Critical Organisational Factors for Sustainable E-Learning Implementation: A Case Study of Selected Universities in New South Wales

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Abstract

The success of e-learning initiatives in university settings hinges on collaborative efforts involving academics, learning designers, local leaders, and students, influencing both effectiveness and sustainability. This study addresses a critical gap in the literature by exploring the motivations and challenges these stakeholders face, ultimately providing practical recommendations for fostering respectful collaboration and optimising e-learning outcomes.

The e-learning literature reveals many enablers and barriers associated with its implementation. However, there is little research regarding effective collaboration between stakeholders when implementing e-learning initiatives. The literature predominantly focuses on organisational structure, technological infrastructure, and resources. Less attention is given to the more human aspects of stakeholder collaboration. This study addresses this gap by delving into the motivations and challenges faced by individuals involved in e-learning collaborations to comprehend better the underlying reasons behind their effectiveness or lack thereof.

To gain a comprehensive understanding of e-learning implementation from stakeholders' perspectives, this qualitative study employs an interpretive approach to identify the critical organisational factors for sustainable e-learning implementation. This study draws on data collected through interviews with academics, learning designers, local leaders and students from two universities in New South Wales. Fullan's (2016) change model is used as a framework for thematic analysis. The findings highlight gaps related to four relational characteristics: collaboration, individual capability, teaching and organisation needed for respectful collaboration to implement e-learning. Drawing from these insights, a heuristic consisting of a set of self-reflective questions was developed. These questions cultivate self-awareness, empowering stakeholders to participate in discussions with heightened empathy, deeper respect for differing viewpoints, and a willingness to explore diverse perspectives. In essence, the purpose of developing this heuristic was to establish a solid foundation of respect during the e-learning implementation process.

The heuristic functions as a practical framework, directly stemming from research findings, to assist educators in navigating the complex process of implementing e-learning effectively through collaboration. By utilising this heuristic tool, educators can benefit from the accumulated knowledge and best practices identified through this research to help them make informed decisions, address challenges, and optimise the outcomes of their e-learning initiatives.

Certification of Thesis

I certify that the ideas, work, results, analyses, and conclusions reported in this dissertation are entirely my own effort, and that, to the best of my knowledge and belief, it contains no material previously published or written by another person or material which to a substantial extent has been accepted for the award of any other degree or diploma at the University of New England, except where otherwise acknowledged.

29 August 2023

Signature of Candidate | Date

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Chapter 1: Introduction

1.1 Chapter Overview

This thesis focuses on the implementation of e-learning in universities and examines the essential organisational factors that are critical for achieving success in this realm. This chapter outlines the what, the why, and the how of the study. Section 1.2 introduces the e-learning context, and Section 1.3 provides an overview of massification and universal models. This is followed by a discussion of the significance (Section 1.4) and motivation (Section 1.5) of the research. Section 1.6 presents the research questions, and Section 1.7 provides an outline of the thesis structure.

1.2 E-Learning Context

The terms e-learning, online learning, and digital learning are commonly used interchangeably. In my thesis, I specifically choose to use the term e-learning for three reasons. Firstly, e-learning has historical significance and is deeply ingrained in the development of electronic educational technology, making it a conventional and widely accepted term. Secondly, its broad and inclusive nature encompasses various electronic learning methods, including online and digital approaches. Thirdly, my preference for e-learning in the thesis is rooted in the terminology used by my interviewees. Their consistent use of the term e-learning reflects its practical and contextual relevance within the field. This deliberate alignment of my research language with the terminology employed by those directly involved in the subject matter enhances the authenticity of my study. Sustainability in my study refers to the challenge of sustaining e-learning within universities through recognising and exploring the roles of stakeholders in the implementation process.

Over the past few decades, e-learning has undergone a remarkable transformation, shifting from the fringes to the forefront of higher education in Australian universities. The onset of the COVID-19 pandemic further accelerated this transition. Prior to 2020, when this research study began, only 14 out of 37 public universities in Australia offered online degree programs across various disciplines (Department of Education, 2018a).

Research reveals that e-learning presents numerous advantages that can benefit a broader spectrum of students (Stone, 2022; Terantino, 2020). Recognising the need to support

both online and on-campus learners, universities are increasingly embracing e-learning as a means to address the evolving landscape of education. This shift is driven by several factors, including the impact of educational technologies, the promotion of inclusive education, the rising influx of international students, and the growth of demands and expectations at the societal level (Crisan, 2019; Terantino, 2020).

These factors have placed significant pressure on universities to establish educational systems that foster student-centric, flexible, and interactive experiences (Stone, 2022). To cater to an expanding student market characterised by changing expectations, universities are increasingly adopting e-learning as a mode of delivery. The focus on providing open, accessible, and flexible study is becoming even more crucial in meeting the demands of these evolving student markets.

Consequently, the successful implementation of e-learning in the educational delivery and support process is becoming paramount in response to these expanding student demographics (Crisan, 2019).

Further, the university sector is currently grappling with a range of challenges, including diminishing funds, escalating costs, the need for greater accountability, and intensified competition from emerging players in the higher education market (Wheaton, 2020). In this increasingly competitive landscape, universities are compelled to reassess their practices concerning students, striving to offer flexibility and open access to encompass more diverse learners while remaining cost-effective and accountable (Debowski, 2022).

The proliferation of a massification education model, coupled with an emphasis on managerialism and the neoliberal pursuit of competitiveness, further exacerbates the challenges surrounding the implementation of e-learning. Simultaneously, the soaring costs of higher education have rendered it unaffordable for many students, prompting them to seek alternative options such as online programs. It is within this context that the research investigation at hand aims to delve into the critical organisational factors necessary for the sustainable implementation of e-learning in universities today.

By integrating e-learning into their educational offerings, universities can address the financial pressures they face while expanding access to education. Embracing online modes of delivery enables universities to reach a wider audience of students, including those who may otherwise be unable to afford a traditional university education. Moreover, the adoption of e-learning aligns with the current trend of students seeking flexible study options that

accommodate their diverse needs and circumstances. Through careful consideration of the organisational factors and strategic planning, universities can navigate the challenges posed by the changing higher education landscape, maximise the benefits of e-learning, and provide an inclusive and accessible learning environment for all students.

1.3 Massification and Universal Models

The massification model refers to the expansion and increased access to higher education, aiming to provide education to a larger number of students with the transmission of skills and preparation for a broader range of technical and economic elite roles. It involves accommodating a larger student population and ensuring access to education for a broader range of individuals. The focus is on increasing enrolment rates and providing educational opportunities to a larger segment of the population. The universal model, on the other hand, relates to the adaptation of the 'whole population' to rapid social and technological change (Trow, 2007). Both the mass and universal models can present challenges in terms of resource allocation, infrastructure, and maintaining educational quality (Altbach, 2014).

Universities are currently grappling with the massification and universal education models at the same time, which is difficult because each model requires different strategies. The universal model represents the highest level of access and participation in higher education, where higher education is available to virtually the entire population, regardless of social background or economic status. For educators, this changed higher education environment creates tensions between open access, quality, and adoption of business models with a higher ratio of students to instructors (Crisan, 2019). Universal systems prioritise equal opportunities for all individuals to pursue higher education, emphasising broad educational goals and societal benefits. They tend to provide a wide range of academic disciplines and professional programs to cater for diverse interests and career aspirations (Trow, 2007). In a universal educational model, universities must explore how technology can be harnessed to deliver student-centred, personalised, flexible, self-directed, and collaborative learning experiences (Stone, 2022). This need arises in the context of reduced government funding (Parker et al., 2021), where universities must also ensure that these technological enhancements provide value for money.

Universities are also challenged by the effects of neoliberalism introduced in the early 1980s. In universities post-1981, neoliberalism changed the philosophy of financial support

from a neo-socialist concept, funding those who deserve it, to a neo-capitalist one, funding those who can afford it. One of the key aspects of neoliberalism in higher education is the introduction of performance management systems. These systems aimed to measure and evaluate the performance and productivity of educational institutions, administrators, faculty, and students based on quantifiable indicators. Performance management typically involves setting performance targets, measuring outcomes, and using performance data for decision-making and resource allocation. The implementation of increased performance management in universities has brought about significant changes.

In their research, Parker et al. (2021) build on the work of Brown (2015), highlighting that as a consequence of the shift to increased performance management and neoliberalism, universities have deviated from their traditional emphasis on fostering innovation and independent research, teaching students to excel, and fulfilling an essential societal role. They point out that failing to recognise the unique character of universities as independent academic institutions, coupled with the pressures from both the government and academia brought on by increased performance management, has led to the commercialisation of universities and the adoption of a more corporate business model in university leadership.

By imposing generic performance indicators and metrics, universities must conform to standardised criteria that may not align with their core values and missions. This has occurred because performance management measures have been implemented without acknowledging the specific nature of universities as professional, autonomous institutions (Brown, 2015). By framing the university as a market commodity, neoliberalism diminishes education as an essential component of a democratic society, instead promoting privatisation and the erosion of public support and funding.

1.4 Research Significance

Universities are increasingly incorporating e-learning into their teaching and learning offerings in response to the changing higher education landscape. Several studies (Ali et al., 2018; Almaiah et al., 2020; Heurteloup & Moustaghfir, 2020; Jokiaho et al., 2018; Priatna et al., 2020) highlight challenges in implementing e-learning and offer insights into the factors that influence its adoption by academics and students. However, these studies have limitations in providing a comprehensive framework for how individuals need to work together to implement sustainable e-learning in their universities. These studies often focus on institutional

requirements or adopt a deficit approach towards academics and students' e-learning capabilities. Furthermore, these studies often concentrate on faculty support within traditional structures that replicate face-to-face instruction rather than considering the unique environment of e-learning. As a result, they do not fully explore e-learning as a workplace innovation that requires engagement and collaboration from all stakeholders. Consequently, these studies may not offer clear guidance or practical recommendations for effectively implementing sustainable e-learning.

This omission highlights the importance of understanding critical organisational factors that go beyond mere barriers and support needs when implementing sustainable e-learning. It suggests that a comprehensive approach to e-learning implementation should involve active involvement and perspectives from all stakeholders, recognise e-learning as a distinct innovation, and foster engagement and collaboration among faculty, management, and other relevant parties. This understanding is crucial for developing effective strategies and fostering an organisational culture conducive to successful e-learning integration. The existing body of knowledge lacks a comprehensive understanding of which organisational factors are truly critical for achieving sustainable e-learning implementation. This thesis aims to address this research gap. By investigating the critical organisational factors for the successful implementation of e-learning, this thesis is, therefore, significant because it seeks to contribute to the e-learning body of knowledge by advancing an understanding of the complexities of implementing e-learning in universities, providing a better understanding of stakeholders' perceptions of organisational enablers and barriers to implementing e-learning within their own universities; suggesting approaches that could help with the successful and sustainable implementation of e-learning; and informing the scholarly literature in education studies.

My research is highly relevant in the context of the Australian Universities Accord's[1], comprehensive review of the higher education system. Its significance lies in its practical approach to implementing e-learning and addressing current educational challenges. Notably, the Accord's Interim Report envisions the future of higher education, aiming to bring substantial improvements to Australia's academic landscape. This closely aligns with the objectives of my research, which centres on sustainable e-learning implementation, contributing to the broader aspirations of the Accord.

[1] https://www.education.gov.au/australian-universities-accord (accessed 14 August 2023)

Moreover, of the seven key points emphasised in the Accord's review, two directly align with my research objectives. Firstly, it highlights the need for innovative teaching and learning methods. Secondly, it underscores the vital role of technology in creating inclusive education. My research directly addresses these priorities by examining crucial organisational factors for implementing e-learning in universities, thus advancing the overarching goals outlined in the Accord.

1.5 Research Motivation

Over the past decade, my work has primarily focused on supporting university academics with implementing e-learning initiatives. Throughout these various initiatives, whether at the individual, school, or faculty level, I observed that senior management provided vision, leadership, and resources. Despite this support, successfully implementing e-learning proved challenging due to resistance from academics. Moreover, the resistance and challenges persisted across subsequent e-learning implementation projects, indicating a lack of learning from previous experiences applied to improve future implementations. This frustrating pattern raised several important questions for me.

I wondered why, even with senior management endorsement and dedicated resources as well as support in place, implementing e-learning remained difficult. I questioned why e-learning had not become more deeply integrated into institutional practices, considering its relatively established history. It puzzled me why implementing e-learning was still sometimes viewed as something ‘new’ or ‘optional’ rather than being embraced within the university’s normal operations as part of their learning and teaching approach. Additionally, I wanted to understand the underlying reasons behind the prevalent criticisms directed towards e-learning, specifically within the university setting.

These questions became the focus of my research, as I felt a genuine motivation to comprehend why implementing e-learning initiatives and projects in the universities where I worked proved to be so challenging, often resulting in failure and lack of sustainability. Through this research, I aim to contribute to the exploration of these topics and uncover insights that can shed light on the difficulties faced in implementing e-learning in higher education institutions.

1.6 Research Questions

The primary objective of this study is to understand which organisational factors are critical to enabling sustainable e-learning implementation. To achieve this goal, the overarching focus of this research is: What are the critical organisational factors for sustainable e-learning implementation? Three research questions support this research focus:

RQ1: What are the perceived barriers and enablers to e-learning from the perspectives of the different stakeholders?

RQ2: How do the experiences of e-learning designers correspond with those of academics with regard to implementing e-learning?

RQ3: How do the decisions of organisational leaders affect the implementation of e-learning?

1.7 Thesis Structure

The thesis is presented in three parts comprising six chapters, as outlined in Table 1.1. Part One (Chapters 1, 2 and 3) introduces the thesis and research problem, reviews the literature, and outlines the research methodology. Part Two presents the findings and results, analysis, and discussion. Part Three synthesises the meaning of the research, responds to the research questions, and suggests future research directions.

Part One: Chapter One highlights the importance of the research. It defines key terms and concepts, outlines the study's goals and objectives, and presents the research questions. Chapter Two, the literature review, is divided into three sections. The first section provides an overview of the history of e-learning and offers definitions of important terms. The second section focuses on key areas within the literature that are relevant to the implementation of e-learning. Lastly, the chapter delves into a discussion of relevant organisational change theories, with a specific focus on the intricacies of Fullan's change model (2016). Chapter Three describes the research methodology. It begins by presenting the research questions and the overall research strategy employed. It then provides details regarding the participants, the methods used for data collection, and the analysis procedures. Additionally, the chapter discusses the limitations of the study and provides an explanation of the trustworthiness factors, including credibility, transferability, dependability, and confirmability.

Part Two: Chapter Four presents the findings of the study, which consist of the responses obtained from interviews conducted with four stakeholder groups: academics,

learning designers, local leaders, and students. The chapter concludes with a summary of the findings in relation to the research questions. Chapter Five discusses the findings in the context of the research questions. It explores the theoretical and practical implications of the findings and develops a novel heuristic.

Part Three: Chapter Six provides a concise summary of the thesis and discusses how the study's aims and objectives have been achieved. This is followed by an explanation of the contributions made by the study. The chapter also includes a personal reflection on the research project.

Table 1.1: Thesis Structure

Part 1: Theoretical understandings and methodological considerations for the research		
Chapter	Title	Theme
1	Introduction to thesis	Sets the scene in terms of significance, motivation, and background culminating in the formulation of the research questions.
2	Literature review	Reviews the literature on implementing e-learning in universities together with organisational change theories that could guide the study.
3	Methods and methodological considerations.	Describes the research methodology used in the study, including the research questions, research paradigm, research design, and ethical considerations.
Part 2: Data analysis, interpretations, and discussion		
4	Findings	Presents the results of the interviews with academics, learning designers, local leaders, and students.
5	Discussion	Discusses the results of the interviews and their theoretical and practical implications.
Part 3: Conclusion		
6	Conclusion	Concludes whether the aims and objectives of the research have been met and their contribution to e-learning implementation research more widely.

The next chapter reviews relevant literature pertaining to this research problem. This chapter is crucial to understanding the research problem and its associated factors, as it provides an overview of the existing literature in the field and outlines the research gaps that this study aims to address.

Chapter 2: Literature Review

2.1 Chapter Overview

This chapter provides a review of the literature of critical organisational factors that contribute to sustainable e-learning implementation and explores relevant organisational change theories. The chapter proceeds as follows. Section 2.2 provides key definitions, and Section 2.3 discusses critical organisational factors for the successful implementation of e-learning, namely institutional infrastructure, leadership and management, multi-profession teamwork and process, and capability building. Section 2.4 reports on organisational theories to ascertain their suitability as a theoretical framework for the study, and Section 2.5 presents the theoretical framework chosen for this study, namely Fullan's (2016) change model. In section 2.6, Ball's (2003, 2016) theory of performativity is explored as an additional theoretical framework. Finally, Section 2.7 concludes with a chapter summary.

2.2 Definitions

It is essential to first define the key terms in this study. This section clarifies the terms e-learning (Section 2.2.1), disruptive innovation (Section 2.2.2), critical success factors (Section 2.2.3), sustainable e-learning (Section 2.2.4), and e-competence (Section 2.2.5).

2.2.1 E-Learning

The origin of the term 'e-learning' is a topic of debate with different claims from various sources. According to Keegan (2020), Elliot Masie is credited with introducing the term during the CBT Systems seminar in 1999. Cross (2004) however, asserts that he coined the term 'e-learning' himself in 1998, suggesting that Masie adopted it later and that Masie instead first used the term 'online' during the aforementioned seminar. Dron and Anderson (2016) also attribute the term e-learning to Cross. With conflicting accounts, it is challenging to determine the definitive originator of the term. Based on the available information, however, it is reasonable to acknowledge Cross as a significant contributor to the emergence of the term e-learning.

The term e-learning falls within the transition period between the rise of networking technologies and collaborative development and the subsequent focus on politicisation, systematisation, and learner-centrism in the application of technologies (Smith, 2005). Smith (2005) categorises the evolution of technologies into four distinct timeframes. The first timeframe, spanning from 1965 to 1979, was characterised by centralised time-share resources and the involvement of expert operators, primarily revolving around mainframe computers. The second timeframe, from 1980 to 1989, witnessed the emergence of stand-alone and distributed resources, with early adopters utilising standalone computers. The third timeframe, covering the years 1990 to 1999, was marked by the proliferation of networking technologies and collaborative development, particularly with the advent of the Internet. Finally, the current timeframe, starting from 2000 onwards, is characterised by the politicisation of technology, its systematisation, and a greater emphasis on learner-centrism, with diverse applications of technologies in the field of education (Smith, 2005).

Smith's (2005) categorisations are useful for understanding the evolution of large-scale e-learning implementation, as two significant changes occurred in this field in the mid 2000s. Firstly, technologies started being applied in a more integrated manner to develop extensive e-learning programs, moving away from specialised software designed for specific purposes. Simultaneously, there was a shift in perspective, recognising technology as a medium for interactive communication rather than just an individualised instructional tool. This shift emphasised the role of technology in facilitating discourse and collaboration among learners (Conole et al., 2007).

E-learning implementation is categorised within the area of meso-level research for online distance learning, which according to Zawacki-Richter et al. (2009) relates to management, organisation, and technology at the institutional level. Zawacki-Richter et al. (2009) categorise the macro level as generally referring to broad conceptual frameworks of distance education theories and systems and the micro level as focused mainly on teaching and learning processes.

The terms 'meso' and 'macro' in the context of education comes from the ecological systems theory, also known as Ecological Systems Perspective or Developmental Systems Theory, a psychological and sociological framework developed by Urie Bronfenbrenner (1979). This Ecological Systems Perspective theory focuses on understanding human development and behaviour within interconnected environmental systems. It posits that individuals are not isolated entities but are deeply influenced by their environments and the

interactions within those environments. The theory is often used to study human development across the lifespan, but it can also be applied to various fields such as education, social work, and community planning.

The core concepts of Ecological Systems Theory include the microsystem, mesosystem, exosystem and macrosystem. The microsystem is the innermost layer and represents the immediate environment in which an individual interacts regularly. It includes family, peers, school, and other direct social interactions. The microsystem has the most immediate and direct impact on an individual's development. Next, the mesosystem encompasses the connections and interactions between the various components of the microsystem. For example, family experiences may affect a child's performance at school, or their school experiences may influence their interactions with peers. The exosystem layer consists of environments in which the individual may not be directly involved but still affect them indirectly. For instance, a parent's workplace or school policies can influence a child's well-being. Finally, the macrosystem represents the broader cultural, societal, and political context in which an individual lives. This includes cultural norms, values, laws, and socio-economic conditions. The macrosystem exerts a profound influence on the other ecological systems.

Ecological Systems Theory emphasises the bidirectional nature of these influences, meaning that individuals not only passively receive influences from their environments but also actively shape and adapt to them. It also recognises the importance of studying individuals within their natural contexts rather than isolating them from their environment. Ecological Systems Theory provides a holistic framework for understanding human development by considering the complex interplay between individuals and their various environmental systems.

By thinking in terms of these different systems, we gain a more holistic understanding of human development and behaviour. It allows us to recognise that individuals are not isolated entities but are embedded in a complex web of relationships and environments. This perspective is valuable in various fields, including psychology, sociology, education, and social work, as it helps professionals develop more effective interventions, policies, and strategies by considering the multifaceted influences on individuals' lives. Ultimately, it promotes a more nuanced and inclusive approach to understanding and supporting human development and better comprehending how individuals grow, develop, and adapt to their surroundings.

This thesis therefore investigates the organisational influences that are critical to successful e-learning implementation to learn more about where the organisation must concentrate effort to help e-learning to be successfully implemented institution-wide.

The definition of e-learning has evolved since its inception. Khan (2005, p. 3) defines e-learning as:

> *An innovative approach for delivering well-designed, learner-centred, interactive, and facilitated learning environment to anyone, anyplace, anytime by utilizing the attributes and resources of various digital technologies along with other forms of learning materials suited for open, flexible, and distributed learning environment.*

Kahn's (2005) definition is helpful in that it incorporates the complex and all-inclusive nature of e-learning and is not limited to or by specific technologies or infrastructure. However, Khan (2005) does not allude to the physical separation of the learner from the instructor, which is a defining characteristic of distance education (Guri-Rosenbilt & Gros, 2011). This is important because where students are physically located is irrelevant to e-learning. Moreover, Kahn's (2005) definition only concentrates on the delivery systems, technology, and resources, with no mention of pedagogy or the actual learning that takes place

Donohue and Howe-Steiger (2005, p. 22) propose using "e-learning courseware" as an umbrella term because it incorporates all the components that enable a programme of study online and focuses on the relationship between academics and students. However, this is also limiting because it suggests an authoring package or technical shell into which e-learning 'fits', implying the technology is driving the learning rather than vice versa.

Two years later, Bates (2007) conducted an analysis of over 200 studies on the applications of electronic technologies, revealing a significant level of confusion surrounding the definitions of digital technologies. Specifically, terms such as e-learning, online learning, web-enhanced technology, and teaching lacked clear and consistent meanings. The lack of consensus made it challenging to determine the precise scope and characteristics of these terms. Bates (2007) concluded that the ambiguity in defining these terms stemmed from the dynamic nature of e-learning and its relationship with society. As both e-learning and society are in a constant state of flux and evolution, different understandings and interpretations of what e-learning entails emerge over time. This dynamic element contributes to the varying perspectives and definitions associated with e-learning (Stein et al., 2011). The varying emphases observed in different definitions of e-learning can be attributed to the influence of

different disciplines on e-learning practices. The interdisciplinary nature of e-learning, drawing from fields like computer science, communication technology, and pedagogy, introduces a dynamic element (Sangra et al., 2012). This dynamic element, as highlighted by Sangra et al. (2012), is considered a characteristic of educational systems in the 21st century.

Different authors approach the definition of e-learning from distinct perspectives, influenced by their respective profiles and areas of focus. Some authors, like Kahn (2005), who possess a technological background, tend to prioritise the technological aspects when defining e-learning. On the other hand, authors like Donohue and Howe-Steiger (2005), who emphasise e-learning as a delivery mechanism, tend to place greater emphasis on the communication methods involved. Sangra et al. (2012) argue for a more comprehensive definition of e-learning that considers multiple facets, aiming to make it relevant to a broader audience. Sangra et al. (2012, p. 152) advocate for a definition that encompasses the diverse aspects and dimensions of e-learning to ensure its applicability and usefulness for a wider range of people:

> *E-learning is an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication, and interaction and that facilitates the adoption of new ways of understanding and developing learning.*

This definition includes comprehensive coverage of technology, delivery systems, communication, and educational paradigms. Sangra et al. (2012) consulted with experts who conceptualised e-learning within these four interrelated categories. The resulting definition is characterised by its generic, inclusive, and flexible nature. The definition allows individuals to establish a personal connection to the concept of e-learning at various stages of implementation. Therefore, this study adopts the e-learning definition proposed by Sangra et al. (2012) as the guiding framework.

