able to repeat and read transcripts, take breaks, access additional embedded resources and even revisit it later whenever needed"

Thus, it allows for self-directed learning which is again something that some HR managers deem as necessary to create a culture of learning across organisation.

These responses from the HR managers are thus in line with what Beamish et al. (2002) and Lee et al. (2015) had identified as well about the just-in-time feature and how this accessibility is transforming the way people learn and the way organisations progress.

4.1.2.3 Adaptability

The adaptability is another factor that really appeals to the HR managers as it means that they can easily communicate with their staff and any changes in content can be accounted for with one update. Exemplary quotes:

"…you'll save money, because you only have to develop it once for the system. Then after that it's there and you just maybe tweak it or update it but it's not like you're having to do it over again" – Kimberley

"to me it's more sustainable because it's easier to maintain and improve it and everything, and that's what I'm seeing in all these online SaaS solutions is that they are really up to date. They're up to date and they're going to stay that way with all the upgrades coming in overnight without you even realising it"- Mona

Moreover, the theme of adaptability goes beyond ease of updates. Digital learning solutions are flexible in terms of the content they offer that can cater to a far more diverse audience by exposing employees to a breadth of topics to choose from. Furthermore, they also can be better aligned with the employee preferences and if they adapt it well to the learning needs of the learner – they will automatically develop interest in them and are more likely to stay motivated.

"...with LinkedIn Learning – it is versatile – it can cater to different needs of employees as they have a variety of modules on there" – Susan

"let it be employee-led rather than employer-led to ensure it is 'employee-directed' to reap better results" – Kate

Steve passed an interesting comment about how they can inspire you:

"when I think of MOOC and it does not suit my needs – I think well I can create a version of the MOOC which may be the best way"

This view of adapting them to create one that is well adapted to your own needs has also been brought up in literature. Savino (2014) and Dodson et al. (2015) in their discussion of MOOCs and their use in corporate training suggested that if a typical MOOC offering does not meet your demands, you can create your own version of it that suits your goals best. This is reflective of how flexible and adaptable they can be.

The factors discussed prove that there is reasonable support for the sustainability of digital learning solutions across literature and primary research. The sustainability of these digital learning solutions is what appeals to the HR managers as it enables them to rationalise their decision. The next theme discusses the support functions that HR managers look for in digital learning solutions. They may not be as critical as the factors that determine their sustainability, but they still have appeal in them.

4.1.3 Support functions and features

Support functions and features are those attributes or qualities of a digital learning solution which are not essential. These are the factors that HR managers did not identify as the main reasons why they would adopt a digital learning solution, however, it would be an added benefit if it offers any of these supportive features. As discussed in the first section, their alignment with learner preferences, accessibility and adaptability are the three key features that are essential and thus their rationalisation is embedded in them. However, there has been an increasing interest in the innovative features that they offer

which makes learning more effective. Literature has identified almost all of these factors: engagement, powerful communication, collaboration, branding, data management and reporting (Armstrong & Landers, 2018; Bruck et al., 2012; Cabanero-Johnson & Berge; 2009; Dodson et al., 2015; Göschlberger & Bruck, 2017). However, they have not been classified or prioritised in any manner in the literature. Based on the responses of the participants, they have been classified separately as per their priority – those that are essential (that have been discussed under sustainability) and those that are support functions.

OL literature emphasised the importance of knowledge management as was evident from Huber's (1991) identification of learning constructs and their role in making organisations more progressive by learning from them. It is quite aligned with Mona's comment about an added functionality it offers:

"...it [digital learning solution] becomes a knowledge management tool as well, because we often say how hard it is to get the information out of our subject matter experts heads. Well these tools actually encourage them to share their information which is really cool." – Mona

Research has particularly indicated that digital learning has a great role to play in gather data and serving as an analytical tool (Bogdan et al., 2017; Sousa & Rocha, 2018; Stone et al., 2015). This has emerged from primary research as well - Susan really appreciates its role in data management and analytics:

"I mean with LinkedIn Learning it's very good reporting that you can get from it. Yeah, so I as an admin learning licence - can go in and download Excel reports on usage, the videos watched, so the titles of them, how long somebody's spent on them, what time they went into them, whether they watched the video, whether they've watched a module or whether they've done the whole course, yeah…I can look at their like snapshot dashboards and I can pretty much use that to send to my analytics person, for them to then present to the senior management team. I don't actually have to create anything myself, yeah." – Susan

Another common feature that HR managers really appreciate in these offerings is that they are interactive. Research has also highlighted this feature as it contributes heavily towards motivating the employee to do it (Armstrong & Landers, 2018; Bruck et al., 2012; Göschlberger, 2017). A key element is the "visualisation of the learning progress" they present along with their captivating storylines and visuals which engages the user (Göschlberger & Bruck, 2017, section 3.6, para 1; Ou et al., 2017). The engagement aspect is particularly viewed by HR managers in the context of gamification and is really appreciated:

"I myself do a lot of online gaming. I think that's a brilliant way to learn. I wouldn't say what I do is educational, but I still think it's an excellent way to - that whole gamification. We've been talking about gamification here recently actually with Health and Safety, because it's a relatively dry topic. So, we're looking at ways of really engaging people and obviously through gamification and storytelling, people just really connect really well with the whole concept of whatever the theme is". – Steve

"I love the idea of gamification - because I think we naturally all want - you've got to use it appropriately obviously, but I think there are some really valid points where you could use it. You could certainly use it for leadership development. Look at Candy Crush on Facebook. How popular is that…you know? So, it appeals to something quite human in us, so yeah, I think there's a lot to be said for it." – Kimberley

Mona particularly appreciates the use of AR as it "*brings training to life and is a great job aide".*

These responses clearly indicate the value that HR managers see in them. The more visually attractive and immersive they are, the better the user experience is going to be (Chou, 2015; Göschlberger, 2017; Göschlberger & Bruck, 2017). It also sits well with Rebecca's comment on why it is important to offer employees with something interactive:

"people now have an attention span of a goldfish – if you do not grab their attention in the first few seconds, they are gone".

Moreover, other features such as game elements in gamification can keep employees hooked onto it due to the reward system and sense of competition it promotes which can work well with sales staff and team leaders. The visualisation these tools offer is of immense value as they engage the staff through *"positive reinforcement".* Kimberley kept emphasising that:

"a good digital learning solution should be fun, intuitive, organic, collaborative and should allow easy reporting.".

Susan also really appreciates the collaboration facilitated by digital learning solutions and the new virtual space that it has created that never existed before:

"We have this chatter area to support our employees' informal learning – it's like Messenger - where somebody can type in something and you can get help. You can get support, then the community will say oh there's this. So yeah, there's a community there where I suppose from a learning point of view they can collaborate"

This is a highly valued benefit of digital learning as it creates a sense of community and supports in developing internal networks (Dodson et al., 2015). Employees then not only learn themselves but share their knowledge with others which again also supports knowledge management goals as well as encourages cross-functional learning – an aspect highlighted by Crossan et al. (1999). Thus, this is another feature that finds support in

both the literature and the interviews with the HR managers in relation to the strategic rationale for adopting them.

The next section highlights our second aggregate dimension of "Organisational factors". This theme is related to the rationales of the HR managers for using technology as it identifies the factors which may hinder the adoption of digital learning solutions. There are factors pertaining to operational decisions as well as technology acceptance. The HR managers then have to evaluate the feasibility of digital learning initiatives in the light of their rationale and the factors that might be challenging to manage.

4.2 Organisational factors

The second most common occurring theme revolved around the organisational factors that the HR managers identified as critical when considering adoption of a digital learning solution. These factors have been brought up and addressed by literature frequently. For example, one of the three streams in which Dodgson (1993) collated the OL literature was pertaining to the factors that expedite or hinder organisational learning. Moreover, Bondarouk et al. (2017) discussed the TOP framework in the context of e-HRM and the impact of these factors. He emphasised that each of these factors needs to be critically analysed to ensure that they are contributing towards the strategic goals of the organisation. However, the organisational factors defined by Bondarouk et al. (2017) were narrower in scope than the way our research defines them. Nonetheless, these factors identified by Dodgson (1993) and Bondarouk et al. (2017) are just as applicable on the implementation of digital learning solutions as the responses from the HR managers suggest. The views of the HR managers will be shared in the subsequent discussions of the themes. The factors that emerged from the interviews that were likely to have an impact on day-to-day functioning of digital learning solutions, such as design elements, investment budgets, business support and HR & technology infrastructure, were organised under the main theme of operational decision making. While others such as organisational culture, employee attitude and wider industry dynamics were categorised under "Technological Acceptance" as the degree to which they resisted or supported use of technology had an impact on determining the success or failure of the digital learning solution in place.

4.2.1 Operational decision making

Heikkila and Isett (2004) state that operational decision making pertain to decisions made by institutional actors when they are presented with operational choices affecting day-to-day affairs of the business. Based on this understanding, the factors pertaining to the functional and design features of digital learning solutions were classified under design elements. Similarly, the availability of investment budget limits the level of funding you can dedicate towards it and thus the type of digital learning you would invest in – simplistic or highly innovative. In the same way, the role of business support may influence employee's eagerness towards learning. And lastly, if the HR & technology infrastructure does not offer support or integration, there would be countless tracking challenges and malfunctions which will be discussed in detail.

4.2.1.1 Design elements

The design elements refer to all the potential choices that HR managers can make regarding the functioning of their digital learning solution. It may include the factors that determine the features it would possess, the degree of customisation it will offer, how it will be rolled-out, whether to keep them mandatory or voluntary, to offer them during or after office hours, to use them for formal or informal training, to use it for individual training or in a collective manner. HR managers are generally of the view that all training except for compliance or health and safety should be voluntary to give them the liberty to choose which they hope would keep employees more engaged. There was consensus on offering them during work hours only to ensure the work-life balance is not adversely impacted. Thoughts around degree of customisation varied primarily due to the difference in their interpretation of it. However, they agree that all digital learning solutions should be customised enough to resonate with organisational branding and language. It has been mostly used for offering collective training but there is increasing support for using it to promote self-directed learning. They also advised that all HR managers should exercise caution in rolling it out because it may have a far-reaching impact on determining how employees might respond to it.

Kimberley shared her approach to ace the designing of digital learning:

"I think you need your champions in the business, you need those people who are happy to try new things alongside you testing, giving feedback. The users of your systems should be involved in the design of it and when I say system I mean the communications, the

change effort, because they're the ones who are going to be your customers. So, if you involve them early they'll help you"

The importance of having change agents and solid communication was also highlighted in literature. Vey et al. (2017) emphasised that there is a need to have advocates who can communicate this change to them and offer support. Karakas and Manisaligil (2012) also emphasised that employees need to be involved across the learning design to ensure that what you offer them is fulfilling their learning needs in the best possible manner.