2.2.2 Disruptive Innovation

To understand e-learning, it is important to recognise its classification as a disruptive technology, which encompasses either replacing an established technology or creating a new industry (Bower & Christensen, 1995). E-learning, as a technical innovation, has disrupted the university sector, leading to the emergence of new markets, value networks, and significant societal impact (Christensen & Raynor, 2003). Christensen and Raynor (2003) replace the term *disruptive technology* with *disruptive innovation* because of their recognition that few

technologies are intrinsically disruptive or sustaining in character; rather, it is the *business model* that the technology enables that creates the disruptive impact. A disruptive innovation, therefore, is an innovation that creates a new market and value network and eventually disrupts an existing market and value network. The innovation displaces established market leaders and alliances and has a significant societal impact. Further, Christensen and Raynor (2003) argue that disruptive innovations can negatively affect successful, well-managed companies that are responsive to their customers and have excellent research and development. Christensen and Raynor (2003) explain that it is not unusual for a big corporation to dismiss the value of disruptive technology or disruptive innovation initially because it does not reinforce their existing company goals.

In universities, e-learning follows the pattern of both technology and innovation disruption. Initially, e-learning was considered a disruptive technology because it replaced the lecture (Garrison & Anderson, 2003). Later, e-learning was seen as a new way of learning that was changing the conventional learning model (Sangra et al., 2012). With the ongoing reduction in online technology costs and the rapid emergence and development of powerful, intelligent tools, e-learning is constantly evolving. These changes are transforming the way education is delivered, providing learners with new opportunities to acquire knowledge outside of traditional university settings. Technological advancements have increased the option of social mobility and open access for learners, fundamentally changing the conventional face-to-face learning model. After residing on the periphery of higher education since the 1990s, e-learning has now transitioned into the mainstream of educational practices (Stone, 2022).

2.2.3 Critical Success Factors

The inclusion of this dedicated section on Critical Success Factors (CSFs) within this thesis is important to provide essential context and framework for understanding how CSFs play a crucial role in guiding and optimising the implementation of sustainable e-learning initiatives in the context of universities.

Critical success factors become particularly relevant when studying e-learning implementation because they offer a compelling framework for identifying the essential elements that drive the successful adoption and implementation of e-learning initiatives. When universities thoroughly understand and embrace these CSFs, they empower themselves to make well-informed decisions concerning their e-learning implementation initiatives. This

knowledge equips them to allocate their resources effectively, channelling them precisely where they will have the greatest impact. Furthermore, universities can develop strategic plans that proactively address potential barriers to success, enabling them to overcome challenges and optimise their e-learning endeavours.

To elaborate further on the concept CSFs, are a practical and strategic methodology extensively employed to enhance organisational performance, guide decision-making processes, and drive success across various industries and sectors. The concept of CSF was initially introduced by Rockart (1979) and enhanced by subsequent researchers Boynton and Zmud (1984). The CSF methodology allows organisations to identify essential areas, align their strategies and resources, and effectively measure their performance towards achieving their goals. By defining these CSFs, organisations can focus their efforts, allocate resources effectively, and make informed decisions to enhance their chances of achieving their desired outcomes.

Boynton and Zmud (1984) assessed the CSF method by conducting structured dialogues between a skilled CSF analyst and the key personnel in a state university and a small finance firm in North Carolina. The resulting CSFs included issues vital to each organisation's current and future success. As a result, Boynton and Zmud (1984, p. 17) established the following definition for CSFs:

> *Critical success factors are those few things that must go well to ensure success for a manager or an organization, and, therefore, they represent those managerial or enterprise areas that must be given special and continual attention to bring about high performance.*

Particularly noteworthy is the acknowledgement that CSFs are applicable not only at the strategic planning (macro) level but also at the managerial (meso) level. This underscores their relevance to the proposed study. Previously, the outcome of the CSF method was a list of information requirements to be built into a computer-based information system (CBIS) for senior management use only. This refinement identified critical issues and facilitated the allocation of resources to essential areas. By explicitly identifying organisational CSFs, managers could help ensure that resources under their authority were directed towards those pivotal areas.

2.2.4 Sustainable E-Learning

Sustainable e-learning implementation is of paramount importance due to its transition from a new phenomenon to a well-established and dominant form of educational practice. By prioritising sustainable e-learning implementation, universities can optimise the benefits of this mode of education delivery while mitigating potential challenges and risks (Sofiadin, 2020).

The term sustainability initially developed in two directions in an educational context. Education *for* sustainability, which focuses on environmental sustainability through education solutions (Bourn & Shiel, 2009) and sustainability *of* education, which focuses on the implementation of sustainable forms of successful practice through educational development, leadership, and innovation (Davies & West-Burnham, 2003). This study is positioned within the discourse of sustainability *of* education and specifically refers to the challenge of sustaining e-learning innovations within universities. Success in establishing sustainable e-learning initiatives, according to Gunn (2011, p. 510), requires:

> *Ability to sense the environment and reconfigure systems to meet changing requirements; to assimilate or transform them to generate new ones; to manage interdependencies; and to integrate or adapt systems to suit specific purposes.*

Through a scoping review of the literature, consultation with key experts, and distillation of broad empirical knowledge into a single realm, Stepanyan et al. (2013, p. 91) arrive at a "baseline definition" of e-learning sustainability as:

> *The property of e-learning practice that evidently addresses current educational needs and accommodates continued adaptation to change without outrunning its resource base or receding in effectiveness.*

Stepanyan et al. (2013) highlight the significant implications of their definition of e-learning sustainability for future advancements in the education sector. They argue that the successful implementation of sustainable e-learning practices is crucial for universities' continued development. Similarly, Gunn (2011) and Stepanyan et al. (2013) emphasise sustainability as a concept that involves maintaining the viability of a process or system, enabling its continuous use and adaptation.

It is essential to note, however, that these previous definitions may overlook the specific challenges faced by key university stakeholders, such as academics and learning designers, who play a vital role in implementing e-learning amidst ongoing changes. In this thesis, sustainability in e-learning is therefore approached from a broader perspective. It encompasses

the e-learning system's support for the Triple Bottom Line (TBL), which aims to benefit "the society, environment, and economy while ensuring the ongoing learning goals and sustainable practice" (Sofiadin, 2020, p. 82).

Sofiadin's (2020) conceptual framework highlights the need to consider the broader impacts of e-learning on society, the environment, and the economy. Their comprehensive approach underscores the importance of balancing multiple dimensions of sustainability, which closely aligns with the goals of this thesis. This research aims to delve into the incorporation of sustainable practices into e-learning, with the ultimate aim of fostering positive outcomes for all stakeholders involved and ensuring the long-term sustainability, effectiveness and impact of e-learning implementation.

Sofiadin's (2020) characterisation of sustainability closely resonates with the core focus of this study, which revolves around exploring the experiences of four key stakeholder groups in universities: academics, learning designers, local leaders, and students. Sofiadin's (2020) definition is particularly relevant because it explicitly recognises academicians as an integral component within the societal dimension. By recognising the pivotal role of academics and integrating their perspectives and experiences, Sofiadin's (2020) framework reinforces the significance of their involvement in the achievement of sustainable e-learning practices. This alignment strengthens the pertinence and applicability of Sofiadin's (2020) framework to the specific context and objectives of this study.

2.2.5 E-Competence

Schneckenberg and Wildt (2006), in their research on the integration of technology in education, defined the term 'e-competence' as the proficiency and abilities individuals need to use technology effectively and creatively in educational settings. Their definition encompasses the knowledge, skills, attitudes, and strategies necessary to navigate, engage with, and leverage technology for teaching, learning, and other educational practices. E-competence refers to the comprehensive set of skills, knowledge, and attitudes required to effectively utilise technology in educational contexts. E-competence goes beyond technical proficiency and encompasses pedagogical understanding and responsible use of technology for teaching, learning, and other educational practices. E-competence plays a crucial role in the successful implementation of e-learning, as it directly relates to the effective adoption and use of e-learning technologies. E-competence involves developing personal proficiency in creatively and effectively utilising e-

learning technologies for learning and teaching purposes, encompassing everyday educational practices. Schneckenberg and Wildt (2006) also introduced a Synergy Model for e-competence, which identified three essential dimensions for achieving competence. These dimensions include the pedagogical competence and contextual understanding of teachers, as well as the e-competence of students in a specific learning and teaching scenario. The key distinction from their perspective between teachers and students lies in their performance dimension rather than cognitive ability. Consequently, Schneckenberg and Wildt (2006) suggest that university teachers must first determine the most suitable teaching and learning methods for their courses or specific teaching scenarios before selecting appropriate educational technology tools.

In the same year, the Technological Pedagogical Content Knowledge (TPCK) framework was developed by Mishra & Koehler (2006). TPCK (also known as TPACK) highlights the essential knowledge teachers require to integrate technology into their teaching effectively. It encompasses three key areas: Technological Knowledge (TK), focusing on understanding the capabilities and usage of educational technologies; Pedagogical Knowledge (PK), emphasising teaching strategies, assessment methods, and student learning processes; and Content Knowledge (CK), comprising subject matter expertise. The TPCK framework underscores the interplay and integration of these three knowledge domains, highlighting how technology can be leveraged to enhance pedagogical practices and facilitate content delivery in classrooms.

The TPCK framework (Mishra & Koehler, 2006) and the e-competence synergy model (Schneckenberg & Wildt, 2006) are closely related since they both address the integration of technology in educational contexts, albeit from slightly different perspectives. The TPCK framework specifically focuses on the knowledge that teachers require to effectively incorporate technology into their teaching practices. It emphasises the intersection of technological knowledge, pedagogical knowledge, and content knowledge. TPCK offers a structured way to understand how these three domains intersect and influence each, ultimately facilitating meaningful and effective technology integration in the classroom.

E-competence, per se is a broader concept that encompasses the knowledge, skills, attitudes, and abilities required by individuals to operate and thrive in digital environments. It goes beyond the context of teaching and applies to various aspects of personal and professional life. E-competence involves digital literacy, the ability to use digital tools and technologies,

critical thinking in digital contexts, information management, communication skills, and responsible and ethical digital behaviour.

While the TPACK framework primarily focuses on the integration of technology in teaching, e-competence encompasses a broader range of digital skills and competencies necessary for individuals to navigate and engage effectively in a digital society. However, there is an intersection between the TPACK framework and e-competence, particularly for teachers. Teachers who possess strong e-competence are better equipped to implement the TPACK framework successfully. Their digital literacy, skills in using various technologies, critical thinking abilities, and understanding of responsible and ethical digital practices contribute to their effective integration of technology into teaching practices.

2.3 Organisational Enablers and Barriers

Studying the organisational factors that facilitate or hinder e-learning implementation is crucial for its success in universities because it sheds light on the specific challenges unique to each institution. A review of the e-learning literature over the past decade identifies four distinct categories of organisational enablers and barriers that are pertinent to the effective implementation of e-learning: institutional infrastructure (Section 2.3.1), leadership and management (Section 2.3.2), multi-profession teamwork and process (Section 2.3.3), and capability building (Section 2.3.4). Section 2.3.5 provides a summary of these key factors that either enable or impede e-learning initiatives.

2.3.1 Institutional Infrastructure

To meet the needs and challenges of modern knowledge-work economies and societies, universities have had to make a systematic change from a mass to a universal educational model (Watson & Watson, 2013). The universal model requires universities to address issues of social mobility, equal opportunity, and access for all students, which requires different missions and processes from the mass model, which developed in response to a dramatic increase in the population attending higher education (Duffy & Reigeluth, 2010; Trow, 2007).

To implement e-learning sustainably, academics and managers need to recognise that the loosely coupled organisational structure of their universities can act as a barrier to successful e-learning implementation (Martins & Baptista Nunes, 2016b). The concept of

loosely coupled organisations (also referred to as bottom-heavy organisations) was initially introduced by Karl Weick, a prominent organisational theorist, in his work "The Social Psychology of Organising" (1976). Weick (1976) described loosely coupled systems as organisations where the components or units have a certain level of independence and operate with a degree of autonomy, with limited interdependence within these systems.

The loosely coupled organisational structure within universities requires attention because it can create two tensions that make it difficult to meet the challenges of systematic change. Firstly, faculties are organised around specific disciplines, resulting in academics identifying strongly with their respective 'tribes' and having limited attachment to the overall university (Schneckenberg, 2009). This loyalty to their specific areas can conflict with the university's need for institution-wide goals and centralised strategies to effectively address innovation challenges. As a result, there is a clash between the increasing focus on performance and the traditional values of autonomy, collegiality, and professionalism that academics uphold (Boncori et al., 2020; Maassen, 2017).

Secondly, if research is valued more highly than teaching as a performance indicator for academic staff, it can lead to a lack of motivation for academics to implement e-learning innovations in their teaching practice (Conole, 2010; Schneckenberg, 2009). Additionally, Martins and Baptista Nunes (2016b) note the tension created by Higher Education Institution (HEI) strategies to implement e-learning into organisational routines, structures, and processes and academic experiences in a changing environment. To increase motivation for participating in e-learning initiatives, McGill et al. (2014) suggest that an organisation consider engagement with e-learning as a genuine aspect of the participant's responsibilities that contribute to their career advancement, in addition to making structural changes at the institutional level. Two of the most important elements to focus on within organisational factors, according to Priatna et al. (2020), however, are the creation of a work culture and the establishment of policies that are binding on the academic community to carry out e-learning.

Actions that foster a supportive institutional culture, such as implementing an institutional plan, involving committees, providing professional development opportunities, and offering logistical support, are closely linked to the adoption of e-learning. Additionally, faculty perceptions and beliefs, particularly those that view the use of new methods as beneficial and non-risky for student learning, along with their confidence and self-efficacy in implementing e-learning, play a significant role in driving its adoption (Heurteloup & Moustaghfir, 2020; Sidhu & Gage, 2021). Building trust within the institution among all

stakeholders in the educational offering process, therefore, is critical to implementing e-learning successfully. The creation of a working relationship to achieve this requires a balance between central planning, policy and resources, and the values and workload of academics (Boncori et al., 2020).

For e-learning to be successfully implemented, it must be aligned both in process and technologies within the organisation in which it is being introduced (Giannakos et al., 2022). Universities that have a clear understanding of their distinct strengths can concentrate on their areas of expertise and effectively leverage online technology to enhance their institutional capabilities (Christensen & Eyring, 2011). However, managing top-down strategic change together with the local context, namely where academics reside, needs to be bridged conceptually and pragmatically. Academic staff need to be involved in strategic changes likely to affect their academic roles. Issuing top-down directives or simply making central resources available are unlikely to engage academics and could result in false compliance or complete rejection of top-down directives (Hardaker & Singh, 2011).

To ensure success in a competitive world, it is crucial for all university staff, including executives, academics, and professional staff, to have a clear understanding of their past achievements, core capabilities, and strengths (Massen, 2017). Additionally, by considering the specific goals, existing practices, and the university's culture in the context of implementing e-learning, it becomes possible to overcome barriers associated with its implementation (Conole, 2010; Martins & Baptista Nunes, 2016b; Schneckenberg, 2009). To address the e-learning challenge, Watson and Watson (2013) proposed four paradigm shifts that universities must undergo. These shifts include transforming work processes to prioritise learner-centred learning; fostering a collaborative and participatory internal social infrastructure, adopting collaborative practice; and transitioning from being an organisation of learning to becoming a learning organisation. What is needed is a more collaborative and responsive structure (Maassen, 2017).

Lack of trust is a critical factor that affects e-learning at both individual and organisational levels, creating various barriers. At an individual level, the lack of trust in e-learning implementation is associated with behaviour, attitudes, and self-efficacy within the "actional-personal sphere" (Martins & Baptista Nunes, 2016b, p. 310). This implies that individuals may struggle to engage with e-learning platforms if they do not trust the effectiveness or reliability of the medium. On the other hand, barriers to trust in e-learning in the "structural-organisational sphere" (Martins & Baptista Nunes, 2016b, p. 310) are related to

decision-making processes, regulations, routines, structures, and practices. This includes the culture surrounding strategy formulation and commitment, all of which can impact the level of trust individuals and organisations place in e-learning. These barriers need to be addressed to foster trust and promote effective e-learning experiences.

Further, the immediacy of online interaction conflicts with an organisation's deep-rooted change resistance to change and its established processes (Martins & Baptista Nunes, 2016a). To overcome surface-level approaches to e-learning, Martins and Baptista Nunes (2016a) propose a three-pronged approach. This approach encompasses authentic workload distribution for online teaching, recognising and rewarding online teaching through performance appraisal and career progressing, and regulating interaction expectations between teachers and learners in the e-learning environment.

2.3.2 Leadership and Management

Effective leadership and thoughtful planning are crucial for successfully integrating e-learning in universities. Academic leaders in universities are confronted with a range of challenges stemming from the growing diversity of their institutions. These challenges include dealing with uncertainties in tenure, handling voluntary redundancies, managing reduced middle management costs, and adapting to changes in staffing models. (Rizvi & Beech, 2017). Like other sectors of the economy, universities now understand the importance of innovation for their survival and competitive edge (Iqbal et al., 2019). Of increased significance is that of knowledge-oriented leadership in creating an environment that promotes self-efficacy and facilitates the sharing of implicit and explicit knowledge to respond to change. To achieve responsiveness, university leadership must, through their knowledge orientation, lead by example to prioritise teamwork among academics to build trust and foster a learning culture, leading to increased knowledge sharing, innovation and enhanced performance (Rehman & Iqbal, 2020).

The leadership and management approach to change is the key to successfully implementing e-learning in universities. To achieve this, universities require leaders who actively participate in strategic planning, change management, and stakeholder collaboration, fostering an environment that promotes diversity, innovation, and a seamless transition to modern learning approaches. Additionally, senior university leaders must develop and

implement strategies, policies, and practices that prepare the academic workforce for change, enabling them to adapt seamlessly to the future (Debowski, 2022).

The distinction between leadership and management in universities is generally related to policymakers (senior academics) and those who implement policy (administrators) through their day-to-day management of the university (Salazar-Rebaza et al., 2022). However, when it comes to leading change in loose-coupled organisations like universities, a characteristic that is different from other types of organisations Salazar-Rebaza et al. (2022) advocate for transformational leadership. Dearlove (1995), nearly two decades ago, Fullan (2016) and more recently Salazar-Rebaza et al. (2022) all advise that personalities are often more important than formal status, so the leadership classification needs to be broadened. A complication to leadership roles within the university environment, however, is that staff taking up these roles rotate frequently. Such rotation of roles occurs at both local and middle management levels and can result in less well-defined roles. Role rotation is challenging because employing heads of departments, heads of schools, and deans on a cyclical basis can be incompatible with adaptive, responsive, and innovative organisational cultures. Frequent role rotation can send the message that leading and managing change in a university is a sideline to the more important work of research, resulting in insufficient time and resources allocated to leading change and organisational learning (Anderson et al., 2008). The institutions that manage growing change pressures best have clear, complementary, well-spread, and valid leadership roles with clear role descriptions. However, it is not just leadership at the middle level of management that is important. Enabling and supporting more local-level leaders is also crucial to e-learning implementation (Anderson et al., 2008).

Research suggests that universities must think carefully about the human implications for their staff if they are to successfully implement e-learning. Top-down directives and strategies need to be contextualised by faculty managers and leaders. If key performance indicators (KPIs) make this too directive at times, it can result in a lack of consideration for staff who must implement these directives and initiatives (Hunter et al., 2017; Ong, 2012). There can, however, be an overemphasis on funding the technologies used for e-learning rather than support for people and processes using those technologies (Conole, 2010). Rapid technological advances enable and require universities to provide more inclusive and more personal learning experiences for their students. However, Hunter et al. (2017, p. 5) argue that a similar "humanizing" approach is not being taken towards supporting staff that are making those changes. Hawkins and Marcum (2002) argue that if an environment is to encourage

young managers to move into a leadership role, it must encourage experimentation, provide rewards for innovation, and tolerate mistakes. Chaney et al. (2010) further suggest that if mid-manager norms and culture openly support face-to-face modes, this can be a real barrier to implementing e-learning. Further, to support e-learning implementation, it is suggested that those in leadership roles must develop their understanding of e-learning (King & Boyatt, 2014). Martins and Baptista Nunes (2016b) argue that unless management and academics have meaningful discussions together about what e-learning really means in practice for the academics, including limitations, then the possibilities and affordances of e-learning might not be realised.

Lack of awareness or failure to use central support services can contribute to failure to sustain e-learning implementation (Gunn, 2010). Technical collaboration and support are also important as they allow for development efforts to be shared and resources to be reused (Gunn, 2011). In addition to collaboration between academics and learning desigers (LDs), collaboration also must occur between academics and management, so that through discussion, consensus building, and collective inquiry, collaborative reflection on e-learning can take place. Further, Martins and Baptista Nunes (2016b) argue that social exchange mechanisms must enable the trust to break down both the power and material structures that may operate as barriers within the university.

2.3.3 Multi-Profession Teamwork and Process

Research over the past decade advocates for working in multi-professional teams incorporating faculties including pedagogues, learning designers, IT departments, and project managers to help to meet the challenges of implementing e-learning in universities (Doherty, 2010; Salmon & Angood, 2013; Ward et al., 2010). Working in multi-professional teams and using project methodologies and processes to organise and manage the process can also help the implementation of e-learning university-wide. Development teams who can collaborate in this way are able to align the discipline-specific goals of academics and educational designers for teaching improvement with the strategic goals of academics, the pedagogical goals of learning designers (LDs) for enhancing the student experience, and the strategic goals of the university and its faculties (Doherty, 2010; Ward et al., 2010). Ward et al. (2010) conclude that project management principles when applied to support project-based collaborations between e-learning specialists and small teams of academics, can create learning activities aligned with

the learning outcomes of students. However, if stakeholders in universities are to implement e-learning successfully, they may need to make changes in behaviour, values, norms, culture, and roles by working together constructively and collaboratively (King & Boyatt, 2014; Salmon & Angood, 2013; Watson & Watson, 2013).

Salmon and Angood (2013) suggest that the conflict between IT departments and faculties could prevent the delivery of learning experiences that meet the expectations of future students if a committed multi-professional teamwork approach is not adopted for sustainable partnerships. This conflict arises from the different backgrounds of IT professionals and educators and how they establish credibility in their field. IT professionals often establish their expertise as strategists in large-scale IT systems and may place central importance on standardising systems, services, and tools. Academics on the other hand, often desire the freedom to choose the technologies they believe to be the right ones for their teaching context, which might mean using specific software in one subject that might not be used elsewhere in the university. This approach can make it difficult for IT services and academics to negotiate which educational tools and technologies are best to support e-learning (Salmon & Angood, 2013).

The role of learning designer (LD) was created in universities to bring together expertise in technology and pedagogy to work with academics in improving learning and teaching and enhancing the student experience. However, this position is not without issues. Collaborative work to implement e-learning can result in role changes, including the expansion of the knowledge domain and the shift for academics away from being the expert. To avoid conflict, it is crucial to have careful discussions about the roles of each team member and what each role brings to the project at the beginning of working on e-learning projects in teams (Halupa, 2019).

2.3.4 Capability Building

Researchers agree that building e-capability is crucial for academic staff implementing e-learning (Alamri, 2023). If academics do not have the necessary skills or confidence to take advantage of the affordances of new technologies, then they will not implement them in their teaching practice. However, for academic staff to be able to design innovative e-learning teaching scenarios that make effective use of digital tools, they need to develop e-competence, namely competence in the technology they are using to teach online as well as the knowledge

to decide which technologies are most appropriate to use for their specific disciplinary practices (Newland & Handley, 2016).

The literature reveals two important aspects associated with building the capability for e-learning. The first is providing professional learning for educators to equip them with the necessary technical skills to teach online, also known as digital literacy (Sidhu & Gage, 2021). This is crucial because a lack of digital literacy among educators can hinder the adoption of technology (Johnson et al., 2016). The second aspect is learning how to adapt and manage change in response to ongoing technical innovations. This adaptation is fostered by promoting the formation of teaching networks. These teaching networks allow academics to connect with peers who have similar interests in e-learning and also to highlight colleagues who have effectively implemented e-learning strategies.

To improve their staff's ability to adapt to technological changes, universities must move away from a traditional, formal, top-down IT training approach towards a collaborative and developmental professional learning style. Digital literacy requires personal engagement and cannot be developed in a one-off, uncontextualised workshop since it involves not only technical proficiency but also behaviour and is dependent on the context and tools available (Debowski, 2022). A one-off training course cannot provide what academics need, which is to understand how to appropriate the technology for their own use and to adapt it to their own style PL must be based on the real contexts of academic staff to enable them to transfer their knowledge to future learners. Moreover, institutions should provide additional incentives and support structures to complement academic staff development. These include recognition and rewards for participation and achievements, career advancement opportunities based on acquired skills, flexible work arrangements, and research and funding opportunities. By offering these incentives, universities can motivate academic staff to actively engage in professional growth, contribute to their career advancement, and foster a culture of continuous learning and development (Martins & Baptista Nunes, 2016b).

The enhancement of digital literacy in higher education is viewed as a quality assurance concern. Newland and Handley (2016) indicate that academics demonstrate a higher level of involvement in a 'Digital Literacy Framework' when it is mandated through a quality assurance process. By integrating digital literacy engagement into various processes, such as course approval and revalidation, institutions can ensure that the necessary skills and competencies are being fostered among faculty members. This approach not only emphasises the importance

of digital literacy but also aligns it with the overall quality standards and benchmarks of higher education.

2.3.5 Summary

Overall, this review of the literature reveals that universities need to address both enablers and barriers to effectively implement e-learning. Organisational enablers involve fostering inclusivity and collaboration in practices and processes, as well as engaging in multi-professional teamwork. Leadership plays a crucial role in successful e-learning implementation by contextualising directives within a well-defined strategy endorsed by senior management. Establishing social exchange mechanisms with stakeholders to build trust in a dynamic environment is also essential. Providing support to develop e-learning capabilities that align with contextual learning needs and engaging academics personally is necessary. Additionally, embedding incentives and support structures to reward e-learning commitment and regulate workload appropriately is important.

On the other hand, organisational barriers to successful e-learning implementation stem from academics' low identification with their institution's strategic direction, resulting in a lack of motivation to adopt innovative e-learning practices. Inadequate e-competence, a culture that prioritises face-to-face instruction over online methods, an emphasis on research performance over teaching, conflicts between support departments and faculties, and the cyclical role of academic leaders all pose challenges to e-learning. A summary of the organisational enablers and barriers to the successful implementation of e-learning is presented in Table 2.1.

Table 2.1: Summary of Organisational Enablers and Barriers to Implementing E-Learning

Enablers	Barriers
Institutional infrastructure	
□ Contextualised strategy matches the external environment to the university's specific context, goals, internal resources, skills, existing practices, culture, needs, and strengths. □ A shift from being an organisation of learning to a learning organisation to enable a flexible structure adaptive to inevitable change. □ All institutional stakeholders support the e-learning strategy so that organisational change is embedded into the culture of the organisation. □ Transform core and support work processes to learner-centred learning. □ The needs of all stakeholders (students, faculty, departments, and administration) are met. □ High-level strategic representation by IT. □ Learning and teaching inform strategic learning technology decisions. □ Engagement with e-learning must be recognised as a genuine part of participants' duties that contribute to promotion. □ Regulate interaction expectation of teachers and students in the shared electronic environment. □ Trust building in social exchange mechanisms to promote balance between academics' commitments, values, and sense of self-worth and centrally planned policy, rules, resources, and exhortations that enable action. □ Reconcile academic and faculty needs with those of the institution. □ Support e-learning as a workplace innovation. □ Complement staff development with additional incentive and support structures.	□ Autonomous faculties are disconnected from centralised strategies and objectives. □ Academics' autonomy at work, self-regulation, and peer control. □ Academics' allegiance to their 'tribe' and 'territory' and low identification with their own universities in opposition to the need for centralised strategies and objectives to meet innovation challenges. □ Research performance is more highly rated than teaching. □ A promotional system that favours research over teaching excellence. □ Face-to-face instruction is considered superior to distance education or e-learning. □ Academic locus of control – if not involved in strategic change decisions, won't adopt e-learning. □ Massification and universal models require different missions, processes, and strategies. □ Technology-driven. □ Existence of unregulated and unaccounted for dynamics due to demands of online interaction immediacy, which is in direct conflict with change-resistant organisational processes. □ The tension between individuals' experiences in a changing environment and HEIs response, is actionable in their strategies used to transfer experiences from the individual level into organisational routines, structures, and processes.

Enablers	Barriers
Management and Leadership	
□ Valid leadership roles with clear role descriptions. □ Senior management bridge the gap between 'local context' and top-down strategic change. □ Support and motivation from middle management in allocating resources, regular interaction, and success with their peers. □ Local leadership, partnerships, and collaboration between multiple stakeholders. □ Faculty interest and skills. □ Organisational and managerial structures, resources, and processes to support e-learning. □ University leaders acknowledge the human dimension in the process of achieving their corporate goal. □ Personalised and inclusive learning experience for academic leaders and educators.	□ Leading positions held on a part-time basis means insufficient time and intellectual effort is devoted to the tasks of organisational learning and leading change. □ Cyclical role of heads of faculties/schools/departments can mean reluctance to promote relationship between IT departments and drive change. □ Mid-manager norms and culture support face-to-face models. □ Conflict between IT departments and faculties. □ Staff attitude and skills. □ E-learning strategies not developed with staff consultation. □ Short timeframe key performance indicators (KPIs). □ Administration, control, institutional support, and leadership. □ Misunderstanding of required effort, faculty compensation, and time required. □ Tensions between administration and academics.
Multi-profession teamwork and process	
□ Unified committed multi-profession team working with understanding of different roles and the value they bring. □ Use of project management methodology and processes to align e-learning and teaching strategy with personal and pedagogical goals of academics and educational designers for teaching improvement. □ Involvement and support of faculty e-learning reference group, faculty senior management, and external stakeholders. □ Cross-institutional partnerships and collaborations between multiple stakeholders to enable sustainable and beneficial response to uncertainties and to innovations.	□ Changing roles. □ Lack of process or management support. □ Failure or lack of awareness to use central services.

Enablers	Barriers
□ Opportunities for sharing practice, professional reflection, professional conversations, and changing teaching practices. □ Supportive design relationships to enhance pedagogical and technological knowledge. □ Additional incentives and support structures provided to capable members who commit to change and innovation. □ Constructive collaboration between IT departments and faculties. □ Involvement of students as key stakeholders and future thinkers. □ Recruitment and promotion of the role of learning technologists as agents of change. □ Collaborative and participatory internal social infrastructure. □ Collaborative practice and opportunity-seeking relationships with external community. □ Appointed e-learning champions.	
Capability building	
□ Clear strategic initiatives, change in departmental and institutional culture, and money to change approach to e-competency/digital literacy building as greater institutional importance. □ Shift from formal IT training to fostering informal e-competence professional learning and professional development to meet real e-learning needs and motivations of academic staff. □ Staff offered appropriate admin support and sufficient resources to develop skills and understanding of e-learning. □ Understanding online technologies and how to use them requires personal engagement in a meaningful way. □ Critical digital literacy involves individuals making informed decisions about what technologies to use in the light of their needs and their disciplinary practices. □ E-learning/engagement with digital literacies more likely to be pursued by course teams as a result of a quality assurance process.	□ Staff attitude and skills. □ Lack of confidence or e-incompetence. □ IT training approach doesn't support 'real' learning and teaching context needs of academics. □ E-learning seen only as tool to support teaching. □ Professional development - uncontextualised half-day workshops cannot develop digital literacies because they are as much about behaviour as technical proficiency. □ Lack of digital literacy not seen as a quality assurance issue. □ Course leaders sticking to needs based or problem-centred model of staff development (symptomatic of institutions with unpredictable environments and resource constraints).

2.4 E-Learning and Organisational Change

Implementing university-wide e-learning is a complex challenge inherently requiring substantial organisational change (Salazar-Rebaza et al. 2022). In this section, seven organisational change theories are assessed for their suitability as a theoretical framework for this thesis. These selected theories include X and Y Theory (McGregor, 1960); the Learning Organisation concept (Senge, 1990); Reframing Organisations (Bolman & Deal, 2013); Change Theory (Fullan, 2007); Six Secrets of Change (Fullan, 2008); Change Leader (Fullan, 2011); and the Triple I Model (Fullan, 2016).

The rationale behind the choice of these particular organisational change theories is based on their relevance and comprehensiveness in addressing the intricate challenges associated with implementing university-wide e-learning. Each theory offers a distinct perspective and a unique set of principles that can substantially contribute to understanding and managing the multifaceted dynamics inherent in this transformative process. By examining these theories individually, a comprehensive understanding of their respective insights and potential contributions to the research objectives of the thesis can be gained.

2.4.1 X and Y Theory

In *The Human Side of Enterprise,* McGregor (1960) proposes that in bringing about change, it is necessary to treat staff as responsible and valued employees. Focused on balancing concerns for tasks and people, McGregor (1960) examined theories on behaviour of individuals at work and formulated two models, which he called Theory X and Theory Y. These models suggest there are two fundamental approaches to managing people. Theory X refers to an authoritarian style of management, which stresses the importance of strict supervision, external rewards, and penalties. In contrast, Theory Y refers to a participative management style, which highlights the motivating role of job satisfaction and encourages workers to approach tasks without direct supervision. Managers who use Theory Y usually achieve better performance and results due to arranging "conditions so that people can achieve their own goals best by directing efforts toward organisational rewards" (McGregor, 1960, p. 61). Managers who tend towards Theory X generally obtain poor results because they are not concerned with their employees' abilities or intrinsic motivations.

2.4.2 The Learning Organisation

In *The Fifth Discipline*, Senge (1990) introduces the concept of the learning organisation. A cornerstone of the learning organisation is systems thinking, which looks at a larger number of interactions within and between organisations instead of focusing only on the individuals within an organisation. At the heart of systems thinking is the belief that component parts of a system are best understood in the context of relationships with each other and with other systems, rather than in isolation. Systems thinking theory is used to focus on cyclical rather than linear cause and effect as the way to develop and implement sustainable change. The problem with complex systems, like universities, is that causes and effects are often remote from problems and solutions, which can result in either delayed or misleading feedback. When implementing change, Senge (1990) suggests that it is essential to understand how an organisation's culture and its norms will react to innovators' efforts rather than focusing solely on the implementation of an innovation. This resonates well with the current study, in which the analysis of interview data in relation to systems thinking can provide new insights into how e-learning implementation could be improved through understanding how changes made to one component of a system might impact other components.

Using systems thinking through applying a learning organisation framework allows leaders to see and understand patterns and relationships within their own complex organisations. This enables leaders to identify whether the organisation must embrace systemic change to deal with the challenges it faces. Systemic change is concerned with designing an entirely new system rather than trying to repair the existing one (Watson et al., 2008).

By becoming a learning organisation and specifically by learning how to manage change, Fullan (2008) suggests that universities will be able to devise strategies to effectively meet the needs of all stakeholders when designing and supporting e-learning. According to King and Boyatt (2014), such e-learning strategies could: define e-learning, its rationale for use, and set clear expectations for staff and students; model the use of innovative teaching methods and provide context and discipline-sensitive frameworks for implementation; demonstrate institutional commitment and investment for the development of e-learning; and offer staff appropriate support to develop their skills and understanding.

2.4.3 Reframing Organisations

In *Reframing Organizations: Artistry, Choice, and Leadership*, Bolman and Deal (2013) propose that to bring about lasting change in an organisation, both its structure and culture must be transformed. Their theory centres around the idea that by adopting four distinct perspectives, or lenses, individuals can reframe how they view a situation. These lenses include the structural lens, which focuses on well-defined goals, roles, and relationships as well as effective coordination (p. 44); the human resources lens, which examines the relationship between people and organisations (p. 135); the political lens, which considers decision-making and resource allocation in a context of scarcity and conflicting interests (p. 183), and the symbolic lens, which explores how humans make sense of the confusing and uncertain world in which they live (p. 244). By using these lenses to reframe their perspectives, individuals can gain new insights and make more informed decisions, ultimately leading to more sustainable change in the organisation.

Bolman and Deal (2013) suggest that when organisations fail to bring about deep and lasting change, it is because managers, leaders, and change agents tend only to focus on above the "water-line" issues of the structural and human resource frames (p. 132). Ignoring the cultural, political, and symbolic issues below the "water-line" occurs because the issues within these frames are particularly difficult to deal with.

2.4.4 Change Theory

In *Change Theory*, Fullan (2007) proposes 'Theories of Action with Merit', which suggest that change strategy must "simultaneously focus on changing individuals and the culture or system in which they work" (p. 7) to be successful. If change focuses only on individuals rather than individuals learning together about their own practice and context, the deep cultural changes needed to effect sustainable change will not occur. To enable effective use of his theory, Fullan (2007) outlines seven core premises: a focus on motivation; capacity building, with a focus on results; learning in context; changing context; a bias for reflective action; tri-level engagement; and persistence and flexibility in staying the course. The first premise of motivation is critical to success; the other six factors empower that motivation. Essential to success is that 'change leaders' must have a deep knowledge of the dynamics of how the factors in question operate if sustainable results are to be achieved. Fullan (2007) identifies three inhibitors to the use of change knowledge: believing that simply having

knowledge about change management will result in rapid change; believing one leader with change knowledge is enough when in fact many leaders with change knowledge must work together to make a difference; and not appreciating that real change requires deep cultural change.

2.4.5 The Six Secrets of Change

In *The Six Secrets of Change*, Fullan (2008) proposes six elements that need to be the focus of organisational strategies to bring about sustainable change: love your employees; connect peers with purpose; capacity building prevails; learning through implementation; transparency rules; and systems learn. Fullan suggests that those leaders who understand how 'the six secrets' interconnect, who appreciate how to apply the nuances within their own organisations, and who believe in their employees can be more confident in their actions when managing change. Leaders can also be more insightful in their reflections towards guiding further action because they are learning from what they are doing through "reflecting on doing" (Mintzberg, 2004). Critical to Fullan's (2008) theory is that leaders within an organisation must work together to apply the six secrets. This combination is the way to motivate the majority of employees in an organisation to engage with managing and making changes. It is the synergistic aspect of 'the six secrets', Fullan (2008) argues, which can guide and monitor leadership to achieve lasting organisational change under complex conditions.

2.4.6 Change Leader

In *Change Leader,* Fullan (2011) theorises that effective leaders need to be "participating in the life of their organisation" (p. 151) by using their own practice as a place to progressively learn. He suggests that rather than applying theory or research evidence to their practice, 'change leaders' should try to discern what is working and what is not and then look to research and theory for guidance. Fullan proposes leaders use his 'Change Leader Framework': be resolute; motivate the masses; collaborate to compete; learn confidently; know your impact; do deliberatively and sustain "simplexity" (Kluger, 2008) to reflect on what they have learnt about their own change leadership and the kind of leaders they are. Fullan (2011) uses simplexity in his framework to refer to the notion that "successful change is both simple and complex" (p. 18). Fullan (2011) suggests seven key insights to guide leaders' practice, ensuring deep reflection and effective leadership. These insights encompass actively

participating as a learner to facilitate organisational improvement, blending resolute moral purpose with empathy, recognising that realised effectiveness motivates people to take further action, embracing collaborative competition as a driver of successful change, balancing confidence with humility, acknowledging the power and limitations of statistics, and understanding that simplexity is the solution in our complex world.

2.4.7 The Triple I Model

In *The New Meaning of Educational Change*, Fullan's (2016) Triple I model outlines a three-phase process for organisational change. The first phase is initiation, which involves the process leading up to and including a decision to adopt or proceed with a change. During this phase, organisations identify areas for improvement and potential changes to achieve their goals. The second phase is implementation, where the organisation puts the proposed changes into practice. This is a critical phase where the challenges of implementing change are realised, and the effectiveness of the proposed changes is evaluated. Finally, the third phase is institutionalisation, where the change is either built into the ongoing system or discarded through attrition or a conscious decision to discard. This phase is essential to ensure the success of the change, as it becomes a permanent part of the organisation's culture and practices. The Triple I model emphasises the importance of careful consideration and evaluation at each stage to ensure the success of organisational change.

Outcomes, in terms of the degree of improvement, of the three phases, are evaluated against criteria relevant to the objectives set. An improvement could be, for example, "improved student learning and attitudes" (Fullan, 2016, p. 56). The change process is further complicated due to several factors, including its non-linear nature, scope and source of change, the time it might take to implement changes, understanding the meaning of the change, and the fundamental understanding needed that "change is a process, not an event" (Fullan, 2016, p. 57). Fullan (2016) argues that the digital age has made innovations more spontaneous and unpredictable. Therefore, Fullan (2016) revised his "traditional Triple I framework" (Fullan, 2001, p. 78) by adding a more iterative lean start-up element to the institutionalisation phase, rendering the model more dynamic overall. He believes that the traditional model of organisational change is not sufficient to address the dynamic nature of modern innovations. The new model is more adaptable and dynamic, enabling organisations to respond quickly to new changes and challenges. Fullan's rationale for introducing this new dimension is to provide

organisations with a framework that can effectively capture the rapid changes that occur in the digital age.

In his lean start up component, Fullan follows Ries's (2012) argument that in the "time of the Internet and related social media access, we have to develop innovations through an iterative process by creating, trying, refining, applying, and continuously improving them in practice – in real situations – rather than try to perfect them in the lab prior to use" (p.20). In essence, Ries (2012) posits that instead of spending years perfecting technology, a minimal viable product needs to be built. Ries (2012) contends that "the lean start up is a new way of looking at the development of innovative products that emphasises fast iteration and consumer insight, a huge vision, and great ambition, all at the same time" (p. 20). Therefore, according to Fullan (2016), the lean start-up model

"is the best way of moving quickly into new clarity and greater efficacy" as "the model parallels Reis's formulation; vision, steer and accelerate", where "the directional vision is a crucial starting point, but you don't really know where it will take you until you experiment, refine, and what Ries calls 'steer'. Once you know what tracks are working out and promising, you accelerate" (p. 79).

Fullan's (2016, p. 59) lean start up model "roughly consists of three interactive components: directional vision, focused innovation, and reining in or consolidation". All three of these components occur simultaneously in a continuous cycle. The innovations become rapidly better through the cycle of "vision-focused innovation consolidation" and continuous improvement. The focused innovation or "letting go" (p. 59)does not mean anything goes but is more a recognition that people should try new things and learn from them. Reining in consists of taking stock as you go, retaining good ideas for further development and jettisoning others that are not working out.

Although Fullan's (2016) Triple I model addresses the entire change lifecycle, encompassing initiation, implementation, and institutionalisation, the elements encompassed in the implementation phase of Fullan's (2016) Triple I model are of particular interest to this study. The characteristics identified serve as a valuable guide for both effectively implementing innovations and identifying potential obstacles that could impede the implementation process, both of which are useful for this thesis.

2.4.7.1 Implementation

According to Fullan (2016), the implementation phase involves the practical application of new ideas, programs, or activities that are unfamiliar to those undergoing or expected to undergo change. When considering implementation, Fullan (2016) posits that a fundamental question arises: What specific aspects would need to change in order for an innovation or reform to be fully implemented? For instance, in the context of school changes, modifications might occur in curriculum materials, pedagogical practices, and beliefs or understandings regarding the curriculum and learning approaches. The significance of implementation lies in its role as the means to achieve desired objectives, as Fullan (2016) asserts. Put simply, implementation is variable, and its potential benefits hinge upon the extent and quality of changes put into practice. These changes can lead to outcomes such as enhanced student learning or improved teacher skills.

Navigating the implementation of change, however, entails grappling with a few key variables, as Fullan (2016) explains. The change process presents intrinsic dilemmas, compounded by the challenging nature of certain factors, the uniqueness of individual settings, and variations in local capacity. Consequently, successful change becomes a highly intricate and nuanced social process. Fullan (2016) highlights the importance of employing effective strategies for managing change, which involves skilfully balancing seemingly contradictory factors. These include embracing both simplicity and complexity, integrating flexibility with structure, combining strong leadership with user participation, reconciling bottom-up and top-down approaches, maintaining fidelity while allowing adaptivity, and engaging in both evaluation and non-evaluation. The more factors supporting the implementation, the more substantial the change in practice is likely to be. Therefore, it is essential to avoid isolating these factors from one another when considering their influence on the implementation process.

2.4.7.2 Characteristics of Change, Local Characteristics, and External Factors

Fullan (2016) divides the implementation phase into three categories encompassing nine characteristics of implementing change: characteristics of change (need, clarity, complexity, and quality/practicality), local characteristics (district, community, principal, and teacher), and external factors (government and other agencies). This model is illustrated in Figure 2.1. The characteristics of change refer to the belief by those involved in the implementation that the change to be made is needed, that there is clarity around the goals to

be achieved, and that the means and resources are available to assist with the implementation. An understanding of the complexity of implementing the innovation is the second characteristic of change and is especially critical when dealing with large-scale initiatives that involve multiple stakeholders. The third category refers to the need to prioritise genuine implementation over simply paying lip service to adoption. Within the local characteristics, the district element refers to the strategies and supports that are offered by the wider organisation that can significantly influence implementation success. Community refers to the issues of staff involved in implementation; for instance, faculty deans, heads of schools, and school staff may not always be in agreement regarding the implementation. This can lead to resistance, conflicts, and other challenges that hinder the adoption of the initiative. At the teacher level, self-actualisation or a sense of efficacy can significantly impact implementation success. Educators who believe in the innovation being implemented and have a sense of efficacy in their ability to implement it are more likely to act and persist in the effort required to bring about successful implementation. External factors, the last set of factors influencing implementation, refer to the school in the context of broader society of departments of education or government and societal trends that act as a stimulus for change (such as changes in demography, global trends, technology advancements, and employment patterns).

Figure 2.1: Fullan's (2016) Change Model

2.5 Theoretical Framework

Among the seven theories of organisational change examined, each holds some relevance to this research. However, upon careful consideration, Fullan's (2016) change model emerges as the most suitable theoretical framework for three reasons. Firstly, although Fullan's (2016) model was originally designed for the school sector, its adaptability to contextual changes makes it highly applicable to the university sector. This adaptability allows for the effective application and tailoring of the model to the unique challenges and dynamics of implementing e-learning in universities. Secondly, although this research does not involve a longitudinal study, Fullan's (2016) change model provides valuable assistance in identifying and categorising data based on its framework. This facilitates the identification of specific categories that lack sufficient support within the case study universities, and which thus hinder the successful implementation of e-learning. Despite utilising the model in a somewhat static manner compared to its original intent, it serves as an invaluable tool for data analysis and interpretation. Lastly, the model's perspective on change as a process, with a strong focus on

people, closely aligns with the underlying principles of this research, rooted in a constructivist epistemology. The model's emphasis on understanding the social and individual contexts of change resonated with the aim of this study, namely to explore the dynamics of e-learning implementation within the university setting.

While the specifics of educational contexts may have evolved since 2016, the fundamental aspects of Fullan's (2016) change model remain relevant today. The model underscores the significance of understanding an organisation's unique context, fostering collaborative cultures, providing appropriate professional development, focusing on pedagogical shifts, emphasising monitoring and feedback, and embracing adaptability. These principles, which are broad and adaptable, form a solid foundation for navigating the complexities of change in educational environments.

In the realm of e-learning, where technological advancements and evolving pedagogies are transforming educational landscapes, Fullan's (2016) change model can be particularly applicable. Its emphasis on adaptability aligns well with the dynamic nature of e-learning technologies. Furthermore, the focus on collaborative cultures and ongoing professional development is crucial when integrating new digital tools and instructional strategies into the learning environment.

Fullan's (2016) model is also a valuable roadmap for those specifically interested in project-managing e-learning implementation. Its comprehensive approach provides a structured framework to address the various aspects of change associated with introducing and managing e-learning initiatives. The model's principles can guide the project management process, ensuring that contextual nuances, collaboration, professional development, pedagogical considerations, monitoring, and adaptability are given appropriate attention.

Taking into account its adaptability, analytical utility, and alignment with this research approach, Fullan's (2016) change model emerged as the ideal theoretical foundation for comprehensively investigating the intricate dynamics of e-learning implementation in universities. This model provides a robust framework to examine the factors that contribute to successful implementation and navigate the challenges that may arise, ultimately providing valuable insights to inform and enhance e-learning initiatives in the higher education sector.

Although Fullan's (2016) change model possesses a dynamic nature that allows for its contextualisation in the university sector despite its original design for high schools, it may not be able to provide a comprehensive understanding of the resistance exhibited by some

academics towards implementing e-learning. Academics' resistance presents as various factors, such as reluctance to collaborate with learning designers, rejection of support in pedagogy or teaching, and even the dismissal of e-learning as a valid teaching approach. To ensure a deeper examination and understanding of the human element in implementing e-learning, this thesis therefore integrates Ball's (2003) theory of performativity alongside Fullan's (2016) change model. By combining these two frameworks, this thesis aims to attain a more nuanced perspective on the underlying dynamics and challenges associated with the implementation of e-learning. This comprehensive approach allows the research to delve deeper into the resistance exhibited by academics and shed light on the intricate interplay between organisational change processes and individual perceptions and performativity. Ball's (2003) theory of performativity is discussed in the next section (2.6)

2.6 Performativity

Stephen Ball's (2003) theory of performativity examines how education policy is shaped and enacted through performance measures and targets. This theory raises important questions about the impact of performativity on the quality and equity of education. It focuses on how educational institutions and individual educators are held accountable for their performance and outcomes. In Ball's (2003) view, performativity is a process that uses "targets, indicators and evaluations" (p. 215) to hold educational actors accountable, assuming that educational effectiveness can be assessed by setting targets and measuring outcomes.

Ball (2003) argues that the emphasis on performativity particularly the measurement of teacher effectiveness based on quantifiable outcomes like test scores has negative consequences. It can lead to a loss of autonomy and creativity for teachers and a devaluation of the subjective, emotional aspects of teaching that are crucial for building relationships and engaging students. Ball (2003) uses the metaphor of the teacher's soul to describe the emotional, spiritual, and ethical dimensions of teaching that are often neglected in a performativity-driven system. He argues that the soul of the teacher is at risk of being lost in the face of increasing demands for standardised, measurable outcomes through "a sense of being constantly judged in different ways by different means, according to different criteria, through different agents and agencies" (p. 220).