Another design element that was brought up was regarding content curation. Kate and Rebecca prefer investing on gaining "*access to learning libraries"* so that they do not need to curate data themselves.

"I quite liked the idea of having access to some kind of a library somewhere, because I'm not going to be able to build my own because that's not scalable. So, having access to somebody else's library of some kind, I've kind of struggled with finding ones that I really like the content of." – Rebecca

Just as any other digital learning solution, learning libraries can be time-saving and cost-effective. However, a downside of it could be lack of resonance with organisational culture as it would be generic – a concern raised by Dodson et al. (2015) regarding massive open online courses.

When discussing about content curation, Mona commented:

"And that's the thing really, because I think it still comes back to curation. Like you can have the greatest system in the world, but if people can't find stuff or it's not categorised well, they're still going to have a problem. So, the idea is to make these little bits and pieces available and regularly have little notifications for people".

And in reference to content curation for gamification:

"what's in the Learning Management System won't work for you if your stuff is really terrible, because no one's going to go through the pain just to pick up 10 points at the end of a module. But I think if you've got pretty good material on there and you're encouraging people to complete it and you're giving them points as well, it's all positive reinforcement". – Mona

These remarks indicate that thoughts of HR managers pertaining to content curation can even determine their choice of digital learning solution as well as how effective it can be. Mona's comments support Dodson et al. (2015) and Savino's (2014) stance that it all comes down to thoughtful curation and tailoring of the learning content as per the delivery tool to reap the desired benefits from digital learning.

The bottom line is that all these decisions pertaining to design essentially determine how employees would interact with them and how they will be integrated into their work lives. These factors often play a vital role in shaping its positioning in the OL strategy.

4.2.1.2 Investment budgets

The investment budget available plays a key role in determining the HR managers' decision to adopt a digital learning solution – whether to adopt one or not, and if so, then which one to choose. This is because all digital learning solutions generally require a significant upfront cost. Most HR managers cited budgetary constraints as a main factor in influencing their decision. It is their responsibility to prioritise within the given budget while ensuring that all learning needs are being catered for within the allocated funding.

"I had a certain budget. There's a limit to how much you can do within that budget. Creating good eLearning, even a short module like that, it cost me $10,000 you know? It's not cheap - good eLearning…if I had an unlimited budget I'd be happy to try and incorporate more. But at the moment given the reaction I get from my people to them and the cost involved in creating them, like oh not sure that's actually worth it to be honest, so yeah." – Rebecca

While all of them find it challenging to deal with, Mona, Steve and Kate shared their ways of better tackling them.

Mona suggests that all HR managers need to turn their thinking around when taking financial decisions:

"...say I've got a system and it's going to cost me $20,000 a year in license, it sounds like a horrific amount of money for a small to medium business perhaps. But if you divide that by the number of employees you expect to put on it, actually maybe it's not so much. Maybe it's only going to cost you something like $60 per employee per year, which is like a cup of coffee a month right? You know, would you spend $5 per employee per month to have them in a system like this? Yes, you would…I always try and break it down to people to make it better, to make it more palatable."

While Steve shared his views:

"...you have to have some strong measures in place to be able to quantify that it's been a worthwhile investment. You know, with any learning you want to come up with some objectives that are measurable and obviously real."

In reference to gamification:

"One of the outcomes would be if it's Health and Safety -, if it's a module on fire safety we would then look at the number of incidents or fire drills for example that were successful, versus the norm pre-module and then we could say well with gamification you get a 20 per cent increase in uptake. If it's something as simple as that it pays for itself and it sells itself, but it's all about having those measures in place, yeah." – Steve

And Kate believes that if you drive usage of your learning solutions from the get-go, it is bound to result in a good utilisation of money.

"We're tracking usage. We're monitoring and reporting and we're just trying to make the most use of it as possible, because if we don't use it then we won't be getting the return on the investment and it will be harder to justify continuing with it…So obviously if you've got more staff using it, you might be paying $1.00 a course, but if you've got relatively few people using it then it could be $20.00 a course."

Cost has been brought up several times in literature as well as a constraint (Armstrong & Landers, 2018; Bondarouk et al., 2017; Gassler et al., 2004). The findings suggest that it still is one of the major factors that HR managers need to think about, but it is encouraging to see that some HR managers have learnt to work their way around it.

4.2.1.3 Business support

Business support includes support from both the senior management as well as other business teams. Bondarouk et al. (2017) argued that top management at times does not see the value in investing because it would not directly benefit them. Swart and Harcup (2013) shed light on the factor in terms of management's attitude – if they do not prioritise it, employees would not prioritise it either. Moreover, the senior management is often the one administering investment and budgetary decisions which is why their lack of support would impact HR manager's ability to take the decisions (Bondarouk et al., 2017; Dodgson, 1993).

In reference to the barriers that digital learning solutions may face, Kimberley's view is:

"I'm just going to say it. It depends on the buy in that you've got at the senior levels around the importance of it"

"I think HR is often - and L&D I include in that - is often seen as a bit of a bolt-on"

"As an HR team you're a cost to the business...you have more obligation than a revenue generating centre to be very, very good with the resources that you've got".

These negative business perceptions can be a constant hinderance. The perception of HR as a support function has been addressed in academic literature several times. Wright and Ulrich (2017) argued that an investment in human capital results in a constant stream of economic rent that goes beyond the cost incurred, thus it is a value generating function. Yet, these negative perceptions exist and can lead to serious problems for the HR managers. For example, Susan's managers did not openly communicate with her HR team when their proposed learning intervention was declined:

"Yeah, I mean that is a barrier…I don't know why, that's a head office thing. 'It just wasn't possible', we were told, so I don't know whether that's a cost thing or an ISMS thing or what. So yeah, that's a barrier".

In Kate's case, it was the staff managers who resisted it which created difficulties and confusions for the employees:

"It's just sort of the wanting to be in control, wanting to restrict access, wanting to determine who has access to what training and when. They just feel really uncomfortable about the fact that all the staff have got access to whatever they want. That's taking control away from the manager. They're no longer the gatekeeper for training within the facility. And they put up a lot of spurious objections to it. They would say oh, the fact that you can do it after hours means that you're expected to do it after hours but we're not going to pay you to do training obviously in the weekends if you choose to. We're not going to pay you to do that, so they kind of tried to put a negative spin on the thing".

These responses suggest that if the senior management does not support it, it cannot flourish because it would not be promoted or encouraged. However, there have been other instances as well where they did find support at another organisational level:

"Our chief executive was pretty supportive of the idea. He is Australian, so I think he was aware of them [Australian digital learning solution] coming from the Australian market and could see the benefit of it." – Kate

Similar support is required from HR team as well. For example, Steve highlighted the importance of having like-minded people onboard at project team level before the organisational buy-in:

"So, I've got to identify people to work with that have that expertise, can translate my vision into something real, have the same vision, ideally have the same experience."

"the second step is to - well actually second step will be done in parallel - is to make sure that the organisation is - because this is my vision eh? I've got to make sure everyone's onboard rather than present here's an option."

The key here is to involve them and to ensure that everyone knows why it is being done. Therefore, as indicated by academic literature as well, open communication, maintaining cordial relationships along with a thorough strategic rationale could help in gaining business support in most cases.

4.2.1.4 HR & Technological Infrastructure

An organisation's HR and technological infrastructure is what the digital learning solution technically relies on for support. HR managers discussed about their "horrible" HR systems – particularly their learning management systems (LMS) which repulses the employees to even use them. Rebecca even commented that:

"it's a horrible system…very clunky, not very pretty LMS, so I think that puts people off a little bit too. It's not slick and smart and mobile-friendly".

This sentiment is shared by most HR managers and thus they explored and adopted standalone digital learning solutions. The issue that then arises is that they are not as well integrated with the existing LMS which makes reporting and tracking of learner profiles a challenge. This difficulty of tracking, in turn, makes it even more challenging for HR managers to prove their efficacy to senior management.

"it is hard to consolidate the overall impact without tracking into our LMS"- Rebecca

"We haven't closed that loop yet. But yeah, for it to be then in our Learning Management System and recorded permanently against somebody's record, I would then have to create that and do that. Yeah, but I haven't done that yet, so yeah, they're not linked unfortunately. One doesn't feed the other, yeah." - Susan

"then trying to get the data in a manageable format, then format in a way that was meaningful for the system; it was all of the data and temporary stuff was incredibly complex." - Kimberley

However, the HR managers that have experienced digital learning solutions in detail see the value in them. Mona remarked that if the HR managers wisely invest they can benefit from the *"credible SaaS based solutions that offer them hassle-free updates"* and depending on the learning solution, they might avail *"easy tracking of learner profiles"*.

Kimberley really appreciated digital learning solutions for their contribution towards:

"…continuous improvement resulting from the integration and support".

Bondarouk et al. (2017) also discussed how digital technologies have enabled easier reporting of data. This data may even be used by HR managers to further build their business case. Thus, HR managers are encouraged to research and take on digital learning solutions that best suit their needs.

However, a word of caution by Kimberley was to always adapt:

"when you take on a new learning system, don't take the same set of processes and mush them into one".

Another challenge is that sometimes IT and HR are working in silos which results in inconsistent service. Only a few HR managers are keeping up with the changing demands of IT and HR expertise. Steve shared his experience and advice:

"As soon as that experience starts to drop, people start to get frustrated, distracted and then you lose, and they start to neglect, or they start to ignore the message being talked about, rather than trying to force themselves to hear through the crackle and static. They just switch off and because they're already disconnected anyway from the whole process"

"…IT and HR teams often work in silos – they need to synergise and evolve together to leverage on both their expertise."

Kate also advised that *"a bit of liaison with IT is needed to work around*" to ensure that the connectivity service is seamless.

The IT and HR capability is the foundation on which the idea of digital learning is built. Research also supports these findings as Bondarouk et al. (2017) discussed the significance of communication across IT and HR departments which if not resolved may result in system errors. Integration of HR systems and organisational systems is also at the heart of SHRM as has been emphasised in the Matching Model (Fombrun et al., 1984) Thus, it plays a crucial role in supporting organisations achieve their strategic goals.

The next theme that pertains to "organisational factors" is 'technology acceptance'. The 'operational decision making' theme discussed all day-to-day organisational factors that impact the decision of the HR managers. While the 'technology acceptance' pertains to those organisational aspects that influence the HR managers decisions due to lack of support for technological tools.