Furthermore, Ball (2016) relates performativity and neoliberalism emphasising the significance of competition, individual responsibility, and market dynamics in shaping

education. Ball (2016) contends that educational policies emphasising performativity are part of a broader trend towards commodifying education. In this view, schools and educators are treated as service providers, and students as consumers. One consequence of this performativity focus is the potential narrowing of the curriculum. Schools and educators may concentrate on areas that are easily measurable and quantifiable. Moreover, it can foster a high-stakes testing culture where students, teachers, and schools face intense pressure to achieve specific targets and outcomes.

In their 2016 research, Ball extends these concerns to the impact of neoliberal policies on education, contending that neoliberal ideologies, characterised by market-driven reforms, competition, and efficiency, have significantly shaped education systems. This influence has resulted in commercialisation, standardisation, and increased surveillance within education, potentially undermining its core goals of nurturing critical thinking and ensuring equitable access. Ball (2016) underscores the need for a critical examination of these neoliberal forces to safeguard the fundamental values and principles of education.

Ball (2016) also highlights the role of neoliberal policies in promoting performativity and creating a culture of fear and competition among teachers. They suggest that this culture erodes trust and collaboration among teachers and can lead to a narrow focus on test preparation at the expense of other aspects of education. Ultimately, Ball (2003) critiques the market-driven approach to education that prioritises efficiency and measurable outcomes over the humanistic values central to teaching. They call for evaluating the subjective, emotional, and ethical dimensions of teaching and for policies that support the development of the whole teacher – mind, body, and soul.

Ball's (2003) and (2016) work relate explicitly to the school context, but their theory of performativity can be applied to universities and other educational institutions. In the context of universities, performativity can manifest in various ways, such as emphasising research output, using student satisfaction surveys as a quality measure, and increasing performance-based funding models. This can create a culture that values quantity over quality and a narrow focus on outcomes that may not necessarily align with the broader goals of education.

Ball's (2003) performativity theory is relevant to the resistance to implementing e-learning in several ways. Firstly, the performativity culture that Ball (2003) critiques can be seen in the push for e-learning and digital technologies in education. Utilising learning analytics that can be easily captured through a learning management system (LMS), e-learning

may be seen as a way to measure outcomes and increase efficiency. However, it can also come at the expense of the subjective, emotional, and relational aspects of learning and teaching.

Performativity has significant effects on teachers, as they are the ones who are held accountable for the outcomes of their students. In a system that emphasises performance targets and accountability measures, academics may feel great pressure to meet specific standards and benchmarks. Furthermore, Ball's (2003) critique of devaluing the teacher's subjective knowledge and expertise in a performativity-driven system may also apply to e-learning. Academics may feel that their role and expertise are being marginalised or replaced by digital technologies. This can lead to resistance to e-learning, as teachers may think that their professional autonomy and creativity are being undermined.

In response to a performativity-driven approach adopted by universities, teachers might exhibit what Ball (2003) terms "cynical compliance" (p. 224). This concept describes a situation where individuals or organisations give the impression of adhering to rules, regulations, or expectations but fail to genuinely meet the requirements. False compliance involves outwardly conforming while not aligning with the intended spirit of rules or expectations.

In the context of performativity in teaching, false compliance can manifest when teachers or institutions focus solely on achieving performance targets or outcomes without considering the broader goals of education (Ball, 2003). For instance, a university may focus on improving student satisfaction ratings without ensuring that students are genuinely learning and growing in their courses. Similarly, a teacher might concentrate on raising test scores without ensuring that students are developing important critical thinking or problem-solving skills. False compliance can be harmful because it creates a culture of superficial conformity, where individuals or organisations prioritise the appearance of compliance over actually fulfilling the underlying goals or objectives. This can result in a lack of authentic improvement or progress and hinder individuals or organisations from realising their full potential.

Ball (2003) also delves into the concept of fabrication (p. 224), which plays a crucial role in comprehending how policies and practices in education are constructed and enacted. This notion is closely tied to the performative nature of educational policies, wherein these policies not only describe or represent reality but actively shape and construct it when they are implemented. Ball (2003) asserts that policies are far from being neutral and objective documents; instead, they are inherently performative. This means that they can bring about the

outcomes they describe or prescribe. The language and discourses used in policies are not merely descriptive; they are prescriptive, influencing the behaviour of individuals and institutions within the education system.

In the context of performativity, “fabrication” refers to the process of constructing and constituting education through the implementation of policies and the actions of educational actors. When policies are put into effect, they generate results and realities that may align with the policy's original intent or may lead to unintended consequences. For instance, if a policy promotes a standardised testing regime in schools, teachers and students may start to orient their teaching and learning practices towards preparing for these tests. Consequently, the policy constructs a new educational reality centred on test preparation, potentially sidelining other aspects of education that are not measured by standardised tests.

Understanding fabrication is pivotal in grasping the performative nature of policies and the dynamic relationship between policy, practice, and the construction of educational realities. Ball (2003) argues that by acknowledging the inherent fabrication within performativity, policymakers, educators, and researchers can gain a better understanding of the intricate and multifaceted effects of policies on education systems. This understanding can help them make more informed decisions regarding policy implementation and its implications.

Overall, Ball’s (2003) theory of performativity underscores the importance of considering education’s subjective, emotional, and relational dimensions of learning and teaching in any educational reform, including implementing e-learning. It raises awareness about the potential risks of prioritising measurable outcomes and class for a more holistic approach to education that values humanistic principles. Resistance to e-learning may stem from concerns about the impact of digital technologies on the humanistic values central to learning and teaching and a desire to maintain professional autonomy and creativity in the face of changing technological demands.

This thesis utilises Ball’s (2003) theory of performativity to aid the interpretation of the data collected in this research. This thesis does not seek to test the theory itself but rather to utilise the model as a descriptive tool to assist in understanding the data and establishing connections among variables. This, in turn, could help both formulate and find answers to questions aligned with the research questions of this study. This utilisation of a descriptive model aligns with Brabbie’s (2014) explanation of social scientists aiming to identify patterns that represent a certain level of order among observed events. It allows for discovering

meaningful insights and patterns within the data, enabling a better understanding of the research phenomena under investigation.

2.7 Complementing Fullan and Ball's theories

Complementing Fullan's (2016) change model with Ball's (2003, 2016) performativity theory provides a nuanced understanding of academic resistance to e-learning implementation. While Fullan's model emphasies change processes, it may not fully capture resistance nuances and power dynamics. Ball's performativity theory, focused on policy impact and accountability, supplements this by examining how external demands shape behavior within educational settings. The integration of Fullan's Change Model and Ball's Performativity Theory proves valuable in comprehending e-learning implementation as a change initiative, highlighting effective leadership, a shared vision, and a collaborative culture. However, for a comprehensive grasp of resistance, integrating Ball's performativity theory is essential. Ball's theory enables an analysis of how e-learning policies are constructed, implemented, and their influence on academic behaviour.

The combination of Fullan's change model and Ball's performativity theory yields a more comprehensive understanding of the challenges universities face in implementing e-learning. Within the context of performativity, academics may resist the implementation of e-learning, expressing concerns about its impact on performance metrics, job security, and professional identity. Performativity theory illuminates how external pressures, such as the imperative to conform to specific standards or metrics, play a crucial role in shaping resistance to change.

In the realm of policy implementation challenges, Ball's theory proves instrumental in scrutinising the framing of e-learning policies and their impact on the daily practices of academics. This approach may unveil disparities between the intended outcomes of the policy and its actual effects on teaching and research.

2.8 Chapter Summary

This chapter has illustrated the complex and varied literature regarding the implementation of e-learning in universities, including institutional infrastructure, leadership and management, multi-profession teamwork and process, and capability building. The

complexity of e-learning implementation led to an exploration of how organisation theories might help better understand change-related experiences that occur within complex innovations like e-learning implementation. Fullan's (2016) change model was subsequently chosen as the theoretical framework to underpin this study. However, there was concern over whether Fullan's (2016) change model could provide sufficient critical dimension to account for some academics' resistance to implementing e-learning. As such, Ball's (2003) performativity theory was also selected to shed further light on academic behaviour when implementing e-learning to understand individuals more holistically as they work to implement e-learning in their teaching practice. This literature review demonstrates the need for a better understanding of the critiques of academics as they move to implement e-learning. In the next chapter, the epistemological, theoretical, and methodological approaches to this research are explicated.

Chapter 3: Research Design

3.1 Chapter Overview

The overarching aim of this research is to construct an understanding of the critical organisational factors for sustainable e-learning implementation within a university setting. To achieve this aim, this thesis draws on three research questions. The first research question seeks to identify the perceived barriers and enablers to e-learning from the perspectives of different stakeholders. The second research question explores whether the experiences of e-learning designers correspond with those of academics with regard to implementing e-learning. Finally, the third research question investigates how the decisions of organisational leaders affect the implementation of e-learning. The literature review in the previous chapter demonstrates the need to investigate the perceptions of stakeholders when implementing e-learning. This chapter presents the case study methodology applied in this thesis to gain insight into stakeholder experiences and learn more about implementing e-learning. This study examines four user cases (academics, learning designers, local leaders, and students) within two universities (termed Alpha and Beta University).

This chapter discusses the research strategy (Section 3.2), theoretical paradigms and perspectives with respect to the ontology, epistemology, and axiology of the case study method (Section 3.3), and its related credibility, transferability, dependability, and confirmability (Section 3.4) (Guba, 1981; Koro-Ljungberg et al., 2009). Section 3.5 provides the rationale for the use of the case study methodology. This is followed by a description of the sample design (Section 3.6), participants (Section 3.7), data collection (Section 3.8), and data analysis (Section 3.9). Ethical considerations (Section 3.10) and research limitations (Section 3.11) are articulated. Finally, Section 3.12 concludes with a chapter summary.

3.2 Research Strategy

This thesis utilises a qualitative research process by constructing theory through induction. In the inductive model, theories are developed from the analysis of research data with reasoning moving from a set of specific observations to the discovery of a pattern that represents some degree of order among all the given events (Brabbie, 2014). A qualitative research approach is suitable for this study because the research questions are open-ended and

require responses from participants to gain a deeper understanding of a particular group. This approach is appropriate when investigating a problem that addresses the meaning individuals attribute to that problem, which is the case for this study. Qualitative research methods are also chosen as they are congruent with an approach that studies cases and processes that are unstructured and non-numerical and looks for answers empirically by obtaining direct, observable information from the world (Merriam & Tisdell, 2015). This study will therefore use meaning-oriented methods such as interviewing, which rely on a subjective relationship between the researcher and subjects, rather than measurement (Crotty, 1998; Denzin & Lincoln, 2018; Lincoln & Guba, 2000).

3.3 Theoretical Paradigms and Perspectives

Understanding the philosophical basis of social science and by extension, how the research outcomes are appropriately and meaningfully interpreted is critical. Having established my position to be within the social sciences, it was crucial that I adopt the process in my research that would enable me to answer my human inquiry "what" and "why" research questions. As Cooksay and McDonald (2011) emphasise, the notion of a paradigm is as the foundation for making decisions about how to address the research questions posed. To do this requires an explicit articulation of my theoretical perspective as a researcher and the assumptions that come with it (Crotty, 1998; Cooksay & McDonald, 2011; Moon & Blackman, 2014). In this study, my ontological position is relative, my epistemological stand is constructivist, and my philosophical perspective is interpretivist.

Ontology, as discussed by Moon and Blackman (2014), pertains to the study of the nature of reality and what actually exists. It involves the researcher's understanding of what is true or not, based on their own thinking and perspective. The concept of ontology is significant because it influences the researcher's perception of their relationship with the reality being studied. It raises questions about whether the researcher sees reality as independent of their knowledge or if they believe they actively contribute to the construction of that reality.

Epistemology plays a crucial role in guiding researchers in their quest for knowledge. It influences how researchers approach their research endeavours. By exploring the relationship between a subject and an object, we can gain insights into the concept of epistemology and understand its impact on research design. Epistemology, as defined by Brabbie (2014, p. 11),

refers to “the science of knowing”, while Moon and Blackman (2014) delve into the exploration of the inherent possibilities and capacities of human knowledge.

In this study, my focus revolves around the ontological and epistemological dimensions pertaining to the meaning participants attribute to e-learning implementation or engaging in e-learning within a university setting. The ontological dimension centres on how participants interpret their experiences with e-learning, delving into their subjective understanding of the phenomenon. On the other hand, the epistemological dimension revolves around the methodology employed in the case study to gain insights into participants’ perspectives. By aligning with Moon and Blackman’s (2014) perspective on epistemology, I adopt the belief that understanding the potentiality of human knowledge is essential for guiding research practices and uncovering meaningful insights.

The ontological assumption of multiple realities implies that the researcher aims to comprehend the enablers and barriers of e-learning implementation in each studied university as perceived by its interviewees. This assumption led to descriptions emerging from the real-life setting of Alpha University being compared to those of Beta University, which shared similar properties. With the collection of more data, useful findings emerged as the research progressed. By asking the same questions to participants in each case study, I gathered data on the general descriptions of e-learning implementation or studying through e-learning across the four stakeholder groups in two studied universities.

The epistemological framework of this research is constructivism, which posits that truth and meaning are constructed through individuals’ engagement with the realities of their world rather than existing as an objective truth (Crotty, 1998). This approach recognises the importance of individuals’ voices and perspectives and is well-suited for qualitative research that seeks to explore personal experiences. Constructivism views reality and interpretations as socially constructed, making it a relational stance (Bhattacharya, 2012). As I am interested in individual perspectives, I adopted the constructivist-imterpretivist view, which considers knowledge to be constructed rather than discovered. In this paradigm, meaning can be constructed differently by different people even for the same phenomenon, meaning that there is no single, true interpretation (Gergan & Gergan, 2012). Consequently, the epistemology for a constructivist-interpretivist paradigm is subjective, meaning that it is impossible to separate the researcher from their knowledge, identity, and understanding of the world (Maxwell, 2012). The researcher and subjects are co-creating meaning, and the researcher’s experiences and

perspectives will inevitably shape the generated knowledge and data (DiCicco-Bloom & Crabtree, 2006).

The constructivist-interpretivist perspective is congruent with my goal as a researcher in trying to understand the complexities of implementing e-learning in universities via the description and interpretation of participants' subjective meanings. By locating my research in this paradigm, I am explicitly embracing the assumptions of a subjective epistemology, a naturalistic methodology, and relational ontology and axiology (Denzin & Lincoln, 2018).

As a researcher adopting a subjective epistemological approach, conducting a qualitative study necessitates close proximity to the participants under investigation. This proximity is crucial because subjective evidence is gathered by capturing individual perspectives and viewpoints (Cooksay & McDonald, 2011; Creswell, 2013; Denzin & Lincoln, 2018). The constructivist-interpretivist paradigm advocates for a naturalistic methodology that involves studying subjects within their authentic settings, such as the university workplace, where participants experience the implementation of e-learning. This methodology is well-suited for this research study because it allows me to obtain relevant data by closely examining the meanings that participants attribute to the phenomenon of implementing-e-learning.

A constructivist-interpretivist epistemology assumes that there are multiple realities and that individuals construct knowledge about the work through their personal experiences and interactions with others (Creswell, 2013; Denzin & Lincoln, 2018). In this research, which embraces a relational axiology, the lived experiences of participants are highly valued in order to understand their perspectives on the implementation of e-learning. Relational axiology emphasises the interconnectedness and interdependence of values. It focuses on the understanding that values are not isolated or independent entities but exist within dynamic relationships and networks (Denzin & Lincoln, 2018). Relational axiology acknowledges that values are shaped and influenced by the complex interactions between individuals, communities, and broader social systems. It highlights the interplay between values, ethics, social norms, and cultural contexts in shaping our understanding and evaluation of what is considered valuable or meaningful. This perspective recognises that values emerge and evolve through relational processes, where individuals and communities negotiate and navigate shared beliefs, moral frameworks, and societal expectations. By focusing on participants' individual narratives and collective stories, the research aims to understand the values that they hold dear in their engagement with e-learning implementation at their universities. This increased

knowledge of participants' perceptions has the potential to provide insights into the critical organisational factors for successful e-learning implementation.

3.4 Credibility, Transferability, and Dependability

Qualitative research aims to provide rich, in-depth insights into a particular phenomenon rather than seeking to generalise findings to a larger population. Credibility, transferability, and dependability, therefore, are criteria commonly used in qualitative research to assess the quality and trustworthiness of the findings (Guba, 1981). These criteria focus on different aspects of research rigour and validity specific to qualitative inquiry.

Credibility in qualitative research is achieved when there is consensus among informed and qualified persons and emerges because of the researcher and participants co-creating and constructing knowledge together. Part of the credibility of the research is achieved by making the theoretical and methodological positions of the research transparent and open, including why those positions were chosen and how the methods used are in line with those perspectives (Koro-Ljungberg et al., 2009). Credibility in qualitative research is concerned with establishing the truthfulness and authenticity of the findings. Qualitative researchers prioritise rigour and trustworthiness by employing various techniques such as prolonged engagement, member checking, and triangulation to ensure that the findings accurately reflect the participants' experiences and perspectives. The focus is on generating rich and nuanced understandings rather than making statistical generalisations. The credibility of the findings in this study was achieved by providing meaningful context-based descriptions of the selected participants and their universities. Triangulation was conducted between data collected from the different stakeholders and between the a priori codebook. Data collected across four different stakeholder groups from two universities further strengthened the credibility of the findings (Miles et al., 2014).

Transferability in qualitative research corresponds to the concept of external validity (Guba, 1981). Rather than aiming for statistical generalisability, qualitative researchers seek to provide enough rich description and context that readers can assess the applicability of the findings to their own contexts or populations. The emphasis is on providing detailed information and capturing the complexity of the phenomena under study, allowing readers to judge the transferability of the findings. Transferability is a characteristic of the constructivist-interpretivist perspective, referring to whether the interpretations and accounts that emerged

from the study, in its context, with the participants sampled, might have meaning in other contexts. This is not the same as the positivistic process of "generalisability", which focuses on generalising from a sample to a relevant population. Transferability of the conclusions of this study was made possible through a clear description of the context, the participants, the data collection methods, the analytical processes, and the findings of the study, enabling comparison and replicability by other researchers.

Dependability in qualitative research relates to the stability and consistency of the research process and findings (Guba, 1981). Researchers employ techniques such as maintaining an audit trail, conducting peer debriefing, and engaging in reflexivity to enhance the dependability of their work. These practices ensure that the research process is transparent and that the findings can be reliably traced back to the data. If the research study process is documented for public inspection, it is viewed as dependable. The dependability of this study was achieved through documentation of the research questions asked and an explicit and detailed explanation of the research design strategies and methodologies utilised. Dependability in case study design refers to the likelihood of a second researcher, when doing the case study over again, arriving at the same findings and conclusions as the original researcher (Yin, 2014). The dependability of the case study design was assured by the chronological sequence of steps in the research process, the operational detail of the analysis of the data, and the systematic record-keeping of decisions affecting the research to ensure that another researcher, when repeating this case study in this workplace, would reach similar results. Throughout this study, I utilised a research diary, participant tracking sheets, memos, and codes, and wrote many drafts. The diary helped record and keep track of the research process, whilst the memos, codes, and drafts show a progression of work and the development of the thinking that took place. The dependability of the study was supported through reading research literature to aid understanding of how to provide evidence and support my conclusions along with engaging in discussions of the data with my supervisors. Additionally, the research journal, memos, and discussions with my supervisors allowed for reflexivity regarding my role as a researcher within the research process and being able to account for how my presence impacted the research. Engaging in ongoing critical self-reflection is crucial for researchers to ensure the integrity of their research (Denzin & Lincoln, 2018).

3.5 Rationale for Using Case Study Methodology

After careful consideration of the research objectives, accessibility, time, financial resources, and the benefits and limitations of different research methods, the case study methodology was selected as the most appropriate for this qualitative research on e-learning implementation in universities. As Thomas (2011) explains, the main advantage of case study research is that a case study focuses on one specific thing and delves into its details without trying to make generalisations. Similarly, Yin (2014) defines case study research as a method of empirical inquiry that explores a contemporary phenomenon in its real-world setting, drawing on multiple sources of evidence. This is particularly important for the current research, as I am interested in understanding the specific factors that contribute to successful e-learning implementation and how they operate within the university context. By examining e-learning implementation from the perspectives of four stakeholder groups – the cases – in two universities, I hope to be able to identify key factors that influence success. This is essential for ensuring that my research accurately reflects the complexity of e-learning implementation and is not limited by the perspective of a single data source. The case study methodology has both benefits (Section 3.5.1) and limitations (Section 3.5.2) in the current research context.

3.5.1 Case Study Benefits

The case study approach is suitable for studying sustainable e-learning implementation, which is the main focus of this study. Case studies involve various methods of gathering data to enhance researchers' understanding of specific groups (such as academics, learning designers, local leaders, and students) or organisations (like a university) and the systems in which they operate (Brabbie, 2014). Case studies intentionally delve into contextual situations, have a time constraint, and are particularly appropriate for addressing "how" and "why" types of questions (Yin, 2014).

From an interpretive perspective, a case study allows researchers to develop the contextual story of interviewee participants (academics, learning designers, local leaders, and students). It concentrates on comprehending and interpreting the subjective experiences, meanings, and perspectives of individuals within their unique social and cultural contexts. This is crucial because it emphasises the richness and complexity of human experiences, leading to a deeper understanding of the phenomena under investigation. This approach acknowledges that personal backgrounds, social relationships, and cultural norms shape individuals' actions

and interpretations. It highlights the importance of context in influencing human behaviour and provides a more comprehensive understanding of the phenomenon being studied. Additionally, by developing the contextual story of interviewee participants, researchers can capture the subjective meaning and significance individuals associate with their experiences. This qualitative information goes beyond mere statistical data, enabling researchers to grasp the intricacies and subtleties that quantitative methods may overlook. It facilitates a deeper exploration of participants' lived experiences and perspectives, shedding light on the underlying motivations, emotions, and social dynamics that contribute to their actions.

This methodology is further supported by Denzin and Lincoln (2011), who argue that "the case study produces the type of concrete, context-dependent knowledge that research on learning shows to be necessary to allow people to develop from rule-based beginners to virtuoso experts" (p. 315). This aligns with the objective of this research, which seeks to identify the facilitators and barriers to e-learning implementation within a university setting.

To conduct a thorough analysis of the critical success factors for the successful implementation of e-learning, a balance was necessary for selecting interviewees from each stakeholder group. The implementation part of Fullan's (2016) change model offers a broad range of categories that could be used for this purpose. The objective of this study is to gather detailed information from each interviewee, aiming to provide a comprehensive and detailed understanding of the phenomenon under investigation. This approach, often referred to as a "rich thick description" (Lincoln and Guba, 2000; Merriam & Tisdell, 2001), allows for a deep exploration of the participants' experiences and perspectives. By examining four user cases within two universities, the study seeks to collect a diverse range of evidence incorporating varied perspectives and contexts, enabling the researcher to draw meaningful conclusions, thus obtaining a broader understanding of the phenomenon being studied.

When adopting a case study approach, Yin (2014) states that there are five issues that need to be carefully addressed with theoretical justifications: 1) selection of the case; 2) specification of the object of study within the case; 3) the link between the data and the research questions; 4) complete description of collection and analysis in descriptive case studies; and 5) criteria for interpreting the findings. To address issues one and two above, the two universities in this study were selected on the basis of their student online enrolment as a percentage of total enrolments. A second criterion for selection was a variation of type; Alpha University is a multi-campus university, and Beta University is predominantly a one-campus university, albeit with outreach facilities. It is important to note that although I previously worked at both

universities in the study and am studying at one of the universities in the study, the information is unsolicited by either university. My personal experience and background of working in the online environment and appreciation of the complex nature of implementing e-learning enabled me to conduct purposive sampling. The collection of data from participants via in-depth interview types addresses issue three as it is congruent with a qualitative approach to address the research questions. Issue four is addressed through the rigour and transparency applied throughout the research process. Issue five is addressed using thematic analysis and progressive coding of data. To guide my data collection and analysis, I used Fullan's (2016) change model. This model helped me identify patterns in the data, substantiate them in the literature, and discover new data.

3.5.2 Case Study Limitations

While case study methodology can be a valuable research approach, it also has some limitations. Both Stake (1995) and Yin (2014) emphasise concerns regarding generalisability, noting that case studies can be limited in their ability to provide causal explanations or establish causal relationships (Stake, 1995) and that case studies often concentrate on specific contexts, potentially limiting their representation of broader populations or phenomena (Yin, 2014). As a result, it can be difficult to generalise findings from a case study to broader populations. Yin (2014) also acknowledges that case studies can be time-consuming, resource-intensive, and may lack statistical generalisability. They advise researchers to carefully weigh the trade-offs and limitations associated with case studies in their research endeavours. Additionally, George and Bennett (2005) criticise case studies for their potential methodological weaknesses, such as issues of reliability and validity. They argue that case studies can be prone to researcher bias and lack of rigour in data collection and analysis.

3.6 Sample Design

To assist in recruiting and selecting participants in a way that would maximise the possibility of rich information, each selected university had to have student online enrolments comprising over one-third of their total enrolment. Two universities met this criteria, identified

in this research as Alpha University and Beta University[2]. Post-university selection, purposive, critical case sampling was used to select participants for the interviews (Cooksey & McDonald, 2011). Purposive critical case sampling helps researchers to focus their efforts on specific cases that are most likely to provide valuable and in-depth information. Purposive sampling is congruent within a constructivist-interpretivist paradigm because it enables deliberate targeting of specific individuals to participate, thereby gaining a comprehensive understanding of implementing e-learning and developing nuanced insights that can contribute to theory development or practice improvements. Exercising judgement in determining whom to include in the sample enabled a focus on the characteristics and intricacies of the population of interest, thus enabling answers to the research questions to be discovered (Cooksey & McDonald, 2011). The prime consideration was recruiting and selecting participants who had a deep understanding of e-learning implementation, so they could provide answers to the questions asked in the interviews. Four stakeholder groups were identified as being able to provide rich information, namely academics, learning designers, local leaders, and students.

Academics: The academic group selected for the study consisted of university lecturers who taught at least 50 per cent of their students online, had a minimum of two years of experience in implementing e-learning in their own practice, and had been in their lecturing role for at least two years. Lecturers with less than two years of experience were excluded. This group was chosen because they were deemed capable of providing comprehensive feedback on the implementation of e-learning in their institution.

Learning Designers (LDs): The Learning Designer (LD) group was selected for the study based on their essential role in supporting e-learning implementation and online teaching. The LD group selected for this study consisted of LDs with a minimum of two years of experience working in a university as a LD. It was important that they had experience in implementing e-learning across multiple subjects, allowing them to understand the process of scaling up e-learning initiatives. To ensure the expertise and diverse perspectives of LDs, those with less than two years of experience in e-learning implementation were excluded from the study. For the purposes of this study, the term learning designer incorporates educational designer and instructional designer to accommodate the varied job titles used across different universities. The selection of LDs is crucial as they possess pedagogical knowledge in

[2] See https://www.universityrankings.com.au/most-online-students/ (accessed 23 February 2021).

implementing e-learning. Furthermore, their experience in transitioning from traditional print and distance education modes to online modes makes them valuable contributors to the study.

Local Leaders (LLs): The local leader (LL) role is defined as individuals, either academic or professional staff, who hold specific responsibilities for implementing e-learning within their respective schools or faculty. These individuals are specifically tasked with the responsibility of implementing e-learning initiatives within their school or faculty. Their role could be explicitly titled, such as Sub Dean Learning and Teaching or Online Academic Lead, indicating their focus within their job title. Alternatively, their role could be a regular academic or professional position in which they had a designated responsibility for a learning and teaching function or project, even if it was for a specific timeframe.

The selection criteria for the members of the LL stakeholder group were twofold. Firstly, academic LLs were chosen if they had responsibility for learning and teaching and/or e-learning implementation at a local level within their school, department, or faculty. These academic leaders also needed to have practical experience in implementing e-learning in their own teaching practice and a minimum of two years of experience in their current learning and teaching-focused role. Secondly, professional LLs were selected if they had responsibility for learning and teaching and/or e-learning across a broader scope, including a school, department, faculty, or even university-wide. These professionals held specific responsibilities related to e-learning implementation. By defining and selecting individuals fulfilling the LL role, this study aims to gain insights from those with firsthand experience and expertise in implementing e-learning initiatives within their respective educational settings. Professional LLs also needed to have experience in implementing e-learning and leading a team of learning and teaching support staff and/or implementing large-scale technologies and/or e-learning implementation university-wide and two years of experience in managing/leading a support staff team. Local leaders with less than two years of experience in implementing e-learning were not included.

While this criterion may seem broad and all encompassing, considering the potential variation in backgrounds, demographics, gender, and e-learning knowledge among participants was essential. Drawing from my prior experience working in the e-learning environment, I was able to pinpoint individuals with a track record of effectively translating policies or directives from a higher faculty or university level into practical applications within local schools or departments.

To ensure a certain level of experience, individuals with less than two years of e-learning implementation experience were excluded. The term 'local leader' is used because not all LLs necessarily have a formal education background, and some educators, despite their background, have limited experience with e-learning implementation. By adopting the term local leader, I aim to capture both types of experience and knowledge, creating a more inclusive title that encompasses a broader range of expertise beyond education or learning and teaching.

The inclusion of LLs in this research study serves several important purposes. Firstly, LLs are individuals who have specific responsibilities for implementing e-learning initiatives within their school, department, or faculty. They possess valuable expertise and knowledge regarding the practical aspects of integrating technology into teaching and learning. Including LLs allowed me to tap into their experiences, insights, and best practices in e-learning implementation, which provides a more comprehensive understanding of the subject. Secondly, LLs often play a significant role in shaping policies, strategies, and practices related to e-learning within their educational context. They are in a position to drive change, make important decisions, and influence the adoption and implementation of e-learning initiatives.

The inclusion of LLs in this study facilitates insights into the factors that impact decision-making processes and generates understanding of the strategies LLs employ to facilitate successful e-learning implementation. Thirdly, LLs have a deep understanding of the local context within their school, department, or faculty. They are familiar with the specific challenges, resources, and constraints that may arise when introducing e-learning. As such, this study seeks to capture the nuances and unique aspects of e-learning implementation within their particular context, which could contribute to the development of contextually relevant recommendations and insights. Fourthly, LLs serve as key stakeholders in the e-learning implementation process. They interact with various stakeholders, including faculty members, administrators, and students, and navigate the complex dynamics involved in bringing about change. Their inclusion in this study enables the researcher to gather their perspectives on the challenges, successes, and impact of e-learning implementation from a stakeholder standpoint. Finally, the insights and experiences shared by LLs are likely to be vital regarding the development of practical recommendations, strategies, and implications for e-learning implementation. By including LL perspectives, this research seeks to provide valuable guidance to educational institutions and policymakers seeking to effectively integrate e-learning into their teaching and learning environments. Overall, the inclusion of LLs serves to help to capture their expertise, contextual knowledge, and stakeholder perspectives, enriching

our understanding of e-learning implementation and generating practical implications for educational practice.

Students: By considering the perspectives of students, this study seeks to contribute to a more comprehensive understanding of online education, which could inform the development of strategies and interventions to implement e-learning more successfully. The student group incorporated students who were enrolled online and had a minimum of one year of experience in studying online. Students with less than one year of experience in studying online were excluded. By including students who were enrolled in online courses and had at least one year of experience studying online, I hoped to gain valuable insights into their firsthand experiences and perspectives. Students can provide rich and nuanced information about their online learning journey, including the challenges, benefits, and overall satisfaction with the online learning environment. Their insights can shed light on the specific factors that contribute to effective online instruction, course design, and support services. This information can be used to enhance the quality of online education and improve student experiences. Students who have been studying online for at least one year have likely developed strategies and techniques to navigate the online learning environment successfully.

For this study, I was not concerned about the age of the student or whether the mode of study the student was pursuing was part-time or full-time. The key criterion for this study was that they were studying online. I did, however aim for some variation in the disciplines being studied by students. Different academic disciplines may have unique requirements, challenges, and pedagogical approaches in the online context. Including students from various disciplines facilitates a broader range of perspectives and experiences, providing a more comprehensive understanding of online learning across disciplines.

To further ensure diversity among the participants, maximum variation purposive sampling was employed. This means that participants were selected to represent different genders, disciplines, ages, and demographics, acknowledging that these factors could potentially impact their experiences with implementing e-learning. However, convenience sampling was also used to some extent, as participants' responses influenced the selection of the sample.

This study planned for twelve descriptive, interpretive, and exploratory in-depth interviews. In research, using multiple cases allows for the comparison and analysis of results from various perspectives. While Yin (2014) suggests having between six and ten cases for this

design, I chose to include more cases to ensure a more extensive and comprehensive dataset. By incorporating a greater number of cases, my objective was to enhance the depth of my understanding and establish a solid basis for analysis, ultimately leading to more insightful findings. I believed that this number would be adequate to gain valuable insights into the multifaceted aspects of participants' perceptions regarding the facilitators and challenges of implementing e-learning within their specific university contexts. The decision regarding the number of participants to be interviewed in this study was carefully considered, taking into account several key factors. These considerations were essential for ensuring the sufficiency of interviews and obtaining a comprehensive understanding of the research topic.

Firstly, the research design and objectives played a crucial role. Given the exploratory nature of the study and the focused research questions, a relatively small number of interviews were deemed necessary. This approach allowed for a comprehensive exploration of the topic with each participant and the ability, therefore, to capture a diverse range of perspectives and experiences. In order to capture the richness and diversity of perspectives, deliberate efforts were made to include participants with a wide range of characteristics and backgrounds. Factors such as age, gender, cultural background, and educational level were considered to ensure a heterogeneous sample. This approach was crucial for obtaining a comprehensive understanding of the phenomenon under investigation and enhancing the validity and generalisability of the findings.

Throughout the iterative process of data collection and analysis, the sufficiency of interviews was constantly reassessed. As insights emerged and patterns started to emerge from the data, the decision was made to gradually increase the sample size. This iterative approach allowed for ongoing evaluation and adjustment of the number of interviews needed to achieve data saturation. It is also important to emphasise that the focus was not solely on reaching a specific numerical target but rather on the quality and depth of the interviews. Rigorous efforts were made to conduct in-depth and meaningful interviews that elicited rich, detailed, and nuanced responses from participants. This approach ensured that the information obtained was robust and provided valuable insights into the research topic. Table 3.1 provides a summary of the selection criteria for the interviews.

Table 3.1: Participant Selection Criteria

Stakeholder Group	Selection Criteria	Qualifier	Minimum Sample Size
Academic	Experience of implementing e-learning in own practice for a minimum of two years. At least 50% of their teaching must be online.	Two years' experience in role.	3
Learning Designer (LD)	Minimum two years' experience as a LD working in a university. Experience of e-learning implementation (across more than one subject, i.e., there must be some idea of scaling up).	Two years' experience in role.	3
Local Leader (Academic) OR Local Leader (Professional)	Academic with responsibility for learning and teaching and/or responsible for e-learning implementation within their school, department, or faculty. Experience of implementing e-learning in own practice. Professional with responsibility for learning and teaching and/or responsibility for e-learning implementation across school, department, faculty, or university. Experience of implementing e-learning and of leading a team of learning and teaching support staff and/or implementing large scale technologies and/or e-learning implementation university wide.	Two years' experience in learning and teaching focused role. Two years' experience in managing/leading support staff team.	3
Student	Enrolled online. Minimum one year of experience in online study. Variation in disciplines. Credit or higher achievement. Recommended by academic.	One year of experience as an online student.	3

3.7 Participants

Academics, learning designers, and local leaders were recruited via direct email (Appendix A) and provided with an information letter (Appendix B) and consent form (Appendix C). The recruitment process for students differed from that of other stakeholders. Initially, I leveraged a connection I had with an academic at Alpha University and asked whether they would be amenable to making an online announcement within their unit

informing their current students about my study and inviting them to take part. This allowed me to extend an invitation to the students to participate in the study. The academic provided my email address for interested participants to contact me directly. I then shared follow-up details about the interviews with those who expressed interest in participating (Appendices B and C). Subsequently, I proceeded with a screening process to ensure that the students met the eligibility criteria and were suitable candidates for interviews. Additionally, I encountered a student from Beta University in a work meeting, whom I had taught an online subject, some six months before. I emailed this student to ask if they would be willing to be interviewed. Additionally, I asked this student for recommendations of other potential student participants whom I could reach out to and include in the study. Overall, I received interest from five students, three of whom were eligible for interview.

To facilitate participant preparation for the interviews, I sent interviewees the interview questions at least one week prior to their scheduled interview. Holstein and Gubrium (2015) address the concept of active interviewing, which includes practices like pre-disclosure to encourage participant involvement and agency. Providing interview participants with the questions before the interview serves several important purposes in a research study. Firstly, it allows participants to have sufficient time to reflect on their experiences and thoughts related to the research topic. By providing the questions in advance, participants can engage in a thoughtful process of introspection and recall, which enhances the depth and quality of their responses. Secondly, sharing the interview questions beforehand empowers participants by giving them a sense of control and agency in the research process. They have the opportunity to familiarise themselves with the topics and consider how they want to express their perspectives. This can help participants feel more confident and comfortable during the interview, leading to more open and candid discussions. Additionally, providing the interview questions in advance promotes transparency and ethical practice in research. Participants have a clear understanding of the topics that will be discussed, ensuring informed consent and allowing them to make an informed decision about their participation. This transparency builds trust between the researcher and the participant, fostering a positive research relationship.

The interviews lasted approximately an hour and were conducted either face-to-face or via Skype, Zoom or telephone, depending on the individual's preference. Permission to record each interview was sought from each participant prior to their interview. An external transcriber initially transcribed the interview transcripts. The researcher then checked these and finally emailed the transcript to each participant for member checking (if they requested this

via the participant consent form). If needed, further clarification was sought via email rather than taking more of the participants' time through an additional face-to-face meeting.

All the interviews conducted were 60 minutes in duration, adhering to the minimum recommended length of a semi-structured qualitative interview, which typically falls within the range of 60 to 90 minutes (Marshall et al., 2013). Firstly, an hour provides a substantial amount of time to delve into the research topic and gather detailed information from the participant. It allows for a comprehensive exploration of their perspectives, experiences, and insights, enabling a rich and nuanced understanding of the subject matter. Secondly, an hour strikes a balance between obtaining sufficient information and respecting the participant's time and attention. It is a manageable timeframe that is less likely to strain the participant's patience or result in interview fatigue. Participants may feel more willing to engage and provide thoughtful responses when they perceive the interview duration as reasonable and manageable. Moreover, an hour provides flexibility within the interview session. It allows for a combination of open-ended questions, follow-up inquiries, and opportunities for the participant to share additional insights or anecdotes. The researcher has the flexibility to probe deeper into specific areas of interest or seek clarification on certain points, enhancing the richness and quality of the data collected. Furthermore, an hour provides a practical and efficient timeframe for both the researcher and the participant. It allows for a sufficient number of interviews to be conducted within a given timeframe, ensuring a diverse and representative sample of participants. Researchers often need to balance the depth of interviews with the practical constraints of time and resources, and an hour is often considered a reasonable compromise.

In total, 17 participants were interviewed for this study—12 from Alpha University and 5 from Beta University. The participants comprised five academics (Jo, Kay, Mike, Stacy, and Theresa), five learning designers (Alice, Beth, Freya, Hannah, and Penny), four local leaders (Harry, Lucy, Hilary, and John), and three students (Melanie, Ben, and Nick). Initially, the distribution of participants between the two institutions was relatively even, but two participants later relocated. Consequently, they are associated with the universities where they were working when interviewed. The names used in this context are pseudonyms; however, the genders of the participants remain unchanged.

Of the five academics interviewed, four were women, and one was a man with ages ranging from 29-59. The academics were from five different schools and four different faculties. Of the five learning designers interviewed, all were women, with ages ranging from 39-69. Two of the learning designers were employed by and located in a faculty, three were

employed by the centralised learning and teaching division but physically located in a faculty, and the other two learning designers were located in their institution's centralised learning and teaching division. Four of the learning designers had originally been in the role of learning designer, hence their selection for an interview. However, at the time of the interview, they had been promoted or seconded to management type roles. Two of the learning designers had additional named responsibility for leading an e-learning implementation initiative or project across a school or faculty, and one learning designer had additional management responsibilities for a learning design team within their learning and teaching division. In addition to learning design experience, all the learning designers interviewed had local leader positional experience, either currently or previously, which added to their rich responses.

Of the four local leaders, two were women and two were men, with ages ranging from 39-59. Two of the local leaders were situated in faculties and two were in the division of learning and teaching. All were in local leader roles when interviewed. Two of the local leaders had first been employed at the university as academics but had subsequently been in a variety of leadership, management or administrative roles within their school and faculty. The other two local leaders had initially been employed to work on specific educational projects and had subsequently been promoted to a leadership position within their division. One of the local leaders had worked in industry and the secondary education sector prior to joining the university. Another of the local leaders had previously worked in the early childhood sector. The third local leader interviewed had spent their entire career working in professional divisions in Higher Education. The fourth local leader had worked in industry until joining the university sector for their latest position.

Of the three students interviewed, two were men and one a woman, with ages ranging from 49-59. All the students were studying part-time online and were in full-time employment. The students were enrolled in two different schools within two different faculties. One student was employed in industry, one in the learning and teaching division of one of the universities in the study, and the third in the library division of the other university in the study. One of the students had been involved in research related to aspects of e-learning, which brought additional rich information to the interviews. A summary of the participants' demographics is provided in Table 3.2.

Table 3.2: Interviewee Demographics

Stakeholder Group	Sample Size	Men	Women	Age Range	Faculty	School	Division
Academic	5	1	4	25-59	5	4	
Learning Designer (LD)	5		5	36-69	2		3
Local Leader (LL)	4	2	2	39-59	2		2
Student	3	2	1	49-59	2	2	

3.8 Data Collection

In order to ensure the credibility, transferability, dependability, and confirmability of this study (as discussed in Section 3.4), I chose to adopt a comprehensive approach towards data collection. This decision is rooted in the recognition that multiple methods of data collection are crucial in qualitative research studies, as advocated by Yin (2014) and Denzin and Lincoln (2018). Denzin and Lincoln (2018) provide an extensive list of ten methods for collecting data, information, and other resources in qualitative research. These methods include interviewing; observing; examining artefacts, documents, and records; utilising visual methods; conducting auto-ethnography; employing data management methods; utilising computer-assisted analysis; conducting textual analysis; organising focus groups; and applying ethnography in practice.

To evaluate the appropriateness of these ten methods for the present study, a careful review was conducted, resulting in the selection of six specific methods: interviewing (Section 3.8.1), observing (Section 3.8.2), data management methods (Section 3.8.3), computer-assisted analysis (Section 3.8.4), textual analysis (Section 3.8.5), and artefacts, documents, and records (Section 3.8.6). Table 3.3 summarises the suitability or unsuitability of Denzin and Lincoln's (2018) methods for this study.

Table 3.3: Ten Methods of Data Collection and Analysis (Denzin & Lincoln, 2018) and Their Suitability for the Research Study

Methods of Collection and Analysis	Suitability for the research study
Interviewing	Suitable - main source of interpretive data for finding out participants' perspectives on their personal experiences of implementing e-learning.
Observing	Suitable – because of the value of observing (via listening to) participants' nonverbal cues and emphasis when they speak. Unsuitable – because observation requires shadowing participants over time and this research is a snapshot case study, not a longitudinal one.
Data management methods	Suitable – transcribing interviews, storing electronic documents, audio files, and scanned items to enable sense making of each case but also to enable cross analysis is crucial to analyse data in enough depth for themes or categories to emerge from the particular and specific accounts of participants to the more general, transferable in other contexts.
Computer-assisted analysis	Suitable – spreadsheets for cross-case analysis purposes.
Textual analysis	Suitable – specifically theme analysis. Coding of interview transcripts and data displays via tables and matrices to help abstract out from individual aspects to more general themes.
Artefacts, documents, and records	Suitable - main source of contextual information about each university to gain background information into the history and systems within which participants work.
Visual methods	Unsuitable – because it is through conversation that the reported opinions, thoughts, and feelings are obtained from interviewees rather than pictures, models, or observation.
Autoethnography	Unsuitable – because the study aims to understand critical success factors for implementing e-learning from interviewees through gathering themes and cross referencing them with a tried and tested theory, rather than writing a narrative of the participants' story of their experience in emotional terms.
Focus groups	Unsuitable – participants are drawn from a range of locations and backgrounds, thus rendering focus groups difficult logistically and the research is looking for individual accounts rather than group views and opinions.
Applied ethnography	Unsuitable – ethnography requires long periods in the field with emphasis on detailed observation and interview evidence. This research is a snapshot case study not a longitudinal one

3.8.1 Interviewing

The main source of interpretive data for understanding what participants report they feel and think about their personal experiences with e-learning implementation is through interviewing. (Denzin & Lincoln, 2018). This is because we cannot know what another person

truly thinks or feels without asking them directly. Interviews allow for the "emic, or insider's perspective" rather than the "etic, or outsider's perspective" (Merriam & Tisdell, 2015, p. 30). Therefore, the purpose of interviewing is to gain insight into the other person's perspective and develop an understanding of what they value in their engagement with e-learning implementation.

To facilitate case comparisons in this research, it was essential to adopt a structured approach that offered more guidance than an open interview format. Therefore, I chose to utilise a semi-structured interview format to gather data on participants' experiences and perceptions of implementing e-learning. Semi-structured interviews incorporate predefined topics to be covered, allowing for cross-case comparison, while also providing flexibility to explore emerging ideas through probing questions. It is crucial for the interviewer to remain flexible during the interviews, as valuable insights often arise when participants deviate from the predefined questions and introduce additional perspectives (DiCicco-Bloom & Crabtree, 2006). The detailed interview schedule is provided in Appendix D. The semi-structured interviews incorporated six main questions to elucidate stakeholders' perspectives on implementing e-learning:

Q1: Please tell me about your role.

Q2: What are your experiences of e-learning in your own practice?

Q3: What are your perceptions of enablers to implementing e-learning?

Q4: What are your perceptions of barriers to implementing e-learning?

Q5: How do you think the decisions of organisational leaders affect e-learning implementation?

Q6: How do you feel about your level of e-competence?

Each question covered a different and specific topic that referred to a particular research question. The primary objective of Q1 was twofold: to establish rapport with the participant and to gain a comprehensive understanding of the contextual aspects of their role within their workplace, including their responsibilities and reporting lines. Moving on to Q2, its purpose was to gather information about the participants' general knowledge and comprehension of e-learning, as well as how they currently utilise it. The aim of Q3 was to delve into the participants' perspectives on the factors that facilitate e-learning implementation. Q4 sought to explore the participants' perceptions regarding the barriers that hinder the adoption of e-

learning. Next, Q5 focused on uncovering the participants' viewpoints on the impact of leadership e-learning implementation within their university. Lastly, Q6 aimed to investigate the participants' perceptions of their own e-competence.

Accompanying each question were several prompt questions to help participants expand on their answers when necessary (Appendix D). A pre-prepared interview schedule was followed in the interview to keep the focus on collecting data and to ensure the research questions were answered (Minichiello, 1995). At the same time, there was flexibility and time built into the interview to allow for delving further into areas of interest that interviewees raised. Interviews were recorded, thus enabling the interviewer to concentrate on what the interviewee was saying rather than trying to write extensive notes at the same time as listening. The manner in which the questions were asked was important in establishing a good relationship with the interviewee and eliciting meaningful responses (Appendix D). The interview transcripts were sent to the participants for member-checking for accuracy if they had requested it by ticking Yes on the consent form.

3.8.2 Observing

In this study, the method of data collection and analysis involved not only listening to the participants' verbal responses but also paying attention to their non-verbal cues and the emphasis they placed on certain aspects during the interview. As the recordings were audio only, this meant listening to participants' tone of voice, pauses, hesitations, and emphasis to gather additional information contributing to a richer and more nuanced analysis. This approach, whilst not true observation, was considered suitable for capturing signs of emotions related to participant e-learning implementation experiences. It is important to note, however, that the study design did not incorporate the practice of shadowing participants over an extended period of time, as this research utilises a snapshot case study rather than a longitudinal study.

The use of non-verbal cues as a source of data provided valuable insights beyond the explicit spoken words. These non-verbal elements offered subtle indications of emotions, attitudes, and beliefs that might not have been explicitly expressed through words alone. By considering both verbal and non-verbal cues, a more comprehensive understanding of the participants' perspectives and experiences was achieved, enhancing the validity and depth of the findings.

3.8.3 Data Management Methods

Data management methods played a vital role in this study by facilitating the organisation and analysis of data at both the individual case and cross-case level. Transcribing interviews in addition to storing electronic documents and audio files were crucial steps that supported data collection and data analysis. Moreover, these data management practices were essential for allowing deeper theme analysis of interviewees' responses. Analysing the data in depth facilitated the identification of patterns and insights that were transferrable to other similar contexts. The effective implementation of data management methods thus contributed to a more rigorous and comprehensive analysis, enabling the extraction of meaningful findings.

Immediately after each interview, the audio recording was transcribed into a Word document (Marshall et al., 2013; Miles et al., 2014). During transcription, I was mindful of issues of punctuation or run-on sentences affecting the interpretation of the recording (DiCicco-Bloom & Crabtree, 2006). Once transcribed, I listened to the interview recording several times and any notes made on the schedule during the interview as well as new thoughts or reflections that emerged, were added to the document. Conducting early analysis at the same time as data collection is recommended by Miles et al. (2014) as it is less overwhelming than collecting all the data first before then analysing it. The process of analysing transcripts after each interview made it possible to trace interviewees' reactions to similar phenomena over time, in detail, and with precision. In turn, this process allowed me to identify the organisational success factors for implementing e-learning. It is important to note that transcribing is an act of interpretation too, which means it cannot entirely represent the full experience (Poland, 2008). Whilst the interview is a co-creation of knowledge between the interviewer and the interviewee, so the transcript is an interpretation of the experience made by the researcher (Davidson, 2009). An interpretive approach was taken with the data by matching the concepts in the data with explanatory theories from the literature and also the categories from Fullan's (2016) change model formulated in the a priori codebook (discussed in the next subsection).

3.8.4 Computer Assisted Analysis

Computer-assisted analysis facilitated the transcription of interviews (described above) and data analysis. Detailed spreadsheets were constructed for individual case and cross-case analysis purposes in addition to the a priori code book (detailed in the next subsection).