4.2.2 Technology acceptance

The second major theme that emerged was the degree of technology acceptance across the organisation. It includes the employee attitude towards introduction of a digital learning solution – whether they were receptive or resistant. Also, the organisational culture – whether it is supportive or not and whether the digital learning solution is customised enough to resonate with the organisational culture, values, language. Therefore, employee eagerness coupled with its alignment with the organisational culture play a vital role in determining the likelihood of an organisation adopting one. Not only are these factors important, but also the role of industry has been found to have a significant impact on their choice of platform due to the variance in employee roles across industries but also the type of training they would require for their role.

4.2.2.1 Employee attitude

The role of people factors has been a prominent theme in academic OL literature. The learning interventions are for the people, so it is only natural that their attitude towards it could greatly influence their success. Bondarouk et al. (2017) highlighted the role of user acceptance as part of their TOP framework while Sousa and Rocha (2018) discussed people's role in learning collaboratively and building learning communities in the context of digital transformation. General view of the HR managers is that they have noticed that employees have become *"more tech savvy"* and their "*resistance to digital learning has gone down"*. But this increasing comfort with technology has changed their learning preferences – they want "*instant gratification"*. Therefore, the delivery methods also need to be aligned to ensure they get instant access to learning and that should contribute positively. However, that is not the only people related concern. With their exposure to the different social media, they are not easily captivated anymore. Susan and Rebecca said that their employees were not at all excited about their online module which they attribute to *"boring delivery"* and *"dry content"* as it is predominantly compliance training with not much engagement. This is explained by Mona's remarks about employee attitudes towards digital learning:

"…unless you can immerse them somehow in the technology in the classroom, I think it's going to be pretty boring in comparison and people expect instant gratification now, because like now, if I have to wait five seconds for something on the internet I get really annoyed, because I want it now, right?"

"The employees are gagging for it [technologically empowered learning solutions]. If they had a way that they could do something simply on their phone they'd love it. That's why apps are so popular. If it's a useful app, hey, look how it takes off.".

As mentioned earlier, Steve also discussed significance of crafting a *"user experience"* to ensure that the employees remain interested and connected to the learning offering. Therefore, HR managers need to ensure that they incorporate interactive elements to offer an immersive user experience while leveraging on the just-in-time functionality.

An interesting comment by Rebecca about the employee attitude in relation to it being paid or not:

"when I send people out on a program and it's free, the drop-off is much higher than if it's something I've had to pay for them for."

It is interesting to note that this has been found and backed by research too – employees generally take it more seriously if they are aware of the investment involved (DeSanctis, as cited in Bondarouk et al., 2017).

Moreover, at time employees seemed eager but later did not respond as favourably as was anticipated. This was mostly attributed to time constraints or hinted towards lack of alignment to individual goals – an area most HR managers struggled establishing. However, it could also be because the self-directed learning intervention was not engaging enough. Some of the views from HR managers were:

"Employees ask 'how do I fit it into my day?'" – Rebecca

"'I've [employee] been here 20 years, I've been here 30 years. I've not needed to do this ever before, why do we need to do it now?' That'd be one. That's predominantly around setting performance goals and development plans." – Steve

"You've almost got a group of people maybe at the bottom so-called of the organisational food chain who will never interact with your technology and I guarantee you'll have very senior people who will never do it either, because they feel like they're too good for it or they won't get any value out of it" – Kimberley

"the usage was not as high as was expected given that they really wanted the license to it – they are just not finding enough time" – Susan

But amidst all the possible things that can go wrong – two participants shared their ways to tackle employee related issues.

"You must have non-HR advocates as change agents to communicate it to the employees." – Kimberley

"treat employees as your internal customers, involve them in the designing of it" – Steve

Making employee satisfaction a priority and involving them in the development of the solutions may result in higher resonance with employees. The beauty of it is in their empathetic approach which is reflective of their focus on people. Literature has also supported the role of employee involvement during the development phase for feedback to ensure that they accept it more readily (DeSanctis, as cited in Bondarouk et al., 2017).

4.2.2.2 Organisational Culture

Organisational culture resonates through all aspects of the organisation and hence any decision that is not aligned with organisational values, language, symbols, norms, behaviours or processes is bound to have an adverse effect. It is one the most important determinants of whether the e-HRM initiative would be successfully adopted or not

(Kossek et al., as cited in Bondarouk et al., 2017). It has even emerged as one of the key aspects that need to be accounted for in any OL framework (Popova-Nowak & Cseh, 2015). Servage (2005) also suggested that the organisational culture has an impact on how a learner's experience is shaped. For example, innovative organisations with an open culture generally do not resist (Ruel et al., as cited in Bondarouk et al., 2017). Other dimensions of organisational culture pertained to adapting as per the socio-cultural contexts which may result in lack of resonance with the learner (Bierema, 2002; Park & Wen, 2016).

Some of the more visible components of an organisational culture are the branding symbols and language. The focus of most HR managers was on ensuring that the digital learning solutions are always customised in terms of carrying the organisational branding and using the organisational jargons. For example, Kate included an introductory module with the CEO introducing the organisation and welcoming the new joiner to add the personal branding touch. Kimberley identifies it as one of the reasons why some digital learning solutions fail because they do not feel "*on-brand*". However, it can also be looked at in the broader prospect. For example, Steve discussed that his organisational culture meant that their learning intervention should also not be pushed to the staff as they are not accustomed to it.

"We have an opt in culture at our organisation currently. That has benefits and also has drawbacks. Some things cannot be opt-in; Health and Safety, for example, cannot be opt in…My ideal is that it's not the big stick approach. You know, we dangle the carrot, there's some sort of motivation to be a better leader, to be really good at your job and here are the options presented to you, so MOOCs, gamification, all that yeah"

Therefore, to work around it, Steve is developing an engaging module to motivate employees through an interactive and immersive MMORPG based training. Similarly, Kate's organisation has a very empowering culture where they work in self-managed teams which is why self-directed learning facilitated by online video content library is ideal for them.

"we have kept it accessible…it's freely available to them 24/7, up to them. They've got access to the full library. I think it just supports our kind of self-managing teams, our culture and values"

"It's been a very conscious decision to yeah, be that free with it. So, the way we've implemented it I think matches with our culture and values and strategy in terms of self-managing teams and wanting to get rid of the middle person, minimise the bureaucracy and hierarchy involved in this organisation and to push decision making down to the lowest possible level, which is very much part of who we are as a company."

However, organisational culture can be a barrier as well. Like in the case of Susan, her *"prescriptive organisational culture"* made it difficult for HR to take decisions and thus had a *"highly regulated culture"* with bureaucratic barriers. Thus, the organisational culture is deeply ingrained and needs to be accounted for in more ways than the apparent language and branding aspect of it.

4.2.2.3 Industry Dynamics

This is a highly contextual factor and varies not only across industries but also across organisations and countries. This factor was not greatly touched upon by literature or not categorised as broadly. Some of its constituents were discussed as part of the TOP framework (Bondarouk et al., 2017), however, it did not offer as much detail. CIPD (2017) in their digital learning factsheet also briefly discussed its significance in influencing management's decisions pertaining to the features they may need and how it would vary across industries. It was interesting to note that highly regulated industries such as law firms generally had to face some challenges.

"with a law firm, you have compliance, legal and security issues…which makes it harder to get approvals" – Rebecca

Technical industries such as engineering, or hospitality required more hands-on training from the perspective of Susan, as was discussed earlier:

"They can't sit in a class and look at a video and go oh that's how you do that machine. They've got to get in about it and they might need a supervisor with them, like a buddy"

An alternative could be AR or VR training but as Susan said, it may not always be *"affordable*".

Some industries are more progressive than others. For example, aged care and horticulture industry employees had not interacted with computers which was a challenge.

"we've got staff who are not sitting in front of computers and they're basically providing manual services; they're working in the kitchen. They're working in the laundry. They're providing daily cares to residents. They weren't doing anything techy. They didn't have company email addresses. We had to find out their personal email address so that they would have an individual log-in and where they didn't have a personal email address we had to provide instructions on how we could set up a Gmail account for them." – Kate

"'I don't know how to use these things. I don't know how to use a computer, my kids do it for me…I do not have access to Wi-Fi'…so, do we give them access to our own Wi-Fi? Do we have Wi-Fi in the orchards in the glasshouses? Yes, sort of, but it has minimal reach so - it's all these kinds of challenges thrown at you. They're all solvable, but they're still challenges nonetheless." – Steve

These problems can be overcome by offering access across mobile devices as most people do own a phone, however, it can be expensive.

Another interesting point specific to New Zealand dynamics was by Rebecca:

"my role here is quite different from my roles in the UK. Here we are about 320, 330 people, so it's just me. I do everything; I do the admin and I do the strategic thinking, so I have to play a little bit in all of the spaces. Whereas, over in London I worked for a big law firm with about 5000 people, 36 offices, so it was very different. So, our L&D team was like 35 people, so you were a lot more specialised and niche than probably my role here, which requires me to be a little bit of a jack of all trades."

Since most businesses in NZ are small or medium sized, the smaller organisational sizes have led to smaller L&D teams which hampers the in-house capability of providing digital learning solutions. Moreover, a lot of them found NZ to be lagging technologically. Rebecca remarked *"little old* NZ*"* does not have many digital learning solution providers and Susan criticised too how NZ does not offer any local, context specific solutions.

"...well when I did some research here I found that some of the MOOCs - because I think they [head office] wanted us to look at what was available in your country. So, when I looked here for our industry for MOOCs there was nothing really." – Susan

Steve commented on the connectivity issues which are more relevant to his industry:

"this country, we don't have that full saturation of fibre, so we don't have the full connectivity up and down the country and because we're a primary industry company, because we deal with horticulture, we grow vegetables and fruit, a lot of our operations are in rural areas where necessarily the connectivity is not fantastic."

The network connectivity is more of an issue for primary industries where the employees work in rural areas and thus hampering the usage of digital learning solutions. The lack of NZ centric options means that there is no exemplary case to follow the lead of but also that they would have to consider foreign providers. Mona, although a strong advocate of digital learning is concerned about the current state of digital learning in NZ:

"let's put it this way – eLearning modules that's churned out by organisations is absolutely appalling." ... "unfortunately, very few people are doing it well in New Zealand."