3.8.5 Textual Analysis

To assist with the iterative process of data collection and subsequent theme analysis of interviewees' responses, I utilised a code book, which I developed a priori to the interviews. Using an a priori code book when collecting data for research is useful for several reasons. Firstly, it provides a set of standardised codes agreed upon in advance. This improves the consistency and reliability of findings. Secondly, an a priori code book saves time and effort by providing a pre-determined set of codes, thus avoiding the need for the researcher to create new codes or categories during the analysis process, which can be time-consuming and lead to inconsistencies in coding. Thirdly, an a priori code book is typically developed based on existing theoretical frameworks or research questions. This ensures that the coding process is driven by a clear theoretical foundation, making it easier to interpret and analyse the data. Fourthly, an a priori code book makes it easier to replicate research studies, as the same codes can be used across different datasets or research contexts. This increases the reliability and validity of the research findings. Overall, using an a priori code book provides a structured and systematic approach to data analysis, which improves the quality and rigour of the research (DeCuir-Gunby et al., 2011; Rose et al., 2015).

In this study, I developed the code book by incorporating 12 theory-driven codes. Eight of these codes were derived from Fullan's change model (2016) and included the concepts of need, clarity, complexity, quality/practicality, district, community, principal, and teacher. Additionally, I synthesised four category codes based on the literature review, including institutional infrastructure, leadership and management, multi-profession teamwork, and process and capability building. The decision to use a combination of categories from Fullan's change model (2016) and categories identified in the literature review is discussed in detail in Chapter Two of this thesis.

Maintaining a clear focus on the codes identified in the code book was essential for ensuring the data collected during interviews was relevant and, therefore, useful for answering the research questions. To enable this focus, I created the code book as a table with the overarching category name, followed in the next column by the specific category names and then a brief theme descriptor in the third column. To further ensure focus on each of the twelve code categories, I included the stem sentence "The interviewee states or alludes to and/or makes direct or indirect reference to and/or describes or gives examples of:" above the category names. The codebook categories and definitions are provided in Table 3.4.

3.8.6 Artefacts, Documents, and Records

Artefacts, documents, and records were considered suitable as they provide contextual information on each university regarding background information of the history and systems of the participants' work environment. Information on student enrolment and, therefore, the appropriateness of Alpha and Beta universities to be included in the study was gathered online. Each university website was searched for publicly available documentation to build up the context and story of each university in terms of their adoption of and strategic approach to implementing e-learning. These documentary sources included strategic plans, learning and teaching strategy, digital and technology strategies, as well as the history of the university. The primary purpose of analysing the documentary sources in this study was twofold; first, to precisely choose the university that would serve as the case under examination, and second, to offer a contextual background for the research.

Table 3.4: Code Book Categories and Definitions

8 code categories from Fullan's (2016) Change Model The interviewee states or alludes to and/or makes direct or indirect reference to and/or describes or gives examples of:		
Characteristics of change	Need	A belief that e-learning is needed.
	Clarity	Clarity (goals and means) for e-learning implementation.
	Complexity	The complexity of implementing e-learning.
	Quality/Practicality	Adoption being more important than implementation.
Local characteristics	District	Strategies and supports for e-learning offered by the larger organisation.
	Community	Faculty Dean, Head of School and school staff not being in agreement.
	Principal	The Head of School playing instructional or change leadership roles.
	Teacher	Self-actualisation or a sense of efficacy that leads teachers to act and persist in the effort required to bring about successful implementation.
4 code categories formulated from the Literature Review The interviewee states or alludes to and/or makes direct or indirect reference to and/or describes or gives examples of:		
Organisational Factors	Capability Building	The need for professional learning with skills that specifically target e-competence and the need for learning ways of adapting and managing change in response to continual technological innovations.

	Institutional Infrastructure	Organisational structure and/or culture affecting e-learning implementation either positively or negatively.
	Leadership and Management	Managerial structures, resources provision, and processes that impact implementing e-learning.
	Multi-profession Teamwork and Process	Partnerships, collaboration, changes in roles, process, and project management impacting on e-learning implementation.

3.9 Data Analysis

Data was gathered for a period of 21 months between September 2018 and May 2020. Most of the data was actually gathered before March 2020, but the last few interviews were delayed by the COVID-19 pandemic simply because interviewees were busy responding to the needs of their students first and foremost. Transcription of the data began as soon as it was collected, but due to the large volume of data, the analysis could not always be done simultaneously with data collection. To ensure a systematic approach to data analysis across my research, I followed the specific process of data collection, data reduction, data display, and drawing of conclusions outlined by Miles et al. (2014). The primary method of data analysis was theme analysis. The a priori code book incorporating the implementation segment of Fullan's (2016) change model and the four categories drawn from the literature review was used to guide the theme analysis (as detailed in Section 3.8). This section describes the theme analysis (Section 3.9.1) and the drawing and verification of conclusions (Section 3.9.2).

3.9.1 Theme Analysis

Theme analysis is a research method that systematically identifies and analyses themes arising from qualitative data sources such as interview transcripts and survey responses (Braun & Clarke, 2021; Creswell, 2013; Miles et al., 2014). The process involves coding the data to uncover recurring patterns, themes, and concepts, which are subsequently grouped into broader categories or themes. The primary objective of theme analysis is to achieve a comprehensive understanding of the underlying meanings and ideas conveyed within the data. For instance, during interview analysis, theme analysis is applied to examine interview transcripts and extract emerging themes or topics from participants' responses. This entails recognising repeated words, phrases, or ideas expressed by participants and identifying any prevalent patterns or commonalities in their responses (Braun & Clarke, 2021). By analysing these

themes, researchers gain valuable insights into participants' perspectives, experiences, and attitudes pertaining to the specific subject under investigation. Moreover, theme analysis aids in the identification of the most significant or relevant themes within the data and enables the exploration of how these themes interrelate with each other and the broader research questions (Creswell, 2013; Miles et al., 2014). This process enhances the overall understanding of the data and facilitates the extraction of meaningful and insightful findings.

In the first instance, I actively engaged in analysis by writing about the interviews in my research journal and creating memos during the transcription and analysis process. Next, using the transcribed interviews, I coded the data using the a priori code book. I wrote notes and memos in the margins of the transcripts, capturing short phrases, ideas, or key concepts that seemed to fit with the a priori code book categories and sought multiple forms of evidence to support each category (Miles et al., 2014). I also actively sought multiple perspectives about each category. Additionally, I noted themes that did not appear to map to the code book. As the analysis progressed, distinct patterns began to emerge in the data. Furthermore, shared experiences among the participants became evident by the final interviews. I reviewed the codes and data multiple times to identify major themes. Instead of trying to force the data into pre-existing categories, I adjusted the themes to fit the data accurately. During this process, I discovered that some themes were similar but described differently, so I made adjustments to consolidate them (Appendix F).

As I continued coding, I shifted my focus from writing memos to dedicating more time to documenting the major themes. I aimed to simplify, abstract, and transform the data from the interview transcriptions into more manageable components or themes, making them easier to handle (Miles et al., 2014). This involved reducing the spoken words into summarised or paraphrased themes during the data reduction phase. In the second part of the process, I adopted what Creswell (2013) describes as the heart of qualitative data analysis, which is to do with moving from reading and memoing to describing, classifying, and interpreting the data to form codes or categories or themes. This required the development of detailed descriptions, the development of themes and interpretations considering my views and perspectives from the literature, and then cross-referencing with the theoretical framework.

3.9.2 Conclusion Drawing and Verification

The utilisation of the a priori code book as a theoretical framework proved to be a valuable process in guiding the data collection. This code book provided an initial guide and foundation, incorporating existing knowledge in the field and facilitating an iterative approach to data analysis. As the research progressed, theoretical understandings were continuously refined and adapted based on insights gained from the collected data. Ultimately, this process led to the final outcomes of the research.

In addition, an interpretive approach was adopted to analyse the data. This involved closely examining emerging concepts and aligning them with relevant explanatory theories from the existing literature and the chosen theoretical framework. By embracing this interpretive perspective, the aim was to uncover deeper meanings, connections, and patterns within the data. This approach allowed for a thorough exploration of the data's nuances and intricacies, resulting in a more comprehensive and insightful understanding of the research phenomena. Overall, the interpretive approach enhanced the richness and depth of the findings generated from the data analysis.

During the analysis and interpretation of the data, the codes and themes were abstracted to capture the broader meaning of the data themes. Where applicable, these themes were connected to the relevant research literature. The emphasis was on analysing and interpreting the findings rather than solely focusing on the narrative aspect. This approach was driven by the belief that exploring the wider implications of the study would be of greater interest outside the organisation, while the narrative aspect would be more relevant to those within the organisation (Hartley, 2004; Rose et al., 2015).

Throughout this process, a significant aspect of performativity (Ball, 2003) began to emerge from the data. Performativity refers to how individuals perform their identities and roles based on societal expectations and norms. The researcher observed that the participants' actions and behaviours were influenced by these expectations, which in turn influenced their experiences and interactions within the study context. This realisation provided new insights into the data and contributed to a deeper understanding of the participants' experiences. However, it was only at this stage that the theoretical framework of performativity was determined to be appropriate for this study.

The use of the implementation categories from Fullan's (2016) change model, the categories from the literature review in the code book as well as utilization of Ball's (2003)

theory of performativity were useful in understanding stakeholders' perceived enablers and barriers to implementing e-learning and by token, highlighting the gaps in the implementation aspects from the interviews.

3.10 Ethical Considerations

The research proposal for this study went through two stages of approval. Firstly, permission was sought and gained from the School of Education within the Faculty of Humanities, Arts, Social Sciences, and Education (HASSE) at the University of New England. Following faculty approval, the research proposal was approved by the Human Research Ethics Committee at the University of New England (Appendix E). Secondly, consent was sought and gained from everyone invited to participate in the study. Participants included academics, learning designers, local leaders, and students. This section summarises the ethical considerations of informed consent (Section 3.10.1), anonymity, privacy, and confidentiality (Section 3.10.2), and protection from harm (Section 3.10.3).

3.10.1 Informed Consent

Approval was sought and gained for the individual interviews. All participants were provided with information sheets about the component of the research applicable to them and each signed a consent form to participate and to be recorded when interviewed (Appendices B and C). The interviews were conducted privately, transcribed by an independent third party, and checked by the researcher. Data generated from the interviews underwent validation through member checking of the interview transcripts with participants where they expressed a desire to do so. This ensured that their views had been accurately represented. The researcher also checked the transcript against the recording. Each interview lasted approximately one hour. Electronic files of the transcript were coded and stored securely.

3.10.2 Anonymity, Privacy, and Confidentiality

Data collected during interviews were treated with the strictest of confidence. Participants were not identified in any study reports or publications directly and consent to directly quote anonymously for the purpose of reporting, presenting at conferences, and publishing was obtained prior to the interview. Paper copies of data were stored in a locked

filing cabinet, and paper copies of identifiers and data were kept in a separate locked filing cabinet. Electronic data were stored on the university iCloud and were password protected.

3.10.3 Protection from Harm

An interviewer's task is to obtain information while listening and encouraging another person to speak. Additionally, the participant might benefit from reflecting on their own opinions. DiCicco-Bloom and Crabtree (2006) point out that the interviewer may inadvertently cause participants to talk about issues they had not talked about or processed before, subsequently leading them to feel distressed. For this reason, contact details of institutional and national counselling services were provided on the participant information statement in case the research should trigger any upsetting issues for the participants. A researcher cannot be expected to provide professional counselling – unless qualified to do so – but must be prepared to provide psychological support if their interviews cause stress of any kind to participants. Practical concerns around the safety of the research and participants were also taken into consideration prior to the interviews taking place. These included simple precautionary methods of both researcher and participant telling someone where they were going and when they should return, taking a mobile phone with them, and not going into closed-door rooms alone with participants. Such physical precautions were only taken with Alpha University participants as all Beta University interviews were conducted online.

3.11 Chapter Summary

The contextual data collection phase of this study employs an exploratory and descriptive case study research design. This design is chosen to provide a comprehensive understanding of the research context. The philosophical assumption underlying the study is rooted in a constructivist-interpretivist paradigm, which acknowledges the subjective nature of reality and the importance of individual interpretations. To gather interpretative data, semi-structured interviews were conducted with academics, learning designers (LDs), learning leaders (LLs), and students. These interviews allowed for an in-depth exploration of participants' experiences and perceptions regarding the implementation of e-learning in their universities.

To ensure a systematic approach to the analysis of the interviews, this study follows the Miles et al. (2014) interactive model. This model provides a framework for organising and

analysing the collected data, ensuring consistency and rigour in the analysis process. Furthermore, the study incorporates two case studies (Alpha University and Beta University), which serve as distinct sources of data. The systematic analysis of these case studies provides triangulation, which strengthens the validity and reliability of the findings. By examining multiple cases, the study aimed to establish a comprehensive understanding of participants' experiences and perceptions of e-learning implementation within the university setting.

Chapter 4: Results

4.1 Chapter Overview

This chapter presents the findings related to participants' perceptions of enablers and barriers to implementing e-learning (RQ1), how the experiences of e-learning designers correspond with those of academics with regard to implementing e-learning (RQ2), and how the decisions of organisational leaders affect the implementation of e-learning (RQ3). This chapter presents the experiences of four distinct groups of participants, namely academics, learning designers (LDs), local leaders (LLs), and students. Theme analysis reveals four primary categories: collaboration (Section 4.2), individual capability (Section 4.3), teaching (Section 4.4), and organisation (Section 4.5). These four categories encapsulate 18 distinct themes: sharing practice, e-learning knowledge, the learning management system (LMS), recruitment, roles, e-competence, digital narrative, self-efficacy, professional learning, elbow support, workload allocation, complexity, e-classroom management, currency, communication, policy enactment, culture, and organisation structure. Table 4.1 provides a summary of these categories and themes.

Collectively, these categories and themes illuminate the intricacies of how participants engage in collaborative efforts, build e-learning capabilities, traverse complex technical terrain, and negotiate organisational structures. The findings shed light on the complexities and challenges that arise in implementing e-learning. However, these findings also reveal tensions and issues in implementing e-learning. For example, collaboration may be hindered by differences in expertise and perspectives. A lack of training or access to technology may limit individual capability. Teaching practices may need to be adapted to suit the unique needs of e-learning, and the organisation's structure may prohibit adequate support services for implementing e-learning. Section 4.6 provides a summary of the findings framed by the three research questions, and Section 4.7 concludes with a chapter summary.

Table 4.1: Categories and Themes of Enablers and Barriers to Implementing E-Learning

Category	Theme
Collaboration	Sharing practice
	e-learning knowledge
	Learning management system
	Recruitment
	Roles
Individual capability	e-competence
	Digital narrative
	Self-efficacy
	Elbow support
	Workload allocation
Teaching	Complexity
	e-classroom management
	Currency
Organisation	Communication
	Policy enactment
	Culture
	Organisation structure

4.2 Collaboration

Collaboration specifically refers to how individuals work together and share ideas, resources, and expertise when implementing e-learning in universities. It involves cooperative efforts aimed at achieving common goals and utilising collective knowledge to enhance the effectiveness of implementing e-learning. Five distinct themes comprise the collaboration category, namely sharing practice (participants ' perspectives on exchanging and disseminating best practices related to e-learning); e-learning knowledge (insights and experiences regarding the understanding of e-learning implementation); learning management system (LMS) (discussions about the use and effectiveness of the LMS as a tool for facilitating collaborative

learning experiences); recruitment (considerations and challenges associated with support staff when guiding and assisting academics to implement e-learning); and roles (identifying and clarifying roles and responsibilities within collaborative e-learning environments). These five themes shed light on the various aspects of collaboration that participants experienced as enabling or hindering factors during e-learning implementation. This section describes these five themes in detail in Sections 4.2.1-4.2.5, followed by a summary of the collaboration category in Section 4.2.6.

4.2.1 Sharing Practice

In this study, the theme of sharing practice refers to exchanging or disseminating best practices, strategies, and experiences related to implementing and using e-learning methods and technologies. Through discussions and shared language, teachers are able to navigate the complexities of teaching (Fullan, 2016).

Academics recognised sharing practice as an enabler when implementing e-learning. For instance, three academics emphasised that by observing their colleagues' online platforms, they were able to gain insights into innovative ways of utilising technology, which they could subsequently integrate into their own teaching practices. Mike found it helpful to look at examples of good Interact2 sites created by other lecturers rather than just basic or standard ones. This indicates that he is seeking inspiration from colleagues who have demonstrated excellence in using the platform, and he may be interested in borrowing some of their ideas or techniques to improve his teaching.

> *What I find helpful is looking at other Interact2 sites, good Interact2 sites by the lecturers, not just the basics. (Mike, Academic, Beta University)*

Kay highlighted the importance of showcasing successful innovation in using educational technology so that academics can learn from each other. She argues that by observing what has worked well for others, she can learn from their experiences and incorporate similar strategies into her own teaching.

> *I think it's really important to have examples of where people have successfully developed novel ideas of presenting information or where they've used a new tool and it's been successful. (Kay, Academic, Alpha University)*

Jo expressed excitement about learning from colleagues who use technology innovatively, reporting that she could improve her teaching practices by incorporating their ideas and techniques.

> *They use the technology in a really innovative way, and I've gleaned things from that and incorporate that into my own teaching and get very excited about that. (Jo, Academic, Alpha University)*

Jo also expressed the view that collaboration between academics was essential to designing a successful online unit in terms of structure, content, and teaching strategies. Specifically, she appreciated the value of collaborating with other instructors in her subject team, as they were able to provide high-quality content. Jo, as an instructor, found it beneficial to have this content as a foundation, allowing her the freedom to engage with it creatively and present it in a captivating manner to capture students' attention and help them grasp the subject matter in a new and interesting way.

> *The subject teams are really useful because they do put together just top-notch content but then I as an instructor can kind of dance around the content and try to make it jump out at the students and kind of point out the things in an interesting way to transform their way of understanding that area. (Jo, Academic, Alpha University)*

Academics and LDs, however, had differing perspectives on sharing practice. Academic responses centred on the value of sharing practice with their fellow academics. On the other hand, while LDs agreed on the importance of sharing practice for implementing e-learning, they advocated for sharing practice between academics and LDs. More specifically, LDs were frustrated by the lack of mechanisms for sharing and disseminating good e-learning practices between themselves and academics. Hannah specifically expressed the need for academics to share their examples.

> *I feel that more examples from the teaching staff need to be shared. (Hannah, LD, Alpha University)*

Alice, another LD, expressed her concern about the lack of a platform for sharing and organising resources between LDs and academics across the faculty at her university. She highlighted the need for a dedicated space where learning and teaching practitioners could curate and collect their own resources. Alice believed that such a platform would contribute to a vibrant learning and teaching community within the faculty.

We haven't got a space where learning and teaching practitioners can curate and collate their own resources that feed back into the learning and teaching community across the faculty (Alice, LD, Alpha University)

Academics and LDs recognised the importance of sharing practice in e-learning implementation. Academics value sharing practice as it enables them to learn from their colleagues' experiences and incorporate effective strategies into their own teaching. They find inspiration by observing examples of good online sites created by their peers, showcasing successful innovations in educational technology. However, there are differing perspectives regarding sharing practice between academics and LDs. Academics primarily focus on sharing among themselves, while LDs emphasise the need for sharing between academics and LDs.

4.2.2 E-Learning Knowledge

E-learning knowledge in this study refers to an understanding of the benefits, challenges, and practical aspects associated with implementing e-learning. Both academics and LDs considered that a lack of e-learning knowledge among senior leadership posed a barrier to effectively implementing e-learning practices and affected their daily online teaching experiences. For instance, Mike notes that although managers might have a general idea of what e-learning entailed, they were not knowledgeable enough to have meaningful discussions about what constituted a high-quality e-learning unit at a more granular level.

I don't think the management at either university, in terms of middle or upper management, are really acquainted with e-learning that well at all; they know it exists, they know roughly what happens, but I don't think I feel confident having a discussion with them about whether I should do X on the subject site or whether I should do Y. (Mike, Academic, Beta University)

Jo argued that limited e-learning knowledge among senior leaders led to insufficient consideration of practical implementation steps as well as a lack of awareness of the consequences of their decisions. Jo expressed concern that decisions were being made without a thorough understanding of the intricacies involved in e-learning. This lack of firsthand experience led to a disconnect between senior leaders and the practical realities of e-learning. Instead, Jo suggested that decisions were often based on limited exposure, such as casual observations, a couple of articles, or snippets from podcasts. Consequently, Jo found it

challenging to trust the strategic decisions made by senior leaders who failed to fully grasp the steps required to successfully implement e-learning initiatives.

> *I do feel that sometimes decisions are made, and it might be just that little gap of trust because we look at these people who've never sat in, on or done an e-learning experience who are making broad decisions about it based on, you know, what they've seen or an article or two that they've read or that they've heard on some podcast or something and they say this is how we want to be in the future without thinking about all the steps it takes to get there. (Jo, Academic, Alpha University)*

Stacy, another academic, highlighted the impact of senior leaders' limited knowledge of e-learning on teaching practices. She pointed out that if leaders do not understand how the LMS affects practical aspects of online teaching, such as content delivery and student engagement, they may overlook those factors when selecting which LMS will be utilised at their university. As a result, teachers may face limitations in customising their online classrooms or teaching in their preferred manner. Stacy described how those individuals who are less familiar with technology might view the LMS as a distant tool akin to a notebook and pen. Stacy, however, viewed her LMS site as a communicative space that served as her classroom.

> *I think maybe some people who don't use technology a lot see it as this thing that's at arm's length. You know, it's like a notebook or something, a piece of paper and a pen. For me, an online website is really a space, you know. It's where you communicate. It's your classroom. (Stacy, Academic, Alpha University)*

The disconnection of senior leaders from the practicalities of e-learning, leading to poor decision-making, was also highlighted by two LDs, Beth and Penny. They observed that disconnection was due to either a lack of direct e-learning experience or reliance on experiences from traditional face-to-face-based universities. Beth specifically noted that when senior leaders lacked direct experience using an LMS, they were unaware of the challenges that academics could encounter. This was possibly because some senior leaders did not actively use the LMS and therefore did not understand the difficulties faced by academics who did.

> *I think some of those high-level leaders are actually not using the LMS on the ground, so they're not quite aware of the difficulties. (Beth, LD, Alpha University)*

Similarly, Penny, another learning designer at the same university, shared her worry about senior leaders making decisions about implementing e-learning based on their

experiences in more traditional, in-person universities. Penny suggested that since these leaders lacked prior experience in the e-learning environment, their decision-making might have been influenced by assumptions drawn from different university settings.

> *I think that possibly they haven't had that prior experience, some of their decision-making may have been based on assumptions from a different (more traditional) university than ours. (Penny, LD, Alpha University)*

Another LD, Theresa, discussed how senior leaders' lack of e-learning knowledge, combined with little understanding of learning and teaching, resulted in their pursuit of strategic directions without understanding the impact it could have. An example at her university was a directive to stop giving lectures. The problem with this overarching statement was that, whilst its intention to move away from transmissive style lectures was worthy, it dismissed other considerations of delivering a well-designed scripted talk, such as a TED talk (an effective learning approach), so it was over-simplistic.

> *A TED talk is a valid practice and does engage people in effective learning. I mean, TED talks are popular for a reason. (Theresa, Academic, Beta University)*

Learning designers went further than academics in considering how a lack of e-learning knowledge was a barrier to implementing e-learning. In addition to some understanding of e-learning at the senior level, Freya argued that commitment to implementing e-learning must come from faculty leadership positions such as the Head of School and the Course Director to make a difference. If faculty leadership lacked e-learning knowledge and was uncommitted to implementing e-learning, that attitude permeated the school.

> *It depends on the school; it depends on the discipline group; it depends on the Head of School, it depends on the course director. If there is strong leadership in all these positions, then this is a real enabler. So, you know, if you're not getting the buy-in, you're not getting the ownership. (Freya, LD, Alpha University)*

The issue of leaders lacking e-learning knowledge was also of concern to LLs. Harry pointed out that even if a Head of School was committed in principle, if they had little or no e-learning experience, it was still problematic to implement e-learning across the school. For instance, whilst a Head of School might have carefully considered the purchase of specific software or hardware, showing commitment to implementing e-learning, their lack of understanding of the support implications of the resources they had procured or the complexity

of managing the software or hardware locally, rather than through the central university IT division, could act as a barrier.

> *So, the head of school, a week before I started down there, had just bought this software in consultation with the maths discipline and physics, so it was a considered decision. The real complexity of managing just within one school, a sophisticated piece of software which wasn't managed elsewhere in the university and the IT and the central directorate saying you're kind of on your own. So, having to work out all the things to do with upgrades, test environments, production environments, all that kind of thing. (Harry, LL, Beta University)*

Unlike academics and LDs, LLs did not expect senior managers to possess extensive knowledge or understanding of e-learning implementation. Instead, LLs prioritised the need for managers to have a clear project plan and practical project management skills. John emphasised the importance of project management skills, in particular, expecting that managers must be able to see the big picture and be aware of the interconnected components that need to work together.