Moreover, the nature of industry also determined their focus on the type of training. For example:

"if you come from an industry where there's a huge focus on safety, so for example utilities, a lot of the time most of the focus in training is around compliance; whereas ones that don't need to worry so much about compliance have got more time and money to focus on leadership development, or the softer skills" – Kimberley

In addition, in Mona's experience, *"government departments such as the Defence forces took training very seriously"*, however, *"corporates often have short pockets"* and do not allocate much budget to training due to profit making objectives.

In a nutshell, all organisational as well as external factors have an impact on what would work well so each HR manger must make that decision carefully keeping in mind that what would suit them best.

The next section highlights our third aggregate dimension of "HR centric impeding factors". This dimension is related to the organisational factors as HR managers need to be aware of the challenges and be able to differentiate between the factors that are within their control and those that are not. The factors just discussed can be hard to manipulate. Thus, HR managers need to put in more effort to tactfully address them beforehand. Their awareness of these factors will ensure that they consciously make efforts to at least manage the factors that are within their control.

4.3 HR manager centric impeding factors

This is the most interesting finding of the research as it revealed different dimensions to understand how the HR managers' perceptions could be shaped and impact their decisions. This is an area which was not excessively highlighted or discussed in the literature. SHRM and OL literature does acknowledge their role as the strategic decision makers (Wright & McMahan, 1992; Wright & Ulrich, 2017). However, it does not closely examine the factors that may impact their overall decision. From the primary research, it was evident that their grip over the L&D aspect was strong due to their years of diverse experience. Their understanding of the rationale behind adopting digital learning solutions was also discernible. However, despite holding similar views regarding the powerful impact of digital learning solutions, most of them resorted to orthodox digital learning in their organisations except for Mona. Further probing into why the uptake has been slow shed some light on the facets that have caused hinderance. These reasons become the sub-themes of this section as they detail the role of each of these in impeding the uptake of digital learning solutions: their struggles of establishing strategic link, level of awareness, comfort with technology and purpose clarity. It is critical to note that unlike the previous finding which outlined the elements of consideration, were organisational factors that HR managers need to think about but may not be able to control. However,

this finding pertains to factors that are directly within the HR managers' ambit of control or are dependent on their behaviours and capabilities.

4.3.1 Strategic thinking

This emerged as the biggest challenge that the HR managers face with regards to digital learning solutions' adoption. This factor is multifarious – HR managers have to establish the impact of the digital learning solution at the individual, team as well as organisational level. This is the most important aspect as highlighted by literature. OL is underpinned in SHRM by this link – the impact of organisational learning on individual learning which enables organisations to achieve its goals (Bowen & Ostroff, 2004; Ostroff & Bowen, 2000; Wright & McMahan, 1992; Wright & Nishii, 2007). Therefore, it is of utmost importance that HR managers establish a link across the three levels (Crossan et al., 1999; Wright & Nishii, 2007; Wright & Ulrich, 2017).

A common HR jargon used by participants for this was *"closing the loop"*. If the goals at these three levels are not weaved together by a common thread, the missing link is going to make it difficult to prove its efficacy. It is already difficult to establish the link for live training modules but with digital learning there comes the added burden of responsibility.

In words of the HR managers:

"the upfront investment involved is higher…it can be challenging to convince the business because you cannot see the benefits until you implement it." - Kate

"HR has to battle the negative sentiments around HR initiatives". - Kimberley

Their remarks are indicative of how crucial it is for HR managers to be experts at calculating the return on investment. This requires the HR managers to put forward a *"business case"* to prove that it's a worthwhile investment. Most of them struggle with developing this due to their inability to *"identify quantifiable measures"*. However, Steve attempted to simplify it by recommending:

"specific quantifiable measures need to be set at each of the individual, team and organisational levels – to gauge the level of impact on a regular basis".

In Mona's words, the idea is that it should:

"either save money or result in profit. Every individual hired by the organisation has been hired for a job to perform. Use those measures, for example, how much time he saved or money or anything related to his key performance indicators."

Thus, quantifying the distinct contribution of each individual in relation to their key performance indicators. These performance indicators should be mapped against the business team goals which should be contributing towards organisation's strategic vision. Kate's implementation was the most reflective of this:

"we are in the middle of mapping out our learning resources across NZQA unit standards in an attempt to align the two. This overlap should support and promote staff professional development."

This employee development can be measured across their key performance indicators and the improvement at individual level may create a measurable ripple effect. However, even then Kate struggled with mapping it across team and organisational goals.

Whichever factor you choose as your evaluative measure, they should elucidate the link between learning intervention and business imperative. As research suggests, the adoption of these solutions can only be rationalised if their contribution can be linked to organisational goals (Karnouskos, 2017; Stone et al., 2015; Wright & McMahan, 1992). Therefore, it is important that before you even proceed with it, you should try to visualise what success would look like so that you do not have to worry about rationalising it and justifying it to the senior management later.

4.3.2 Awareness

This is an area where most variance was found across the six interviews. The variation in their understanding of digital learning ranged from very basic to sophisticated. Irrespective of the type of digital learning solutions they have interacted with, it was quite interesting to see how aware they were about the various offerings available. Three of the HR managers held a simple, primitive view of digital learning:

"So, we are producing some of our own training using screen casts and utilising those training videos offered by our content library of video resources" – Kate

"The eLearning that we've introduced really is through - mostly so far it's been either producing a PowerPoint and using software like Captivate or Articulate to turn it into some sort of course, then uploading it into our Learning Management System. A couple of them are basically really just slides that are based from PowerPoints. So really I mean so far they have been fairly I would suppose you'd say - well I don't really know, but basic." "However, it is still a way of instead of just having a PowerPoint slide, you know,

some interaction where people have to click the next button, or answer A, B, C or D to the question or whatever it might be. So that's really the extent of the eLearning that we have sort of is that we're in-house on our LMS." – Susan

"They are very much eLearning solutions, embedded videos, pop-up quizzes, those sorts of things, but able to be accessed by the user on any device when they wanted to"- Kimberley

With the speed at which technology is changing, HR managers must stay up-to date and evolve their learning strategies. It was interesting to note how at some level they blame NZ's tech industry for lagging behind and not offering technologically advanced learning solutions as has been quoted previously. On the contrary, some HR managers working within the same industry dynamics seemed to be more well-versed with most offerings available. However, only Mona was aware of all the digital learning solutions discussed in the literature review. This could also be indicative of their personal eagerness to delve deeper to explore learning delivery options. As the ones who have not considered the more innovative digital learning solutions often said:

"I am not too familiar with it" – Susan

"I have not put any active thought into it" – Rebecca

"I have not looked at any other options" – Kate

However, the bottom line is that the more aware you are of the tools in your box, the more efficiently you will be able to use them. Mona recommends doing *"due diligence"* as there are lots of *"cheap, cheerful LMSs which are expensive in the long run"*. Kimberley also brought attention to first evaluating your need and matching it with the product capability before investing in it rather than overdoing customisations later. Such thoughtful and strategic decisions can only be made if the HR managers are fully aware. Therefore, it all comes down to how keen the HR manager is and how much efforts they are willing to put in to research about the most appropriate learning solution for their employees.

4.3.3 Comfort with technology

It is quite fascinating to see how the years of experience with L&D has given them thorough understanding of learning but their personal attitude towards change and technology became a barrier. There has been a difference of opinion of HR managers in the way they perceived the technologies such as VR, gamification, micro-learning which have been there for a while but are relatively new within NZ context:

"there's some really cool gadgets out there and by the way, it's still bleeding edge. Like if you invest in one it's almost as bad as an iPhone's getting. You know, as soon as you've bought one headset - it's idle - a better one comes up next week right" – Rebecca

"I think it just depends what's in fashion. Oh, I don't know. I really do think HR can be quite fickle in terms of what's the latest and greatest thing, yeah and whatever the latest buzz word is." – Kimberley

"the problem is it's a bit of a fad at the moment, like oh we can do virtual reality, isn't that great! Look! You must think well why would you do it that way when it's so expensive to do it that way, when it would be simpler to do it another way. So, the question is what problem are they trying to solve? Or is it the solution looking for a problem? That's not what you want in learning and development, because you should be doing a proper analysis up front." – Mona

One of them even admitted that with the variety of constraints that they have to deal with, they are forced to give preference to convenience over innovation.

"I think it's a matter of convenience as well as the fact that you would just rather want to do it with the resources that you already have." – Rebecca

It was an eye-opener – how HR managers were very critical of other HR managers and held them responsible for not making wise decisions or for giving lame excuses. Kimberley commented that it is because HR managers complicate it for themselves and the employees which is why uptake of digital learning solutions is slow.

"The moment I find any technology hard I'm going to go oh, I can't be bothered. You shouldn't need - and I come back to this all the time with any HR tech - you shouldn't need a manual on how to use it. You didn't need one for Facebook. You didn't need one for Instagram. Why do we need one - why do we make HR so hard, right?" – Kimberley

"Your average person can shop online. Your average person - like it makes me laugh. Some HR people, they must have their heads like I don't know, on another planet. But you know, they say oh we can't implement this solution because we've got blue collar workers and they're not computer literate. These are all excuses, because all of those blue-collar workers have got Samsungs or iPhones or some kind of a - I mean most people have got an iPhone where they can do their emails; they can go online, they've got internet access. That is the new literacy you know, so I don't think that that excuse is valid anymore, and yet I often hear it." "Until my mum recently suffered from dementia, I had my 80-year-old mother online looking for stuff and so I mean I think it's a myth." – Mona

It may actually depend on HR manager's personal attitude – their personal resistance to stepping out of their comfort zone that clouds their perceptions of digital learning solutions. Or simply as Rebecca said, it may be a matter of convenience in the face of countless constraints. They also admitted how the fast pace of technologies does make them nervous as they learn one thing and it changes the other day. Therefore, their personal resistance to change might be a factor in not letting them step out of their comfort

zone. In the context of the modern technologies and their applications, Rebecca commented *"I can see the value in it"* and Susan remarked *"there's no reason why we can't do it"*. This is in line with their lack of awareness and how they might be bound by their personal limitations.

4.3.4 Purpose clarity

Lack of clarity in purpose is a factor that can potentially influence various other aspects and dimensions of digital learning solutions resulting in its slow uptake or even failure. The digital learning solutions can be quite appealing and appear as an ideal fix for all the complaints about boredom as the quotes from HR managers suggested. However, HR managers need to meticulously think about the specific purpose that the digital learning solution would be fulfilling otherwise it might not reap the desired benefits.

"…you must evaluate, is it the best way to approach it?" – Mona

All of them brought attention to how they have to put all their personal biases aside to ensure that they are proceeding with taking it on board for the right reasons. However, due to this strong wave of technology, many HR managers have jumped onto the *"bandwagon*" and failed miserably. This is why they should exercise caution when evaluating why there is a need for it which is not only clear to them but also the individual, business team as well as the management. Mona suggesting asking yourself this question:

"why are you going digital anyway?"

Kimberley too emphasised that:

"Do not do it because you have to have an L&D and a digital solution – there needs be a 'why?'"

"The one that was successful was when the project teams were all very invested, so we could all see why we were doing it. A very hard piece of work, but worthwhile. So again, everybody understood the why, so I think that…is critical. You don't just chuck people a piece of work without saying to them why are we doing this, what are we trying to achieve, yeah."

Therefore, there is a need to first identify and prioritise the learning objectives and organisational goals in the wider perspective that it should be fulfilling. The need for purpose clarity is crucial and is underpinned in the SHRM and OL literature. If the HR managers do not have a purpose to fulfil, the impact of these initiatives on the individual

performance cannot be monitored. Boateng et al. (2010) discussed the various purposes digital learning can serve and the purpose is the anchor which determines the direction in which HR managers will utilise them. Sousa and Rocha's (2018) also mapped out the distinct functions and contexts pertaining to digital learning and indicated that the purpose determines the type of digital learning solution your organisation needs. For any learning initiative to be successful, it needs to be embedded in the organisational strategy to be effective (Crossan et al., 1999; Fombrun et al., 1984). Otherwise they are hanging by a loose thread without any goals or desired outcomes linked to them which is bound to result in failure.

The three aggregate dimensions discussed are all linked together. The 'strategic rationales' section sheds light on the potential that the HR managers see in digital learning solutions and thus think about when making this decision. The second stream of 'organisational factors' highlights the issues that they face due to the operational side of such a decision or due to the degree of technology acceptance that these digital learning solutions require. While the third stream of 'HR manager centric impeding factors' bring attention to their personal limitations that HR managers often do not even realise are within their own control. The following chapter will put the findings into perspective by embedding it into an overarching theoretical framework.

Chapter 5: Discussion & Conclusion

The fourth wave of industrial revolution has already had a profound impact on organisations, industries and countries alike. With the pouring effects of these disruptive technologies in daily lives, it will not be long before any conservative approaches to work that are dispensable would be replaced. But despite the swift move towards leveraging technologies across all professions, the human element is still considered invaluable. Albeit the reasonable global uptake in digital learning solutions, as part of the OL strategy, organisations in NZ are making slow progress. The HR managers' responses regarding their current state of organisational learning and their awareness of the digital learning offerings are reflective of how far they are from adapting and utilising these technologies. Nevertheless, it was encouraging to learn that they do see potential in digital learning solutions. However, despite their support for digital learning solutions' strategic importance, there still were impeding factors. These factors were of personal nature or from the wider context that hindered their adoption or resulted in a failure – giving rise to more barriers. It could be sensed from their conversations that tension existed between the strategic and operational fronts, between learning and technology, and between work and learning. These three tensions will be discussed in detail to synthesise the findings.

To understand these tensions better, it is crucial to gain perspective on how HR managers rationalise the idea of digital learning solutions and how that influences their priorities and decision-making. Upon deeper analysis, it comes as no surprise that the HR managers due to the strategic nature of their role and experience rationalised the use of digital learning solutions from the SHRM perspective. Their logic behind considering these digitalised options is to train their people in a way that they serve as a source of competitive edge to their organisation. Their view was closely aligned with Barney's (1991) resource-based view discussed in the literature review. The HR managers often brought up the idea of "*self-directed learning"* and "*promoting a culture of learning"*. This is indicative of how they wanted to use their L&D strategy to contribute towards making their employees more valuable. This view of considering people as a valuable, rare, inimitable and non-substitutable resource is typical of the RBV. RBV has a far-sighted approach to training employees, aiming at developing them such that they can evolve with the everchanging business environment. This also resonated through the HR managers' thoughts around the *"upskilling of staff to prepare for future needs"*. Based

on this basic understanding of the deep-rooted underpinning of their perspective, it should be easier to discuss the tensions identified earlier, especially strategic versus operational.

It was evident that the HR managers interviewed were endeavouring to strike the right balance between focusing on both the strategic and operational fronts. Given the managerial nature of their role, they are liable for making strategically sound decisions. This also explains why establishing a link and proving the impact is of utmost importance to the HR managers because the onus is on them. However, that certainly does not mean that they are relieved of worrying about the operational dimension of these decisions. They are required to handle this tricky situation of viewing all their decisions from both the lenses. The only way to go forward is to ensure that even the smallest of the operational decisions regarding digital learning solutions are made bearing in mind the bigger picture. Unfortunately, much like the HR practices that Wright and McMahan (1992) argued were developed in silos, the thoughts around digital learning solutions also indicate the same lack of integration with other business goals and strategies. The views of HR managers around digital learning solutions indicate a lack of planned strategic orientation and poor integration with HR systems. Therefore, it is quite concerning for the HR managers. However, it would be helpful to track learner profiles, make use of data analytics and map out individual key performance indicators against team and organisational goals. This multilevel focus on analysing the HRM practices-performance relationship is at the heart of SHRM (Bowen & Ostroff, 2004; Ostroff & Bowen, 2000; Wright & Nishii, 2007; Wright & Ulrich, 2017). It may require practice and a steady focus on *"closing the loop"* but it will ensure that their decisions are strategically and operationally aligned.

Apart from the tension across the strategic and operational dimensions of embracing digital learning, a resource allocation strain can also be noticed. The HR managers must use their limited resources carefully to ensure they are contributing towards organisational performance and goals. This tension around efficient use of resources is the main idea behind RBV (Barney, 1991) and thus backs the findings of this study as well. They must make the choice between distribution of funding resources between digital learning and live training. It is challenging to find the most ideal innovative learning solution within budgetary constraints. Concurrently, they must assess the support or resistance it may receive from management and business support functions. In addition, there is the impact of the external dynamics. NZ does not have many local instructional

designers offering digital learning solutions to choose from and the organisational size does not leave much room for developing inhouse capability. The HR managers remain wary of its worth and sparingly dedicate their time to explore it further. Moreover, the organisation's HR and IT infrastructure strength adds on to the HR managers resource allocation dilemma – whether it is wise to adopt a learning platform that is not integrated with the existing internal processes and system. Furthermore, HR managers are also responsible for working through the employees' time constraints as well. The complaint regarding low usage of the self-directed digital solutions can also be reflective of work-learning tension at their level. Bearing this in mind, the HR managers have to devise a learning strategy that balances this tension while accounting for the different types of learners and job role dynamics. It is quite challenging indeed to work within these constraints. Most of these factors and their consequences have been identified and discussed by Bondarouk et al. (2017) in their e-HRM paper outlining the TOP framework. Bondarouk et al.'s (2017) emphasis on strategic reorientation of HR is in line with HR managers focus on strategic alignment of L&D interventions. Therefore, strategic use of the available learning technologies may help in easing out these tensions.

The third interesting aspect of the research was the tension between HR managers' understanding of learning versus their understanding of technology. This could be discerned from the findings pertaining to their awareness of digital learning solutions, their level of comfort with technology and how their personal perceptions came in the way. It is undeniable that they were not only very passionate about L&D, but also their breadth of experience made them experts in the field of HR. Therefore, the arguments they gave for the slow uptake of digital learning solutions do hold credibility and can also find academic support. However, the differences in awareness did seem to influence their likelihood of considering a digital learning solution. It might be argued that HR managers have a tendency to "*stay in their comfort zones"* and give "*lame excuses"*. But in my detailed interaction across this study, I found them to be very dedicated and thorough. From my understanding, their lack of awareness could be attributed to their conscious or unconscious bias which inhibits them from exploring these further. This bias may have developed overtime due to prior unpleasant experience with an online learning module, discouraging employee or peer feedback, lack of support from management or support functions or HR & IT system issues among many others. However, the extent to which these personal biases and attitudes affect their decision cannot be estimated. Nevertheless, it is interesting to note that the underlying causes behind this personal bias or lack of

motivation is also the same as the factors of consideration identified earlier. This may hint towards a vicious cycle of HR managers' prior experience of facing resistance along technological, organisational, people and other contextual fronts. This may have contributed towards their lack of enthusiasm and reluctance towards actively exploring or crafting their personalised digital learning solutions. To minimise this tension, efforts need to be redirected towards supporting and educating HR managers which may inspire them.

5.1 Theoretical implications

Before closing the discussion, it would be helpful to put the findings into perspective by shedding some light from literature. Most of the factors of consideration that were highlighted in the findings have already been succinctly described and organised by Bondarouk et al. (2017) in their TOP framework for e-HRM. Although the TOP framework (Bondarouk et al., 2017) is very comprehensive and provides a foundational structure to these factors, I felt that there was no factor that resonated with external context or country dynamics. I understand that the TOP framework predominantly had an internal focus but the emergence of external factors from my research indicates that they might be valid in other cases too. Therefore, I believe it would be useful to look into how the external dynamics can be incorporated as an element of the TOP framework. Nevertheless, it was encouraging to see the applicability of the e-HRM TOP framework on this digital learning research as it reconfirms the validity of the significance of these technological, organisational and people factors. This exemplary fit with the e-HRM TOP framework may also give way to further exploration of its applicability on other domains of e-HRM.

Moreover, as discussed earlier, the rationale behind digital learning solutions is deeply embedded in SHRM's resource-based view. However, the research findings reflected the struggles of HR managers in remaining strategically focused while dealing with resource allocation constraints and recognising their own biases. The strategic rationale needs to be communicated across the individual, group and organisational levels. Since the learning interventions are meant for the employees, HR Managers must seek feedback from them and value their perceptions while designing them. As Wright and Nishii (2007) stated, HR must not only map the organisational practice and performance goals but should also ensure that there are goals set for groups as well as individuals. At each of these three levels, there should be clarity regarding the rationale, link to their performance

and how it will be evaluated (Bowen & Ostroff, 2004; Ostroff & Bowen, 2000). In essence, using the TOP framework in conjunction with the RBV can give a more holistic and well-rounded analytical framework. Further research can explore how evaluating learning interventions across VRIO framework while accounting for TOP framework can contribute towards making more strategic decisions.

Due to the limited scope of the study, the overarching framework was embedded in the RBV only although findings of the research inspired me to think of two other ways of approaching it. An alternative way of exploring it could be by treating the decision to embrace digital learning as an organisational change. Thus, this decision can then be underpinned in Organisational Change and how it suggests planning and rolling it out while ensuring it is perceived well at all individual and organisational levels. Another one would be to look into the 4I organisational learning framework in conjunction with SHRM's multi-level approach. Crossan et al. (1999) highlighted the crucial role of the intuiting, interpreting, integrating and institutionalising processes happening at all organisational levels which makes organisational learning effective. The struggles of embedding all of these learning processes in their planning of digital learning or implementation may explain the slow uptake.