> *I actually think, first and foremost, they need really good project management skills, if you like, to be able to see the big picture and think about all the working parts that need to, you know, happen seamlessly. (John, LL, Alpha University)*

John elaborated further on his view that leaders needed project management skills, with an example of an e-learning model that his faculty was expected to apply across all their online subjects. He described how the details of the model appeared carefully considered, but lack of communication, management of timelines, allocation of workload to staff, and the ratio of LDs to academics to operationalise the model across the faculty prohibited effective execution.

> *I think the work done to develop the elements was good; it was well thought through and considered. But, when it came to operationalising that in subjects, I don't think that all of the moving parts, and it is challenging, but in terms of making sure that staff were available, that workload is given, staff are freed up to work with educational designers, that it's the right staff to work with the right educational designers to enhance e-learning affordances of their subjects. That wasn't well managed, and so we hit lots of barriers to having that effectively implemented. (John, LL, Alpha University)*

Hilary, another LL, emphasised the importance of having a well-defined, step-by-step plan to guide the progress of a project, even if adjustments need to be made along the way.

According to Hilary, having a clear plan ensured progress, even if the initial direction needs to be adjusted or even completely changed. Hilary considered it crucial for leaders to have a shared understanding of the project agenda and take responsibility for moving things forward while also allowing for collaborative decision-making.

> *If you've got a good plan to get there, then you're always moving forward. Sometimes it's not the right direction, you might have to deviate, and you might have to do a U-turn or whatever. Still, the leaders have to be seeing the agenda, and I mean collaboratively, but they've got to be responsible for taking things forward. (Hilary, LL, Alpha University)*

The importance of having a dedicated project manager specifically assigned to oversee the implementation of e-learning initiatives was raised. Harry expressed concerns, however, about the common practice of appointing a senior LD as both the project manager and creator of e-learning sites and resources simultaneously. This dual responsibility often placed a heavy burden on the senior LD. Harry considered it was actually crucial to have some support staff dedicated to the project who directly reported to the LD/project manager to alleviate the workload and provide valuable assistance in successfully executing the e-learning initiative.

> *Putting a senior LD on a project isn't usually enough if it's a big project. You really need people who can actually put in the elbow grease to build Moodle sites and populate it with content and find imagery and compress it and crop it and get everything to the right spec. (Harry, LL, Beta University)*

These findings further support the notion that leaders who disregard others' perspectives and assume they have all the answers are unlikely to succeed, as argued by Fullan (2016). Fullan (2016) emphasises that implementing educational change is a process that requires working with the diverse realities of the people involved to achieve success.

The observations of both academics and LDs align with the view that those in leadership roles need to develop their understanding of e-learning (King & Boyatt, 2014) and that top-down directives and strategies need to be contextualised by faculty managers and leaders (Hunter et al., 2017; Ong, 2012). Furthermore, Martins and Baptista Nunes (2016b) suggest that unless leaders and academics have meaningful discussions about what e-learning means in practice in academia, the possibilities and affordances of e-learning will not be realised.

The viewpoints shared by academics Mike, Jo, and Stacy, as well as LDs Beth, Penny, Freya, and Theresa, and LLs Harry, Hilary, and John, highlight the consequences of senior leaders lacking e-learning knowledge and experience. While leaders may have a general understanding of e-learning, they may not engage in meaningful discussions about specific aspects of high-quality e-learning in units. As a result, practical implementation steps are often overlooked, and the consequences of decisions are not fully considered. Senior leaders' decisions can be influenced by limited exposure to the online environment or assumptions about traditional university experiences, which may not align with the realities of e-learning.

When senior leaders lack direct experience in e-learning, they may not understand the intricacies and challenges involved in implementing such initiatives, resulting in decisions that overlook the practical needs of educators and learners. Without a comprehensive understanding of e-learning, senior leaders may inadvertently create barriers that hinder the effective integration of online education methods. Moreover, when senior leaders lack e-learning knowledge, there can be a disconnect between strategic decisions and the practical realities of e-learning, adversely affecting educators and students. This can result in decisions that are not grounded in a deep understanding of the necessary steps, resources, and support required for successful implementation.

4.2.3 The Learning Management System (LMS)

The LMS in this study refers to the digital platform that manages and delivers e-learning (online and blended courses) to students. Overall, a LMS in a university serves as a digital hub for learning and teaching, providing academics and students with various tools and resources to enhance their educational experience. LDs viewed some leadership decisions about the LMS as a barrier to implementing e-learning. If a LMS had limited functionality it could discourage academics from trying new ways of implementing e-learning. Alice declared that whilst the actual LMS at their university was adequate, more educational tools or licences were needed to accompany it to expand what staff could do. To be able to experiment with different educational technologies, she explained that she and some of her fellow LDs paid for their own licences.

> *You'll find that I myself, personally, and a lot of people that I know, we are all buying our own licences for different things to be able to use things that you probably would*

expect that are fairly common and that an institution would have bulk licenses for. (Alice, LD, Alpha University)

Learning designers acknowledged that technical hitches were a barrier for everyone, so ensuring that the LMS was user-friendly was an essential enabler to implementing e-learning. However, when organisational leaders made decisions about the LMS, there was often poor communication and collaboration with technical, learning, and teaching staff, resulting in significant technical limitations. Beth provided an illustration of her institution's approach to cost reduction, where they chose not to implement all the components of the LMS. Instead, they bought certain components while developing customised tools for others. Unfortunately, it seemed that the potential effects on teaching resulting from this cost-driven decision were not adequately considered.

Decisions are based on cost or so they don't necessarily think about why you might not purchase a cheaper product or you might not buy the whole package. They don't take into account how that might affect our teaching staff. (Beth, LD, Alpha University)

Two LDs provided examples of how the lack of a fully integrated LMS made it difficult for staff to use. Beth explained that when separate components were integrated into an LMS, it resulted in a slow and cumbersome platform for staff. She described it as "an overcomplicated platform with clunky add-ons" (Beth, LD, Alpha University). Similarly, Freya noticed a tendency at her university to persist with using custom-built technologies instead of adopting newer and more user-friendly options that could be seamlessly integrated into the LMS. As a result, staff had to spend time learning how to use multiple separate technologies instead of having all the features streamlined within a single LMS that was easier to navigate.

So, you know, it's often we're pushing and putting a lot of effort into learning particular technologies when something simpler could do it. (Freya, LD, Alpha University).

Local leaders also expressed concerns about how leadership decisions regarding the LMS directly impacted the academic and student experience. Lucy talked about the process of selecting an LMS. There was a need to consider the strengths and weaknesses of different LMS options and make a decision based on factors like flexibility, end-user experience, and return on investment. Lucy highlighted how leaders needed to balance the advantages of choosing between an extremely flexible tool like Moodle, which allows for customisation but may result in a less polished student experience, or a more supported and structured option like Blackboard

(BB), which offers restricted customisation and relies on vendor updates. She emphasised the need for careful consideration of these trade-offs.

> *It is key to have some decisions [from leaders] around do we want an extremely flexible tool like we currently have with Moodle. Because it's open source, we can make it what we like. But this comes at a cost in terms of the student experience not being as polished as we would like. Or do we go with something that's more supported and structured (like BB) but possibly restricted (testing done by the vendor, and you just get updates)? (Lucy, LL, Beta University)*

Additionally, Lucy stressed the importance of avoiding using an inflexible LMS that could not adapt to changes over time. This becomes problematic when even a single component of the LMS requires modification. Furthermore, if the expertise required to update the LMS was concentrated among a small number of staff members, it becomes a concern if those staff members leave the university.

> *It can't be a monolithic object that then gets used, and then nobody has the expertise to make changes to it to put new ideas in there. You could spend a lot of time making something, a single object that's really nice and shiny, but what happens to it in 12, 18, or 24 months when even just you know a single piece is changed? (Lucy, LL, Beta University)*

Similarly to LDs, students' responses revolved around the challenge of navigating a LMS that consisted of different tools. Two students, Ben and Melanie, noted that whilst they personally found it easy to navigate the LMS at their university due to their comfort with technology, they were concerned about their classmates who were less technologically proficient. Melanie, in particular, shared that her dual role as a staff member and student allowed her to be familiar with the LMS at her university. This familiarity saved her time since she didn't have to spend extra effort navigating different systems like other students who were less familiar with the LMS.

> *Oh, because I'm familiar with the LMS, I know how to make it do what I want, or I know what it can't do, so I don't waste time. (Melanie, Student, Alpha University)*

Ben, another student, expressed dissatisfaction with the interface of the LMS at his university. He found it difficult to both navigate and understand the collection of different tools within the system. While he eventually figured it out with time and effort, Ben highlighted it

could be even more challenging for older students who may not be as computer literate as him and younger students who may overestimate their computer skills.

> *The interface, the sort of collection of different tools, is not good. I could figure it out. It took me time. I understand what they're doing; they're trying to link all sorts of systems together, but for an older student who's maybe not so computer literate, or for a younger student who may think he or she is computer literate but, in fact, isn't, it's a daunting prospect. (Ben, Student, Beta University)*

The findings of this study are consistent with Giannakos et al. (2022), who demonstrate that the use of user-friendly systems that also incorporate easily accessible social e-learning technologies leads to increased adoption and improved performance within organisations.

The insights provided by three LDs (Alice, Beth, and Freya), a LL (Lucy), and two students (Ben and Melanie) emphasise the crucial role of implementing an intuitive and accessible LMS in the context of e-learning. These examples shed light on the challenges that arise when the components of a LMS are not effectively integrated, resulting in a fragmented and cumbersome experience for staff and students. LDs and students emphasised the importance of having a LMS where all the features are seamlessly integrated and user-friendly. This enables staff and students to navigate and utilise the platform efficiently. They recognised the significance of leadership decisions in selecting the appropriate LMS, as it directly impacts the academic and student experience. The need for balancing flexibility and end-user experience was emphasised while also considering the long-term adaptability and maintenance of the chosen LMS.

Local leaders recognised the significance of leadership decisions on the choice of LMS and how it affects the academic and student experience. They emphasise the need to balance flexibility and end-user experience while also considering the long-term adaptability and maintenance of the chosen LMS. Overall, the comments from LDs, a LL, and students underscore the need for an intuitive and well-integrated LMS to cater to the diverse proficiency levels of both staff and students. It is also essential to consider the user experience and long-term viability when making decisions regarding LMS implementation.

4.2.4 Recruitment

The recruitment theme in this study focuses on the employment of staff to directly support the implementation of e-learning. Both LDs and LLs identified the scarcity of staff as a significant barrier to e-learning implementation in their respective universities.

Theresa pointed out that the universities making the most progress in implementing e-learning were the ones investing heavily in recruiting LDs. Theresa highlighted that other universities, which had larger budgets than her university, had teams of 50-60 LDs, whereas her university had only 10 LDs.

> *The people who are making significant changes in the sector have vastly larger budgets and resourcing capabilities than we do. The PVCR will frequently quote things like [name of university] and [name of university] have teams of 50-60 LDs, and we've got 10 in our neck of the woods (Theresa, LD, Beta University)*

Hannah, another LD, emphasised the importance of having e-champions within schools, in addition to LDs and faculty leaders, to effectively promote and lead the implementation of e-learning. She considered these e-champions should be academics with experience in implementing e-learning and teaching, as their credibility with their colleagues plays a crucial role in engaging and driving adoption.

> *We need champions in faculty leadership, but most certainly, we need champions across the actual teaching arena. (Hannah, LD, Alpha University).*

Harry, a LL, specifically highlighted the shortage of LDs available to support academics over an adequate period, such as a year, which hampers academics' progress in developing expertise in implementing e-learning in their teaching practices. The shortage of experienced learning designers who could collaborate closely with academics to develop strategies, offer guidance, and enhance their e-learning capability often led academics to rely on their academic colleagues for additional support.

In addition, Harry emphasised that the human costs associated with implementing e-learning are often overshadowed by the focus on hardware, software, and bandwidth issues.

> *Lack of resources is a big barrier. Sometimes it's hardware, software, or bandwidth but more commonly, it's human resources. So, experienced educational technologists and LDs who have been set aside to sit with the academics for 3-12 months to establish*

strategy, capability-building templates, on-the-spot guidance all that sort of thing. The human cost often gets overlooked. (Harry, LL, Beta University)

Lucy, another LL, also noted that unit co-ordinators (academics) commonly navigated implementing e-learning with the help of their colleagues and whatever support could be provided by the limited learning design team academics had access to.

Unit coordinators kind of muddle their way, I think, with support from their colleagues and support from that learning design educational support. (Lucy, LL, Beta University)

A lack of support from LDs was viewed not just as hindering the initial implementation of e-learning by academics but also as affecting its long-term sustainability. Harry pointed out that when academics were not supported and if academics did not sustain e-learning implementation themselves, their e-competence tended to decline over time. Harry expressed his disappointment when he revisited a faculty where he had previously assisted with e-learning implementation, only to find the academics had abandoned their efforts to develop their e-learning capabilities once he had moved on to another project. He considered that if academics fail to grasp the goal of implementing e-learning if their capability does not improve, and if they do not consistently and immediately apply what they have learned, entropy can take hold. According to Harry, there is an additional risk that after 18 months academics might revert back to their previous state before they worked with a LD.

If they don't capture the vision and if their capability doesn't rise, and if it isn't used straight away and constantly, entropy comes in and sets in. Then you run the risk that in 18 months, you're back where you started. You drop by the faculty two years later, and they go, 'Oh yeah, we don't do that anymore, never really understood what that was about', and it's so disheartening. (Harry, LL, Beta University)

Lucy also highlighted the challenge of the practical aspects of sustaining e-learning implementation at scale due to insufficient resources. She explained that with a large number of units to be prepared for each teaching session and limited support, there was a constant trade-off between introducing innovative e-learning approaches and maintaining a baseline level of e-learning. Over the three trimesters at her university, Lucy reported there were 1100 e-learning units to implement. She emphasised how important it was to have scalable solutions, but there was also a continuous balancing act between pursuing innovation and considering its feasibility across such a large number of units.

We have 700 units taught in each teaching period in Trimester 1 and Trimester 2. It's about 400 in Trimester 3. Things need to be scalable. It's always that push or pull between innovation and can that really be realised in 700 units. (Lucy, LL, Beta University)

The insights from LDs and LLs shed light on the challenges posed by having limited support staff to assist academics in implementing and sustaining e-learning in universities. Resourcing support staff recruitment was seen as a priority so that both innovative and sustainable e-learning implementation could be achieved. The human costs, alongside technical aspects, need to be prioritised, and a balance should be struck between innovation and feasibility in order to achieve successful e-learning implementation. The need for sufficient staffing and support to address the challenges and complexities of integrating e-learning into teaching practices is crucial but can be underestimated in favour of focusing on technical aspects.

Collaboration between academics and LDs was further prohibited through insufficient recruitment of LDs. This situation resulted in too few LDs to support academics for long enough to positively impact e-learning university-wide. As a result, sustainability was hard to achieve, and LDs felt frustrated by not being able to provide enough support for e-learning implementation initiatives. These findings align with the argument presented by Sidhu and Gage (2021) that universities offering logistical support are more likely to adopt e-learning. Furthermore, it was observed that faculty members who did implement e-learning tended to utilise the available support. The findings also align with Stupnisk et al. (2018), who suggest that internally motivated behaviour, driven by autonomous regulation, is more sustainable when implementing best teaching practices. On the other hand, externally motivated behaviour relying on external factors (like LDs) tends to decline once the external pressure is removed.

4.2.5 Roles

The role theme in this study refers to the different roles in play when people collaborate on implementing e-learning initiatives. People's roles when collaborating on e-learning implementation emerged as a significant concern for both LDs and LLs. LDs recognised that their role could be problematic for academics as it required a shift in the established higher education paradigm. Additionally, LDs acknowledged that their role, aimed at bridging the gap

between disciplinary expertise and pedagogical content knowledge (Shulman, 1987), had not been entirely successful.

Theresa, a LD, believed that one of the obstacles preventing academics from collaborating effectively with LDs was academics' sense of identity and how they felt it was affected by having to work with LDs. Theresa considered that merely appointing a LD to work with an academic did not take into account how academics felt about that change.

> *But I think now that's an overly simplistic solution and doesn't acknowledge the complexity of people's identity and how they feel about change and their mindset. (Theresa, LD, Beta University)*

Harry, a LL, observed that some academics disregarded the expertise of LDs and chose not to collaborate with them. This hindered the formation of productive relationships necessary for implementing e-learning initiatives. Despite acknowledging the academics' disciplinary knowledge and the pressures they faced, Harry expressed frustration at the lack of reciprocal respect towards his pedagogical expertise as an LD. He argued that discussing the role and expertise of LDs was essential, but the defensive or hostile attitude displayed by some academics who asserted that as they were the expert, the LD did not have anything to teach them, made it challenging to engage in constructive dialogue.

> *I'm respectful of people's expertise as subject matter experts, and I'm also respectful in acknowledging the pressure they're under etc., but it is important to discuss what LDs bring to the table as academics can be defensive and hostile, e.g. "Who are you anyway and how can you tell me? I'm a Dr; how can you tell me how I should teach this stuff? Academics don't respect my expertise which is in pedagogy. (Harry, LL, Beta University)*

Harry further highlighted his frustration with being perceived primarily as an IT person responsible for technology problem-solving, rather than being recognised for his pedagogical expertise as a LD. He described how some academics expected him to fix their computers when he was at a meeting to collaborate with them on implementing e-learning.

> *I sit down while the meeting's waiting to start; almost as soon as the meeting has started, we've been introduced, and one of them passes me his laptop and asks me to fix it for him. (Harry, LL, Beta University)*

On the other hand, being too rigid about people's roles when working in a team was also perceived as a barrier to implementing e-learning. Alice noted the importance of

acknowledging and appreciating diverse skills and abilities that team members bring rather than confining them to a single expertise. Enabling everyone in the team to contribute their unique aptitudes was deemed by Alice to be crucial for effective collaboration in e-learning implementation.

> *I think one thing we often do is pigeonhole people into specific roles when actually their skills span across a few of those roles, really, and so again, it comes back down to that relationship within the team. Everyone being able to pitch in and move across to different kinds of roles and help when it's needed. (Alice, LD, Alpha University)*

Theresa, another LD, shared the belief in the significance of collaboration between academics and LDs during e-learning implementation. She advocated for a team approach that combined the expertise of academics as subject matter experts and LDs as pedagogical experts. Theresa argued that this integrated approach would be more effective than the current separation of LDs and academics at her university.

> *We need to reconfigure the way that we think about teaching and start teaching in teams so that an academic can be positioned as a subject matter expert and those of us who have pedagogical expertise can work in a teaching team rather than be removed in the way that they currently do. (Theresa, LD, Beta University)*

Local leaders expressed their concerns regarding the considerable amount of time they invested in explaining the roles of academics, LDs, the skills LDs possessed, and how LDs were present to collaborate with and assist academics in implementing e-learning. In particular, Harry specifically highlighted how providing explanations about the LD role was demanding, intricate, and time-consuming. However, he emphasised that these efforts were crucial for motivating academics to participate actively in the process.

> *So, there's always a bit of working out who does what and what the expectations are. It's quite complicated; it's quite demanding on an interpersonal level …. a lot of my effort and energy goes into people. (Harry, LL, Beta University)*

Lucy raised concerns about the challenge of balancing academics' autonomy in designing their online unit sites with students' desire for a more standardised experience across different units. She highlighted that while granting academic staff freedom and ownership over their online spaces can be beneficial, it also creates tension due to the clash between the mindset of personalising what they see as their space and the students' expectation for consistency.

We give academic staff a lot of freedom in a good way and a bad way; we just let them get on with it, give them ownership – but there's tension with "it's my space; I can do what I like with it", and the student wish for consistency. (Lucy, LL, Beta University)

Local leaders were cognisant that academics were employed predominantly for their professional expertise in some disciplines and were not expected to have teaching qualifications. John suggested that his university, through the learning and teaching division and via LD support, should help academics become proficient in thinking pedagogically and using technology to enhance their online teaching. Increased knowledge, John argued, would naturally encourage academics to experiment with new technologies.

I think where we want to get to with transforming online is to have our academics so proficient in thinking pedagogically but also using technology to enhance what they do online that they'll, just as a matter of course, be pushing boundaries and experimenting with other technologies. (John, LL, Alpha University)

Hilary asserted that in order to engage academics in implementing e-learning, it was crucial for LLs to understand the requirements of academic staff and align the available support accordingly. According to Hilary, if LLs adopted an authoritarian approach, it could foster resistance and obstruct collaborative efforts to find effective ways of implementing e-learning. Instead, Hillary suggested assessing the situation, engaging in dialogue with the staff, and tailoring the support and learning opportunities to their specific needs. This would ensure that staff members would feel involved in the process and empower them to contribute to solutions rather than feeling like they were part of the problem.

I think it's about astutely assessing the circumstance, making a good appraisal, talking with the people, what do they need. Trying to understand that and then trying to fit the support and the learning of whatever they need to match that rather than coming in with the solution because that puts people off, and it means they don't feel part of the solutions, just part of the problem. (Hilary, LL, Alpha University)

Additionally, Harry, another LL, noted that a lack of commitment to implementing e-learning could be attributed to the academic promotion process, which prioritised research over the scholarship of learning and teaching. Harry pointed out that a Head of School, despite holding a position of significant influence, might not possess experience in leadership, project management, or change management skills, as their promotion was primarily based on their research achievements. Consequently, LLs found that this situation posed a potential barrier

since the Head of School, in theory, could play a role in facilitating e-learning implementation but might not offer operational support in practice.

> *Positional leadership is often based on their academic skills and experience, and knowledge, and their doctorate, their publications, their track record, and research doesn't necessarily emerge from expertise in management or directorship. (Harry, LL, Beta University)*

These findings emphasise the importance of addressing behaviour, values, norms, culture, and roles during the implementation process to create a committed and engaged multi-professional team (see Halupa, 2019; Salmon & Angood, 2013; Voogt et al., 2015).

4.2.6 Collaboration Summary

Collaboration is essential when implementing e-learning, as highlighted by the themes of sharing practice, e-learning knowledge, the LMS, recruitment, and roles that emerged from interviewees' responses. Academics and LDs recognised the importance of sharing practice, where they exchange successful approaches and innovative ideas to enhance teaching practices. LDs emphasised the need for collaboration between academics and LDs in sharing practice. Senior leaders' lack of e-learning knowledge hindered the alignment of strategic decisions with practical realities. In selecting a LMS, collaboration between leadership, academics, LDs, LLs, and students is crucial to balance flexibility, end-user experience, and long-term viability. Collaboration between senior leadership, support services, academics, LDs, and LLs is also necessary for addressing challenges related to limited staff, support, and resources; prioritising human costs; and making informed decisions.

4.3 Individual Capability

Individual capability comprises six themes, namely e-competence, digital narratives, self-efficacy, professional learning, elbow support, and workload allocation. This section describes these six themes in detail in Sections 4.3.1-4.3.6, followed by a summary of the individual capability category in Section 4.3.7.

4.3.1 E-Competence

E-competence encompasses three aspects, namely a level of proficiency in using the university's LMS, confidence in using different technologies, and the ability to adapt to and manage changes in response to ongoing technological advancements (Belshaw, 2011; Johnson et al., 2016).

The level of an academic's e-competence was of concern for LDs, LLs, and students. LDs expressed the belief that academics should enhance their e-competence. For instance, Freya emphasised that academics should consider implementing e-learning as part of their job and not avoid developing their e-competence by delegating their responsibilities to LDs.

> *If LDs take the work and do it for academics, they will not learn how to do it or consider it part of their role. (Freya, LD, Alpha University)*

Whilst LDs shared the view that e-competence was critical for academics, they differed in how they defined e-competence. For example, Hannah considered that academics must, at a minimum, be competent in using their university's LMS, or it would be difficult for them to teach their students effectively online.

> *If you're not adept or conversant around the LMS technology, it is very difficult to translate your teaching into the e-learning space. (Hannah, LD, Alpha University)*

Alice, another LD, highlighted the importance confidence played in developing e-competence, which Alice suggested stemmed from an academic's experience with different technologies and pedagogical approaches. According to Alice, this confidence plays a crucial role in enabling academics to quickly adapt to new technology developments. Subsequently, maintaining an attitude of continuous professional growth is highly advantageous as it encourages educators to experiment and successfully incorporate innovative technologies into their teaching practices.

> *Ideally, you want people to have confidence through enough experience with enough different technologies and enough different pedagogies … to know that if you come across something you haven't done before, give yourself a day or two, and you're going to be ok. (Alice, LD, Alpha University)*

Additionally, Alice argued that academics who did not understand how to optimise their students' e-learning experience could also be considered to lack e-competence. The manner in which an academic utilised interactive technology significantly impacted students'

comprehension of the learning process and, consequently, their level of engagement. For instance, if academics conducted synchronous online classes in a one-sided, transmission-oriented manner, similar to their traditional face-to-face lectures, it conveyed to students that interaction was unnecessary. As a result, students were essentially encouraged to observe passively (or listen to the recording later), leading to limited active participation and diminished engagement.