5.2 Practical implications

The research also has several practical implications which may try to address the tensions discussed. Referring to the discussion on resource allocation constraints – emerging learning technologies may be used strategically to address some of these tensions. For example, in accordance with the digital learning literature, digital technologies can facilitate in designing time efficient learning modules. This is where micro-learning fits in as the missing piece of the puzzle with its very small sized information chunks delivered with just-in-time functionality. Bruck et al. (2012) and Göschlberger (2017) particularly gave micro-learning credit for being very targeted and time-efficient to account for employees' competing priorities. Moreover, HR managers do not always have to use the exact offering that is readily available in the market. They can tailor it to their own needs. For example, instead of creating a gamified module, they may be able to use only some of the game elements to make their training more engaging. Furthermore, to help HR managers overcome their personal bias, they could be sent to conferences or workshop about digital trends to inspire them to explore innovative yet economical solutions for their people. Or where it is the management that needs this push, HR

managers can do their own research and share a well thought out business case with them to convince them. It is crucial that they must all possess a learning attitude and at least make efforts to keep up with the technology trends. The fourth industrial revolution is not only going to impact HR but all business functions across all industries and countries. This is going to change the future of work and hence only employees that are upskilling themselves for the needs of the future will remain valuable to their organisations.

5.3 Limitations and future research

As with any research design, it has its own contributions and limitations that need to be accounted for when interpreting findings. As this is a qualitative research, the focus was not on generalising the findings but on gathering rich insights from the participants about the digital learning solutions. Moreover, given the limited scope of time for a dissertation, only 6 interviews were conducted with HR managers, however, for an exploratory research the sample size is substantial. These findings give direction for more research to establish whether the patterns observed in this study are generalisable to all HR managers or not. Given the nature of the study, the generalisations made in the discussion section were related to theory and not to the sample population

Furthermore, future research should look at wide scale surveys and across different industries. In addition, this research was from the perspective of the HR managers, but further research should explore the perspectives of other important stakeholders such as employees, staff managers and the top management team. Exploration of the views across the individual, group and organisational level has been emphasised across literature and primary research as well. It would elucidate the entire dynamics of how each of these interact and contribute towards shaping the conceptualisation and use of digital learning solutions. Future work should look at whether the issues highlighted by HR managers are shared by other stakeholders in the organisation.

Reference List

Agee, J. (2009). Developing qualitative research questions: a reflective process. *International journal of qualitative studies in education*, *22*(4), 431-447. doi: 10.1080/09518390902736512

Armstrong, M. B., & Landers, R. N. (2018). Gamification of employee training and development. *International Journal of Training and Development, 22*(2), 1-8. doi: 10.1111/ijtd.12124

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17, 99–120. doi: 10.1177/014920639101700108

Basten, D., & Haamann, T. (2018). Approaches for Organizational Learning: A Literature Review. *SAGE Open*, *8*(3), 2158244018794224. doi: 10.1177/2158244018794224

Beamish, N., Armistead, C., Watkinson, M., & Armfield, G. (2002). The deployment of e-learning in UK/European corporate organisations. *European Business Journal*, *14*(3), 105. https://web.b.ebscohost.com.

Beer, M., Spector, B. A., Lawrence, P. R., Mills, D. Q., & Walton, R. E. (1984). *Managing human assets*. Simon and Schuster. https://psycnet-apa-org

Bierema, L. L. (2002). The sociocultural contexts of learning in the workplace. *New Directions for Adult and Continuing Education*, *2002*(96), 69-78. doi: 10.1002/ace.80

Boateng, R., Mbarika, V., & Thomas, C. (2010). When Web 2.0 becomes an organizational learning tool: evaluating Web 2.0 tools. *Development and Learning in Organizations: An International Journal*, *24*(3), 17-20. doi: 10.1108/14777281011037254

Bogdan, R., Holotescu, C., Andone, D., & Grosseck, G. (2017). HOW MOOCS ARE BEING USED FOR CORPORATE TRAINING?. *eLearning & Software for Education*, *2*. doi: 10.12753/2066-026X-17-000

Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: four decades of research on adoption and consequences. *The International Journal of Human Resource Management*, *28*(1), 98-131. doi: 10.1080/09585192.2016.1245672

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM–firm performance linkages: The role of the "strength" of the HRM system. *Academy of management review*, *29*(2), 203-221. https://www.jstor.org/stable/20159029

Boxall, P F (1992) 'Strategic HRM: a beginning, a new theoretical direction', Human Resource Management Journal, vol 2 no 3, pp 61-79. doi: 10.1111/j.1748-8583.1992.tb00260.x

Boxall, P. (1996). The strategic HRM debate and the resource-based view of the firm. *Human resource management journal*, *6*(3), 59-75. doi: 10.1111/j.1748-8583.1996.tb00412.x

Bruck, P. A., Motiwalla, L., & Foerster, F. (2012). Mobile Learning with Micro-content: A Framework and Evaluation. *Bled eConference*, *25*. https://domino.fov.uni-mb.si

Bryman, A., & Bell, E. (2011). Business research strategies, *Business research methods 3e* (pp. 14-25). USA: Oxford University Press.

Cabanero-Johnson, P. S., & Berge, Z. (2009). Digital natives: Back to the future of microworlds in a corporate learning organization. *The Learning Organization*, *16*(4), 290-297. doi: 10.1108/09696470910960383

Cangelosi, V. E., & Dill, W. R. (1965). Organizational learning: Observations toward a theory. *Administrative science quarterly*, 175-203.

Chang, S., Gong, Y., Way, S. A., & Jia, L. (2013). Flexibility-oriented HRM systems, absorptive capacity, and market responsiveness and firm innovativeness. *Journal of Management*, *39*(7), 1924-1951. doi: 10.1177/0149206312466145

Chou, Y. K. (2015). Actionable gamification. *Beyond points, badges, and leaderboards*. http://epubunit.info

CIPD. (2014). *Learning and Development*. CIPD. Retrieved from https://www.cipd.co.uk/knowledge/strategy/development/surveys

CIPD. (2015). *Learning and Development*. CIPD. Retrieved from https://www.cipd.co.uk/knowledge/strategy/development/surveys

CIPD. (2017). Digital learning [Fact sheet]. Retrieved from https://www.cipd.co.uk/knowledge/fundamentals/people/development/digital-learning-factsheet

Corley, K. G., & Gioia, D. A. (2004). Identity ambiguity and change in the wake of a corporate spin-off. *Administrative science quarterly*, *49*(2), 173-208. doi: 10.2307/4131471

Creswell, J. (2007). *Qualitative inquiry and research design*. Second edition. Thousand Oaks, CA: Sage.

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of management review*, *24*(3), 522-537. doi: 10.5465/amr.1999.2202135

Crotty, M. (1998). Introduction: The research process, *The foundations of social research: Meaning and perspective in the research process* (pp. 3-11). Sage. http://epubunit.info

Decker, J., Wesseloh, H., & Schumann, M. (2015). Anforderungen an mobile Micro Learning Anwendungen mit Gamification-Elementen in Unternehmen. *HMD Praxis der Wirtschaftsinformatik*, *52*(6), 851-865. doi: 10.1365/s40702-015-0179-4

Delery, J. E., & Roumpi, D. (2017). Strategic human resource management, human capital and competitive advantage: is the field going in circles?. *Human Resource Management Journal*, *27*(1), 1-21. doi: 10.1111/1748-8583.12137

Deloitte University Press. (2015). Leading in the new world of work. *2015 Deloitte Human Capital Trends*. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/na/Documents/human-capital/na_DUP_GlobalHumanCapitalTrends2015.pdf

Deloitte University Press. (2016). The new organization: Different by design. *Global Human Capital Trends 2016.* Retrieved from https://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/gx-dup-global-human-capital-trends-2016.pdf

Deloitte University Press. (2017). Rewriting the rules for the digital age. *2017 Deloitte Human Capital Trends*. Retrieved from https://www2.deloitte.com/cn/en/pages/human-capital/articles/global-human-capital-trends-2017.html

Deloitte University Press. (2018). The rise of the social enterprise. *2018 Deloitte Human Capital Trends*. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/at/Documents/human-capital/at-2018-deloitte-human-capital-trends.pdf

DeRouin, R. E., Fritzsche, B. A., & Salas, E. (2005). E-learning in organizations. *Journal of Management*, *31*(6), 920-940. doi: 10.1177/0149206305279815

Deterding, S., Dixon, D., Khaled, R. and Nacke, L. (2011), 'From Game Design Elements to Gamefulness: Defining "Gamification"', in Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments (New York, NY: ACM), pp. 9–15. doi: 10.1145/2181037.2181040

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical education*, *40*(4), 314-321. doi: 10.1111/j.1365-2929.2006.02418.x

Dodgson, M. (1993). Organizational learning: a review of some literatures. *Organization studies*, *14*(3), 375-394. doi: 10.1177/017084069301400303

Dodson, M. N., Kitburi, K., & Berge, Z. L. (2015). Possibilities for MOOCs in corporate training and development. *Performance Improvement*, *54*(10), 14-21. doi: 10.1002/pfi.21532

Downes, S. (2012, September 27). A true history of the MOOC [Presentation]. Retrieved from http://www.downes.ca /presentation/300

Ferriman, J. (2014, April 29). Critical ELearning Elements [Blog post]. Retrieved from https://www.learndash.com/critical-elearning-elements/

Fombrun, C. J., Tichy, N. M., & Devanna, M. A. (1984). *Strategic human resource management*. New York: Wiley.

Gartner (2017). Why HR needs to move from digitization to digitalization?. *HCM-Tech*. [Blog post]. Retrieved from https://blogs.gartner.com/john-kostoulas/2017/07/03/why-hr-needs-digitalization/

Gassler, G., Hug, T., & Glahn, C. (2004). Integrated Micro Learning–An outline of the basic method and first results. *Interactive Computer Aided Learning*, *4*, 1-7. https://www.researchgate.net

Gavish, N., Gutiérrez, T., Webel, S., Rodríguez, J., Peveri, M., Bockholt, U., & Tecchia, F. (2015). Evaluating virtual reality and augmented reality training for industrial maintenance and assembly tasks. *Interactive Learning Environments*, *23*(6), 778-798. doi: 10.1080/10494820.2013.815221

Gerhart, B. (2007). Horizontal and vertical fit in human resource systems. *Perspectives on organizational fit*, *1*, 317-348. https://psycnet-apa-org.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, *16*(1), 15-31. doi: 10.1177/1094428112452151

Göschlberger, B. (2017). Social Microlearning Motivates Learners to Pursue Higher-Level Cognitive Objectives. In *E-Learning, E-Education, and Online Training* (pp. 201-208). Springer, Cham. doi: 10.1007/978-3-319-49625-2_24

Göschlberger, B., & Bruck, P. A. (2017, December). Gamification in mobile and workplace integrated microlearning. In *Proceedings of the 19th International Conference on Information Integration and Web-based Applications & Services* (pp. 545-552). ACM. doi: 10.1145/3151759.3151795

Grant, B. M., & Giddings, L. S. (2002). Making sense of methodologies: A paradigm framework for the novice researcher. *Contemporary nurse*, *13*(1), 10-28. doi: 10.5172/conu.13.1.10

Gray, D. E. (2013). Theoretical perspectives and research methodologies, *Doing research in the real world* (pp. 19-32). Sage publications.

Growth from Knowledge - Nuremberg [GfK]. (2018, August 29). *Global smartphone market goes large for premium priced devices* [Press release]. Retrieved from https://www.gfk.com/insights/press-release/global-smartphone-market-goes-large-for-premium-priced-devices/

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105. https://www.researchgate.net/

Heikkila, T., & Isett, K. R. (2004). Modeling operational decision making in public organizations: An integration of two institutional theories. *The American Review of Public Administration*, *34*(1), 3-19. doi: 10.1177/0275074003260911

Hogle, P. S. (2018). *What is Corporate Digital Learning?* [White paper]. Retrieved on November 28, 2018, from eLearning Guild: https://www.elearningguild.com/publications/121/what-is-corporate-digital-learning/

Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization science*, *2*(1), 88-115. https://www.jstor.org/stable/2634941

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of management journal*, *38*(3), 635-672. https://www.jstor.org/stable/256741

Ishitani, Y. (2018, August). Development of Organizational Capability from Entrepreneurial Identity: Case Study of Hirohisa Yamamoto and Yamamoto Precious Metal Co., Ltd. In *2018 Portland International Conference on Management of Engineering and Technology (PICMET)* (pp. 1-9). IEEE.

Jain, A. K., & Moreno, A. (2015). Organizational learning, knowledge management practices and firm's performance: an empirical study of a heavy engineering firm in India. *The Learning Organization*, *22*(1), 14-39. doi: 10.1108/TLO-05-2013-0024

Janesick, V. J. (2000). The choreography of qualitative design: Minuets, improvisations, and crystallization. *Handbook of qualitative research*, ed. N.K. Denzin and Y.S. Lincoln, 379–99. Thousand Oaks, CA: Sage.

Jiang, K., & Messersmith, J. (2018). On the shoulders of giants: a meta-review of strategic human resource management. *The International Journal of Human Resource Management*, *29*(1), 6-33. doi: 10.1080/09585192.2017.1384930

Karakas, F., & Manisaligil, A. (2012). Reorienting self-directed learning for the creative digital era. *European Journal of Training and Development*, *36*(7), 712-731. doi: 10.1108/03090591211255557

Karnouskos, S. (2017). Massive open online courses (MOOCs) as an enabler for competent employees and innovation in industry. *Computers in Industry*, *91*, 1-10. doi: 10.1016/j.compind.2017.05.001

Kaufman, B. E. (2014). The historical development of American HRM broadly viewed. *Human Resource Management Review*, *24*(3), 196-218. doi: 10.1016/j.hrmr.2014.03.003

Kaufman, B. E. (2015b). The RBV theory foundation of strategic HRM: Critical flaws, problems for research and practice, and an alternative economics paradigm. Human Resource Management Journal, 25, 516–540. doi: 10.1111/1748-8583.12085

Kim, D. H. (1997). The link between individual and organizational learning. In *The strategic management of intellectual capital* (pp. 41-62). https://pdfs.semanticscholar.org

Klein, J. H. (2008). Some directions for research in knowledge sharing. *Knowledge Management Research & Practice*, *6*(1), 41-46. doi: 10.1057/palgrave.kmrp.8500159

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International. http://dspace.utamu.ac.ug

Kvale, S. (1996). InterViews – An introduction to qualitative research interviewing. Thousand Oaks, CA: Sage Publications.

Larkin, J. (2017). HR digital disruption: the biggest wave of transformation in decades. *Strategic HR Review*, *16*(2), 55-59. doi: 10.1108/SHR-01-2017-0006

Lee, J., Kim, D. W., & Zo, H. (2015). Conjoint analysis on preferences of HRD managers and employees for effective implementation of m-learning: The case of South Korea. *Telematics and Informatics*, *32*(4), 940-948. doi: 10.1016/j.tele.2015.04.010

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual review of sociology*, *14*(1), 319-338. doi: 10.1146/annurev.so.14.080188.001535

Li, J., D'Souza, D., & Du, Y. (2011). Exploring the contribution of virtual worlds to learning in organizations. *Human Resource Development Review*, *10*(3), 264-285. doi: 10.1177/1534484311406421

Lundy, O. (1994). From personnel management to strategic human resource management. *International Journal of Human Resource Management*, *5*(3), 687-720. doi: 10.1080/09585199400000054

Marshall, C., & Rossman, G. B. (2014). Building the Conceptual Framework. *Designing qualitative research* (pp. 21-54). Third edition. Sage publications.

Matthews, R. L., MacCarthy, B. L., & Braziotis, C. (2017). Organisational learning in SMEs: a process improvement perspective. *International Journal of Operations & Production Management*, *37*(7), 970-1006. doi: 10.1108/IJOPM-09-2015-0580

McGregor, D. (1960). The human side of enterprise. *MC Graw-Hill Inc, NY,* _, 23-24.

Nonaka, I., & Takeuchi, H. (1995). The knowledge creation company: how Japanese companies create the dynamics of innovation. doi: 10.1016/0024-6301(96)81509-3

Nyberg, A. J., Moliterno, T. P., Hale Jr, D., & Lepak, D. P. (2014). Resource-based perspectives on unit-level human capital: A review and integration. Journal of Management, 40, 316–346. doi: 10.1177/0149206312458703

O'Connor, E. (1999). Minding the Workers: The Meaning of 'Human' and 'Human Relations' in Elton Mayo. *Organization*, *6*(2), 223-246. doi: 10.1177/135050849962004

OECD/Eurostat. (2005). Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, *The Measurement of Scientific and Technological Activities, OECD Publishing*. doi:10.1787/9789264013100-en.

Olsen, D. S. (2016). Adult learning in innovative organisations. *European Journal of Education*, *51*(2), 210-226. doi: 10.1111/ejed.12170

Ostroff, C., & Bowen, D. E. (2000). Moving HR to a higher level: HR practices and organizational effectiveness. https://psycnet-apa-org

Ou, K., Felicia, P., & Kane, D. (2017). Using simulations and game-based learning for information skills training. *Qualitative and Quantitative Methods in Libraries*, *2*(2), 107-118. http://qqml-journal.net/index.php/qqml/article/download/85/86

Palma, L. C., & Pedrozo, E. Á. (2016). Transformative learning to promote sustainability: inserting the third level of learning in management programs. *Brazilian Journal of Science and Technology*, *3*(1), 9. doi: 10.1186/s40552-016-0018-3

Park, J., & Wen, R. (2016). A comparative framework for culturally differentiated digital game-based learning. *International Journal of Comparative Education and Development*, *18*(3), 138-149. doi: 10.1108/IJCED-04-**2016**-0008

Payton, A. (2017). Skilling for Tomorrow. 26th National VET Research Conference" No Frills". *National Centre for Vocational Education Research (NCVER)*. https://files.eric.ed.gov/fulltext/ED574755.pdf

Pfeffer, J. (1994). Competitive advantage through people. *Boston/Mass*. https://web.a.ebscohost.com

Pimmer, C., & Pachler, N. (2014). Mobile learning in the workplace: Unlocking the value of mobile technology for work-based education. *Increasing access through mobile learning*, 193-203. http://oasis.col.org

Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. (2014). Human capital is dead; long live human capital resources!. Journal of Management, 40, 371–398. doi: 10.1177/0149206313512152

Popova-Nowak, I. V., & Cseh, M. (2015). The meaning of organizational learning: A meta-paradigm perspective. *Human Resource Development Review*, *14*(3), 299-331. doi: 10.1177/1534484315596856

Richards, D. (2018, February 22). Designing eLearning with a Human Touch [Blog post]. Retrieved from https://elearning.net/designing-elearning-with-a-human-touch/

Rosenberg, M. J. (2001). *E-Learning: strategies for delivering knowledge in the digital age.* New York, NY: McGraw-Hill Education

Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. Third edition. Sage.

Savino, D. M. (2014). The impact of MOOCs on human resource training and development. *Journal of Higher Education Theory and Practice*, *14*(3), 59. digitalcommons.www.na-businesspress.com

Schuler, R. S., & MacMillan, I. C. (1984). Gaining competitive advantage through human resource management practices. *Human Resource Management*, *23*(3), 241-255. doi: 10.1002/hrm.3930230304

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific,

interpretive, and critical research paradigms. *English Language Teaching*, *5*(9), 9. doi: 10.5539/elt.v5n9p9

Seet, P. S., Jones, J., Spoehr, J., & Hordacre, A. L. (2018). The Fourth Industrial Revolution: the implications of technological disruption for Australian VET. https://ro.ecu.edu.au/ecuworkspost2013/4821

Servage, L. (2005). Strategizing for workplace e-learning: some critical considerations. *Journal of Workplace Learning*, *17*(5/6), 304-317. doi: 10.1108/13665620510606733

Sousa, M. J., & Rocha, Á. (2018, March). Corporate Digital Learning–Proposal of Learning Analytics Model. In *World Conference on Information Systems and Technologies* (pp. 1016-1025). Springer, Cham. doi: 10.1007/978-3-319-77703-0_99

Sousa, M. J., & Rocha, Á. (2019). Digital learning: Developing skills for digital transformation of organizations. *Future Generation Computer Systems*, *91*, 327-334. doi: 10.1016/j.future.2018.08.048

Stevens, E., & Dimitriadis, S. (2004). New service development through the lens of organisational learning: evidence from longitudinal case studies. *Journal of Business Research*, *57*(10), 1074-1084. doi: 10.1016/S0148-2963(03)00003-1

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human Resource Management Review*, *25*(2), 216-231. doi: 10.1016/j.hrmr.2015.01.002

Strother, J. B. (2002). An assessment of the effectiveness of e-learning in corporate training programs. *The International Review of Research in Open and Distributed Learning*, *3*(1). http://www.astdalaska.org

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & education*, *50*(4), 1183-1202. doi: 10.1016/j.compedu.2006.11.007

Swart, J., & Harcup, J. (2013). 'If I learn do we learn?': The link between executive coaching and organizational learning. *Management Learning*, *44*(4), 337-354. doi: 10.1177/1350507612447916

Thite, M. (2004). Strategic positioning of HRM in knowledge-based organizations. *The learning organization*, *11*(1), 28-44. doi: 10.1108/09696470410515715

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences*, *15*(3), 398-405. doi: 10.1111/nhs.12048

Vey, K., Fandel-Meyer, T., Zipp, J. S., & Schneider, C. (2017). Learning & development in times of digital transformation: Facilitating a culture of change and innovation. *International Journal of Advanced Corporate Learning (iJAC)*, *10*(1), 22-32. doi: 10.3991/ijac.v10i1.6334

Warren, C. A. (2002). Qualitative interviewing. *Handbook of interview research: Context and method* (pp. 83-101). Sage publications. doi: 10.4135/9781412973588

Welsh, E. T., Wanberg, C. R., Brown, K. G., & Simmering, M. J. (2003). E-learning: emerging uses, empirical results and future directions. *international Journal of Training and Development*, *7*(4), 245-258. doi: 10.1046/j.1360-3736.2003.00184.x

Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of management*, *18*(2), 295-320. doi: 10.1177/014920639201800205

Wright, P. M., & McMahan, G. C. (2011). Exploring human capital: putting 'human'back into strategic human resource management. *Human Resource Management Journal*, *21*(2), 93-104. doi: 10.1111/j.1748-8583.2010.00165.

Wright, P. M., & Nishii, L. H. (2007). Strategic HRM and organizational behavior: Integrating multiple levels of analysis. *CAHRS working paper series*, 468. http://digitalcommons.ilr.cornell.edu/cahrswp/468

Wright, P. M., & Sherman, W. S. (1999). Failing to find fit in strategic human resource management: Theoretical and empirical problems. *Research in personnel and human resources management*, *4*, 53-74.

Wright, P. M., & Snell, S. A. (1998). Toward a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of management review*, *23*(4), 756-772. https://www.jstor.org/stable/259061

Wright, P. M., & Ulrich, M. D. (2017). A road well traveled: The past, present, and future journey of strategic human resource management. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 45-65. doi: 10.1146/annurev-orgpsych-032516-113052

Wright, P. M., Snell, S. A., & Dyer, L. (2005). New models of strategic HRM in a global context. *The International Journal of Human Resource Management*, *16*(6), 875-881. doi: 10.1080/09585190500120814

Zhao, F., & Kemp, L. J. (2012). Integrating Web 2.0-based informal learning with workplace training. *Educational Media International*, *49*(3), 231-245. doi: 10.1080/09523987.2012.738015

Appendices

Appendix 1: Ethics Approval

Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology
D-88, Private Bag 92006, Auckland 1142, NZ
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

7 August 2018

Marcus Ho
Faculty of Business Economics and Law

Dear Marcus

Re Ethics Application: **18/303 How do human resource managers in New Zealand organisations conceptualise digital learning platforms within their organisations**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 7 August 2021.

Standard Conditions of Approval

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through http://www.aut.ac.nz/research/researchethics.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through http://www.aut.ac.nz/research/researchethics.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: http://www.aut.ac.nz/research/researchethics.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. You are reminded that it is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

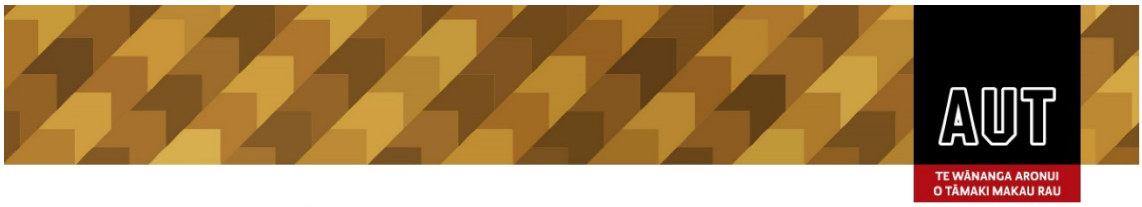
For any enquiries, please contact ethics@aut.ac.nz

Yours sincerely,

Kate O'Connor
Executive Manager
Auckland University of Technology Ethics Committee

Cc: munaal.abdali12@gmail.com

Appendix 2: Participant Information Sheet



Participant Information Sheet

Date Information Sheet Produced:

16 July 2018

Project Title

Employing Digital Learning Platforms – A strategic view from HR Managers

An Invitation

Hi! I am Munaal Abdali, a postgraduate student at AUT. I am conducting research as part of my Master's degree, specialising in human resources and employment relations. The research is about how human resources (HR) managers in New Zealand organisations conceptualise digital learning platforms. Since human resources has seen a shift towards digitalisation of its key functions and processes, its role has become far more innovative, dynamic, and strategic. The digital learning platforms refer to technology-laden learning tools that form a part of the larger umbrella term, e-HRM. These tools may include but are not limited to the use of gamification, massive open online courses, mobile learning, social media learning, digital simulations or micro learning.

I would like to invite you to participate in this research and enlighten me with your valuable experiences. Please note that if you agree to participate, your participation in this research would be voluntary and you may withdraw at any time prior to the completion of data collection. Your participation in this research is confidential and your name or your organisation's name will not be disclosed at any stage of the research process. As part of the research protocol, you will be required to sign a consent form before we proceed.

What is the purpose of this research?

This research aims to explore the factors HR managers in New Zealand consider with regards to adoption of digital learning platforms. It intends to gather data to compare the digital learning platforms based on the experiences of the HR managers. The reason for interest in this topic is due to the shift in HR which has led to adoption of digital learning platforms by organisations around the world to revamp their learning and development strategy. Research about these tools are expected to increase our understanding of their attributed contribution towards serving as a source of competitive advantage to the organisation by building an organisation's intellectual capital and enhancing employee performance. This research is being conducted as part of the Master's degree program offered by AUT. The research findings may be presented in a journal article.

How was I identified and why am I being invited to participate in this research?

You have been identified and invited to participate in this research based on our discussion at NZ HR Conference and Expo 2018 organised by Human Resources Institute of New Zealand (HRINZ). Your contact details were obtained at the Expo. Your rich background working within human resources makes you a very valuable resource for this research project.

How do I agree to participate in this research?

To participate in this research, you will be required to complete, sign and return the Consent Form which has been attached in this email. You have two weeks to return it to me to confirm your participation in this research. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

The research project aims to gather rich insights based on your understanding of the digital learning platforms. You will be interviewed by me for at least an hour on a day that is feasible for you. Please be advised that the interview will be held either at a coffee place, AUT premises or the organisation's office based on your feasibility. This interview will be recorded by my phone and transcribed by an authorised transcriber to whom your or your organisation's identity will not be disclosed, and a pseudonym would be used instead. The data gathered through this interview will then be analysed by me. The data gathered as part of the interview will be securely stored with the supervisor at AUT.

What are the discomforts and risks?

These are minimal because no personal questions will be asked and you will have the liberty to answer the questions in whichever way you deem appropriate. Moreover, you will be offered complete confidentiality so that it may not cause you any sort of discomfort. Furthermore, to ensure the accuracy of data, you will be provided with the interview transcript for confirmation, or to advise any changes or additions you wish to make before the interview data is analysed.

How will these discomforts and risks be alleviated?

N/A

What are the benefits?

Please be advised that your participation in this research will assist me in completing my dissertation and obtaining my Master's degree. Furthermore, you may request a copy of the summary of the research findings which may provide you with an overview of the digital learning platforms in practice in New Zealand organisations.

How will my privacy be protected?

As has been mentioned already, your privacy will be protected by maintaining confidentiality. Your name and your organisation's name will not be disclosed and pseudonyms will be used at all stages of the research.

What are the costs of participating in this research?

Please understand that the only costs associated to participation in this research is your precious time. However, I understand that you must be very occupied hence I will manage the interview such that it takes no more than the required time, that is, 60 minutes. Moreover, you can choose to decide the day that is feasible for you.

What opportunity do I have to consider this invitation?

Given the limited timeframe of the research project, you will have two weeks to confirm your participation in this research by responding to the email and returning the filled, signed consent form.

Will I receive feedback on the results of this research?

Yes, you may request to receive a summary of the research findings upon completion of the research.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, *Dr. Marcus Ho, marcus.ho@aut.ac.nz,* and *09 921 9999 Ext: 5448*.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Name: Munaal Abdali

Email: dpk7889@autuni.ac.nz

Project Supervisor Contact Details:

Name: Marcus Ho

Email: marcus.ho@aut.ac.nz

Approved by the Auckland University of Technology Ethics Committee on *7th August 2018*, AUTEC Reference number *18/303*.

Appendix 3: Interview Consent Forms

Consent Form

Project title: *Employing Digital Learning Platforms – A strategic view from HR Managers*

Project Supervisor: ***Dr. Marcus Ho***

Researcher: ***Munaal Abdali***

- O I have read and understood the information provided about this research project in the Information Sheet dated 16 July 2018.
- O I have had an opportunity to ask questions and to have them answered.
- O I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- O I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- O I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- O I agree to take part in this research.
- O I wish to receive a summary of the research findings (please tick one): YesO NoO

Participant's signature: .....

Participant's name: .....

Participant's Contact Details (if appropriate):

.....

.....

.....

.....

Date:

Approved by the Auckland University of Technology Ethics Committee on August 7, 2018. AUTEC Reference number: 18/303

Note: The Participant should retain a copy of this form.

Appendix 4: Indicative questions for interviews

1. How long have you been working within human resources?
2. Have you ever implemented or interacted with a digital learning platform? If so, how was your experience?
3. Does your organisation have a digital learning platform in place?
    a. If yes, which one is it? Why did you choose this one? What are the factors that were considered before choosing this one? How would you compare it to other digital learning platforms? How effective is this?
    b. If no, why do you think that there isn't one? What are the factors you would consider before employing one? What do you think are the critical success factors? Which digital learning platform are you more likely to adopt and why? If you do not intend to adopt one, why?

Note: The interviews will be audiotaped.