> *We often run online meetings as lectures, and so students think, 'Well ok, it's just a lecture, I'm not really interacting, I can just watch the recording,' and so on, and so we get low participation rates. (Alice, LD, Alpha University)*

Hannah pointed out that some academics expressed discomfort with their level of technical competence, leading to a reluctance to use technology in their teaching practice. These academics felt embarrassed when students exhibited greater technical skills than they did, causing them to feel inadequate and no longer the experts in the classroom.

> *A couple of academics actually said they gave up the use of technology because they would use it, for example, in an online tutorial, and the students knew more than they did about the technology. For them, it was almost embarrassing to admit that they weren't an expert. (Hannah, LD, Alpha University)*

Local leaders shared the view with LDs that a base level of competency in the educational tools and technology provided at their university was essential for academics. Harry further expanded on his concept of e-competence, stating that it involves being comfortable with technology in general and having enough understanding to address any technical issues that might arise.

> *Overarching comfort with the environment and a broad competence and a scheme of which they can slot most of the software or hardware challenges they come across. (Harry, LL, Beta University)*

Local leaders made a distinction between e-competence and using e-learning technology. E-competence was regarded as the higher level because it encompassed how to apply technology for learning and teaching rather than simply knowing how to utilise it. Lucy observed the importance of knowing how to use a tool before you could understand how to apply it.

> *I think you have to have competency in the tool, the how do I do this in a tool before you can think how to apply that. (Lucy, LL, Beta University)*

Furthermore, LLs claimed that a barrier to some academics developing their e-competence was their view of themselves as educationalists and teachers, not technologists. John reported that some academics did not realise that implementing e-learning required them to be proficient with their university's LMS and accompanying external educational technologies, in addition to their discipline expertise. John suggested that whilst some academics might be hypothetically aware of the requirement to utilise technology when implementing e-learning, they had not necessarily translated this into what it meant for them to actually gain proficiency with the technology.

> *They might have maybe conceptually or theoretically thought about it. But when it comes to their own practice and, well, what does that mean for me to skill myself up in how to use Adobe Connect media rooms effectively, or you know, some other piece of software that's going to enhance the offering of the subjects to their students, well…(John, LL, Alpha University)*

Another barrier to developing e-competence, as highlighted by Harry, was some academics' resistance towards online teaching at all. These academics exhibited a lack of motivation to enhance their technical skills, explore the utilisation of their institution's LMS, or develop their online teaching approaches. Despite the LMS being available for over a decade and despite receiving assistance in setting up their individual Moodle sites, Harry reported that some academics at his university still lacked e-competence.

> *So, even here in an online university, we're giving them technology where they have access to Moodle, they have sites set up for that, but their use of it, actually even a decade later, is really quite rudimentary. They don't have that inherent motivation where they're constantly thinking about the online experience for the students, especially those who are at a distance. (Harry, LL, Beta University)*

John acknowledged that while some academics were at ease with using educational technologies for e-learning at his university, they were reluctant to seek assistance in further developing their e-competence. John recognised that there were some academics who were competent in utilising digital tools and were considered "shining stars" or "digital natives" by their colleagues. Still, there was a larger group of academics who recognised the value of incorporating useful technologies to engage their students but hesitated to ask for help due to concerns of appearing technologically inept and therefore not the expert they thought they should be.

There are shining stars and digital natives…but there's a whole bunch of us in the middle; I think, who know, there are really useful technologies out there. We do care about how to engage our students, but we are just kind of embarrassed to ask for help because we think it would show us up as frauds or Luddites or something. (John, LL, Alpha University)

Being unaware of academics' baseline knowledge was noted by John as a barrier to developing e-competence. John advocated for creating a self-diagnostic test that would give academics an understanding of their current level of e-competence and indicate what skills they need to increase their e-competence. He acknowledged, however, that such a diagnostic test was unlikely to be adopted because academics did not appreciate being assessed.

But I think a diagnostic, a simple diagnostic, and this is probably controversial because, you know, we like setting assessments, we don't like sitting our own or being assessed ourselves, but that asset that gives, you know, yourself an understanding of what you can and can't do effectively online. (John, LL, Alpha University)

Harry considered a further barrier to e-competence was a tendency for some academics to focus on content, how to use the LMS, and even how to practically conduct online lectures and tutorials. They did not necessarily, however, consider how they taught their units from a pedagogical perspective. Harry observed that at his university academics needed to make time for learning about pedagogy so they could develop their e-competence.

Subject matter experts in higher education don't make room for pedagogical knowledge. They make lots of room for content knowledge; they know that online learning is a real emphasis in the institution and it's a way of the future, so they make increasing room for that – 'oh, I've got to learn Moodle, I've got to work out how to do Zoom, it's really important' but then if you go back to pedagogy its sort of like 'oh yeah, what is that again? (Harry, LL, Beta University)

Students were deeply concerned about the level of e-competence displayed by academics, as it directly influenced their learning experience. Ben, a student, observed significant variation in academics' ability to navigate the LMS and effectively utilise tools and technologies in the different units he studied. He noticed that some academics had less technical proficiency compared to their students and seemed to possess only the basic skills necessary for online teaching. Ben commented that certain academics seemed to rely on observing others for teaching strategies and simply transferred their traditional face-to-face lecturing style into

the e-learning environment without making appropriate adjustments for the online teaching context.

> *I think one of the problems academics have is that not all academics come equipped with the digital literacy skills that their students have. They learn to teach from observing others, and when they come to teach online, they transfer the pedogeological approach that they had face-to-face, and they only learn enough technology to get by. (Ben, Student, Beta University)*

Ben also noted that some academics at his university had such little technical competence that they could not record lectures effectively. Simple things such as not switching on their microphone or the light, or not removing background noise resulted in poor-quality recordings that were difficult for students to listen to.

> *It really drives us mad when we can't hear them. Get them to switch on their microphone or make sure they switch the air con off so we can actually hear them and put a light on so we can actually see them. (Ben, Student, Beta University)*

Melanie, another student, described how her lecturer was not proficient with the online meeting technology they were using.

> *The subject I'm doing at the moment, the poor academic, we had our first online meeting, and you know, she stumbled a bit just because, you know, she maybe is not familiar with the software. (Melanie, Student, Alpha University)*

Another example of how academic e-competence with technology impacted the students' experience was when the chat feature in synchronous tutorials was mismanaged. This raised the issue that choosing inappropriate technology for a specific learning activity could also be a barrier to implementing e-learning. Ben gave an example of how one of his lecturers could not manage an online chat session effectively because they were not proficient in typing. Spelling mistakes also made the posts challenging for students to comprehend, and Ben reported that the lecturer lost control of the chat session.

> *We had one academic who managed these chat sessions, but he actually couldn't type. He lost control of the chat session very often because everyone was ten-fingered except him. Everyone would be hitting him with enquiries, and he would be trying to tap out an answer, and they were incoherent because he was just a hunt-and-peck typist. Every word was misspelled. (Ben, Student, Beta University)*

Nick commented that he found it difficult in large classes when students were expected only to respond to questions in the chat and the lecturer did not enable the microphone. As someone with dyslexia, he reported he could not respond quickly enough to the chat postings and was embarrassed about making spelling mistakes, so he tended not to contribute.

> *You can have 10, 15, or 209 students listening in on a class. Some subjects, I've been asked to purely type out the question of what's going on. It's very difficult as the subject is rolling through to sit there and type something out, especially when you haven't got spellcheck, and you're dyslexic, and you don't want to embarrass yourself in front of the students, and you tend not to write anything. (Nick, Student, Alpha University)*

According to students, there was a perception that some lecturers were attempting to teach them how to use technologies in which the lecturers themselves lacked competence. As a result, the lecturers were not able to troubleshoot issues that arose or to provide advanced instruction on using the technology. Ben suggested that this situation arose because academics were not using the technology regularly, probably due to time constraints, which hindered their ability to develop their competence fully.

> *Very few of them have the time to start to master technologies that are not directly relevant to their job. (Ben, Student, Beta University)*

Students pointed out that some of their online units were so basic in their design that it caused them to question the academics' credibility in teaching the subject. Melanie observed that "some of her lecturers did not seem to want to try to use new technologies and did not appear concerned to be out of touch". Melanie reported that as a part-time student who was working, this was a particular problem with professional units where students wanted to learn the latest technologies appropriate for their careers, but felt at times that they knew more than the academics.

> *This is particularly bad for professional subjects as we are working and we are pursuing qualifications so that we can get on in our careers, but often we feel like we know more – or at least are more current – than the supposed experts. (Melanie, Student, Alpha University)*

Surprisingly, academics did not mention e-competence in their responses at all, and the reason for this omission remains unclear. There are a few possible explanations for this. Firstly, it could be that academics were completely confident in their e-competence and saw no need to discuss it. Alternatively, it's possible that e-competence was a topic they avoided discussing,

much like an “elephant in the room” because they lacked confidence. Lastly, it could be that academics felt uncomfortable discussing e-competence with the interviewer, perceiving them as someone proficient in e-learning.

From the data, e-competence emerged as encompassing three aspects: proficiency in using the university’s LMS, confidence with the techology, and the ability to adapt to and manage technological changes. Academic e-competence was a concern for LDs, LLs, and students. LDs emphasised the need for academics to develop their e-competence and not delegate e-learning implementation to LDs. The definition of e-competence varied among LDs, with some highlighting the importance of LMS proficiency for effective online teaching, while others emphasised the role of experience, confidence, and continuous professional growth in incorporating innovative technologies. The manner in which academics utilised technology and their understanding of optimising the e-learning experience impacted student engagement. Some academics faced barriers in developing their e-competence, such as discomfort with technology, resistance to online teaching, and a lack of pedagogical knowledge. Students expressed concerns about variations in academic e-competence, which affected their learning experiences, such as technical difficulties in recordings, mismanagement of online chat sessions, and the use of outdated technologies.

4.3.2 Digital Narrative

The term digital narrative in this study refers to the stories that academics appear to internalise about their e-learning capability that impact their ability to engage with e-learning implementation. Responses showed that e-learning implementation was entwined with the identities of the different stakeholders, which then affected their mindset towards implementing e-learning. Theresa observed that some academics would claim, “I can’t do technology; I’m a Luddite”, and close their mind to the possibility of learning new skills. She found this deficit mindset approach to be limiting and wished that academics would be more open-minded when it comes to acquiring new skills for e-learning implementation. Theresa believed that adopting a growth mindset, where one acknowledges a lack of knowledge but maintains the belief in the ability to learn, is more conducive to embracing new concepts. She emphasised that it is more about having the right disposition rather than a specific skill set.

> *It’s a very affixed mindset way of speaking. Whereas approaching a new concept or area going, ‘hmm, I don’t know anything about this, but I think I can learn’ is more a*

growth mindset. So, I think it's very much about a disposition rather than a skillset. (Theresa, LD, Beta University)

These findings align with Dweck's (2014) theory that revolves around the concept of a "growth mindset" versus a "fixed mindset". According to Dweck (2014), individuals with a growth mindset believe that their abilities and intelligence can be developed through effort, perseverance, and learning from mistakes. They view challenges as opportunities for growth and embrace the idea of continuous improvement. In contrast, those with a fixed mindset believe that abilities and intelligence are fixed traits, leading to a fear of failure and a tendency to avoid challenges. Dweck's (2014) research highlights the importance of fostering a growth mindset, as it contributes to increased resilience, motivation, and achievement. She emphasises that individuals can cultivate a growth mindset through self-reflection, understanding the power of effort, and embracing a love for learning.

Theresa further described how she had experienced the academic fixed mindset directly when she taught an innovative online unit to academics. While widely acknowledged as a great pedagogical design, the unit was unsuccessful because the academics did not engage with it. Theresa realised this was likely because the unit she had designed was too far removed from academics' frame of reference and they could not "make the leap to engage". She reflected that she should have designed the unit to challenge the academics a little, although not so much that they felt unable to shift their view.

People have their entire life had a certain paradigm of higher education, and when they come into a different environment, they don't know what to do. (Theresa, LD, Beta University).

Furthermore, some academics' limiting digital narrative prohibited them from asking LDs for help. Theresa noted that discussing pedagogy for some academics, unless they had an educational background, could be problematic because it seemed to challenge their identity as the expert. In contrast, asking LDs for help with technology issues rather than learning and teaching matters was less challenging.

Academics have no problem with saying I can't do technology, so that this person will help me. But it really challenges their identity to say; I'm not good at teaching and learning. (Theresa, LD, Beta University)

Local leaders agreed with LDs that some academics would resist asking for help because their identity as the subject expert meant they were uncomfortable admitting they were

not a technical expert. Harry commented that the development of e-competence is closely tied to people's professional identity, sense of agency, and self-worth, making it a complex and sensitive process.

> *It is important to people's identity, their professional identity, their sense of agency and self-worth; all those things come into it, and so it can be very tricky. (Harry, LL, Beta University)*

Theresa described how LDs had to navigate between the different roles of the pedagogue and technologist when working with academics. This was so LDs could develop relationships with academics in areas that were not particularly challenging initially, so they could provide support and assistance in more complex aspects of e-competence at a later stage when relationships and trust had been established.

> *LDs do end up being the meat in the sandwich and working hard to try and find ways to build relationships with staff in the domain that staff don't find challenging. (Theresa, LD, Beta University)*

Freya reported that it was difficult to encourage more senior academics to embrace the implementation of e-learning. Often wedded to face-to-face teaching or print-based distance learning, some academics, towards the end of their careers, wanted to avoid embracing change and learning new ways of teaching.

> *Things are so slow to change, and it's so heavily based on historical, you know, I teach the way I was taught and teach what I learnt and so on and so forth. (Freya, LD, Alpha University)*

Both LLs and LDs shared their thoughts on their perception of their students as "digital natives" (Prensky, 2001a). Prensky (2001a) coined the term "digital natives" to refer to individuals who have grown up in the digital age, surrounded by digital technologies from a young age. According to Prensky (2001a), digital natives are characterised by their familiarity and comfort with digital tools and technologies, as they have been exposed to them throughout their lives. He suggests that digital natives have developed a unique cognitive style shaped by their constant interaction with technology, which sets them apart from "digital immigrants" who grew up before the advent of widespread digital technology. John, a LL, reflected on a misconception held by himself and some of his colleagues that their students were "digital natives". However, he realised that it was important to remember that the students at his

university were often of similar age to academics and not necessarily more proficient online than the academics were.

> *We wrongly assume that our students are digital natives when in fact, many of our students are of similar age to academics (not in their twenties), and so they are not necessarily any more competent (with educational technologies) than academics are. (John, LL, Alpha University)*

Theresa, a LD, observed that some academics, perceiving themselves as digitally inept or resistant to change, and assuming that students were digital natives, overlooked the need to support students in developing their online learning skills. However, Theresa noted that this assumption was particularly inaccurate for the majority of students at her university, as they were primarily mature learners. Even for the younger cohort, they might possess competence in specific online activities, such as using social media or specific smartphone apps, but when it came to the online learning environment, they often encountered significant challenges.

> *We have a majority mature age cohort, so we're not dealing solely with the 18-year-old school leavers that many universities are, but even for those people, they're actually a lot of people who have competence in a specific way online. So, they will be accustomed to using social media in a certain way to connect with their peers and family, and they might be accustomed to using certain apps on their phone, but when they enter the online learning space they really struggle. (Theresa, LD, Beta University).*

To conclude on the theme of e-competence, academics' perception of their digital skills significantly influences their engagement with e-learning implementation. Some academics have a fixed mindset concerning their digital skills and resist learning new ones. The development of e-competence is a multi-faceted process intertwined with professional identity, agency, and self-worth. Some academics find it challenging to discuss pedagogy with LDs as it challenges their identity as experts. Learning designers assume a dual role as pedagogues and technologists, building relationships and providing support to academics. More senior academics may resist embracing e-learning due to a preference for traditional methods. It is crucial not to assume that students are digital natives; they require support for their online learning skills. Even younger students proficient in specific online activities may encounter challenges in the online learning environment.

4.3.3 Self-Efficacy

Self-efficacy refers to the belief in one's ability to succeed in specific situations or to accomplish particular tasks. It plays a significant role in motivation, decision-making, and performance (Bandura, 1986) and is a critical factor in online teaching (Eberle & Hobrecht, 2021). Instructors' self-efficacy impacts the quality of teaching by way of the technology-related challenges encountered, the unfamiliarity of online pedagogical aspects, doubts about the quality level of online learning, and the lack of face-to-face interactions (Eberle & Hobrecht, 2021) Academics, LLs, and students all expressed the importance of self-efficacy when implementing e-learning. Taking personal responsibility for learning how to do new things online was viewed by academics as an enabler when implementing e-learning.

Jo, an academic, expressed her desire to continually improve her knowledge and skills in teaching and learning. Jo highlighted how her personal experience as an online student had increased her motivation to enhance her e-learning capabilities. Having firsthand experience as an online student made her more aware of the challenges that students face in the online learning environment. Jo's empathy for her students and her recognition of the difficulties they may encounter drove her to maximise her students' learning potential in her classes.

> *"I am always happy to learn more about learning and teaching and doing that better. Partially because I've experienced it as a student, and I know that it can be a really difficult experience. So, I want to be sure that students are feeling that they're getting a fair chance to really learn all that they can in the classes. (Jo, Academic, Alpha University)*

Mike suggested that "practice makes perfect" regarding knowing what to include, what to exclude, and how to technically build his online units. He noted that viewing his colleagues' sites revealed significant variation in the effort expended regarding their online units. He observed that some academics were committed to creating as engaging an online unit as possible, whilst others did the minimum that they had to.

> *Some academics are into updating their site, having as much interactive material as they can, whereas other colleagues are doing the absolute basics and only make improvements when mandated. (Mike, Academic, Beta University)*

Mike complained, however, that complete autonomy regarding the design of his online units was not always possible. He described how he experienced resistance to acquiring specialist software to develop an animated case study, so he purchased it himself.

I asked for permission to purchase the cartoon video software. But was denied it. It wasn't expensive; I think it was about $60 or $70, so I paid for it myself, but if it was thousands of dollars, I wouldn't. (Mike, Academic, Beta University)

Local leaders were concerned about how some academics appreciated the affordances of e-learning yet were nevertheless reluctant to spend time developing their capability. Harry observed that some academics' interest in implementing e-learning waned when they realised the changes they might need to make to their teaching practice and the time it might take to make those changes.

Academics say oh yeah, we should do more online, you know, the internet, it's amazing, there's so many things you can do with the internet. We should look at that. But it's sort of like a passing interest, and when you say, well, actually, you might need to carve out four to six hours a week over the next weeks. You need to look at rearranging the way you do things professionally in the classroom and outside of the classroom, and it's like, 'well, maybe not this term because I'm really busy, I'm like teaching. (Harry, LL, Beta University)

Students emphasised the importance of self-efficacy when seeking help from their lecturers online. They expressed that it could be more challenging to reach out for assistance when studying remotely than when studying in person. Nick reported a tendency to work out things independently rather than ask for help. He gave an example of not contacting his law lecturer for quite a while, although he needed help with the subject. Once he did contact the lecturer, however, he reported finding it helpful as the lecturer was friendly and supportive.

I got to speak to [name of lecturer]. His subject was bloody tough, but when I spoke to him, he was approachable, and I could speak to him about it. We started chatting about other stuff, you know, it was good. (Nick, Student, Alpha University)

Melanie reflected on the need to take personal responsibility for thinking carefully about the lecturer's responses to questions she had posted on the forums. At first, she felt her questions posed to academics on the forum or via email were not satisfactorily answered. However, when she thought more about the answer she had received, she often found that the response was there. Melanie also reflected that she could contact her lecturers for help more often than she did.

You know, there have been times when I've thought, 'Well, you haven't answered my question,' but then I've gone for a walk, and I've come back, and I think, 'oh well you

did, maybe not as directly as I would have liked you to but yeah, the answer is there'. (Melanie, Student, Alpha University)

These findings support the research conducted by Eberle and Hobrecht (2021), which suggests that instructors' belief in their ability to succeed (self-efficacy) influences the effectiveness of their teaching. This influence is observed through the challenges they face with technology, their unfamiliarity with online teaching methods, their doubts about the quality of online learning, and the absence of face-to-face interactions.

To summarise, self-efficacy, namely the belief in one' s ability to succeed in specific situations or tasks, is a key factor influencing motivation, decision-making, and performance. In the realm of online teaching, academics' self-efficacy plays a significant role and is influenced by challenges related to technology, unfamiliarity with online pedagogy, doubts about the quality of online learning, and the absence of face-to-face interactions. The importance of self-efficacy in implementing e-learning is recognised by academics, learning leaders, and students alike. Academics highlight personal responsibility as an enabling factor, motivating them to enhance their e-learning capabilities. However, efforts in creating engaging online units vary among academics, with some going beyond minimum requirements while others stick to the basics. Autonomy in designing online units may be limited, prompting academics to personally invest in tools or software. Some academics initially express interest in e-learning but become hesitant when they realise the necessary changes to their teaching practice and the time commitment involved. Students also value self-efficacy, particularly when seeking help in the context of e-learning, although they may find it challenging to reach out due to the remote learning environment. Taking personal responsibility for understanding lecturer responses and reflecting on them is also emphasised by students for effective learning.

4.3.4 Professional Learning

In this study, professional learning refers to the ongoing process of acquiring new knowledge, skills, and competencies that are relevant to one's professional role within the academic community. It involves activities and opportunities aimed at enhancing teaching effectiveness, research proficiency, administrative abilities, and other professional responsibilities. Professional learning in a university setting often includes formal and informal activities such as attending workshops, conferences, seminars, and webinars; engaging in collaborative projects; conducting research; participating in professional development

programs; and staying updated with advancements and best practices in one's field. The objective of professional learning is to facilitate ongoing growth, improvement, and innovation in different facets of an individual's professional practice within the university setting. Fullan (2016) and Loughland and Ryan (2022) emphasise the importance of collaborative professional learning as a means to drive educational improvement and achieve positive outcomes for students. It involves educators working together, sharing knowledge, reflecting on their practices, and engaging in collaborative inquiry to improve instructional strategies and student learning outcomes. Additionally, Forbes and Walker (2022) highlight that professional learning for online teachers should also be situated, flexible, active, social, and creative in order to be sustainable.

Academics did not discuss the need for professional learning to support their e-learning implementation. However, one academic, Kay, expressed concerns about the teaching experience of presenters in professional learning seminars that she had attended at her university. According to Kay, these presenters lacked a sequential approach to their presentations and instead provided fragmented content without building skills and knowledge throughout the session. Kay noted that poorly structured sessions could limit learning opportunities and act as a barrier to e-learning implementation.

> *As soon as they start, you know they're not trained teachers, or they are not experienced teachers because they don't have a structure to their presentation. They don't start at the beginning and build skills and build knowledge throughout the session; you know, it's just spot fires of content. (Kay, Academic, Alpha University)*

Kay's comment about presenters' lack of teaching experience aligns with the findings of Reid (2014), who highlights that a lack of pedagogical background among presenters can lead to professional learning sessions that are shallow, short-term, and non-sequential in nature. Kay also complained about the inconvenience of scheduling professional learning seminars during teaching times rather than in the break, making it difficult to attend.

> *They keep putting things on, you know, at the most ridiculous times of the year, and it's out of sync with the ebbs and flow of the teaching year. (Kay, Academic, Alpha University)*

One possible explanation for the absence of academics referencing their attendance in professional learning (PL), as indicated by Sidhu and Gage's (2021) research findings, is that academics who embrace e-learning are more inclined to participate in university-provided PL

sessions, and vice versa. In the case of Kay, who appears to have reservations about implementing e-learning, their lack of attendance aligns with Sidhu and Gage's (2021) findings, suggesting a correlation between attitudes towards e-learning and participation in PL.

In contrast to academics, LDs talked about PL in-depth and considered PL crucial for academics to facilitate their e-learning capability. Additionally, LDs emphasised the importance of providing contextualised PL that aligns relevant e-learning approaches and technologies with specific academic disciplines. Hannah noted the importance of integrating 21st-century learning skills into the disciplines in which academics were most actively involved.

> *It's really key in our world today that 21st-century learning skills are actually incorporated into the discipline you are actually engaged in. (Hannah, LD, Alpha University)*

These findings are consistent with the idea that professional learning must be based on the actual learning and teaching contexts of academic staff; otherwise, it does not help academics to transfer knowledge into the future practices of learners (Conole, 2010; Reid, 2014).

Furthermore, Hannah argued that LDs must be mindful of the unique characteristics and requirements of different disciplines when delivering PL seminars. She noted that academics utilise e-learning technologies differently based on what is deemed most valuable in their respective fields. Hannah provided an example from the School of Computing and Mathematics at her university, where privacy and security were significant concerns. She explained that when proposing strategies involving social media or third-party technologies, she had to ensure that they would not compromise the privacy and security of student information. This consideration was particularly crucial in the School of Computing and Mathematics due to is focus on research and expertise in the area.

> *In the school of computing and mathematics, they had a real issue about privacy and security, and I had to make sure that whilst I did encourage the use of social media or even third-party technology, I had to make sure the strategy I proposed would not, in their eyes, compromise the privacy and security of their student information. Which I think is quite common across any discipline. But in the school of computing and maths, it was key because it was their main area of expertise in terms of research. (Hannah, LD, Alpha University)*

Hannah's comments about the relevance of technology to the discipline align with the findings of Newland and Handley (2016), namely that academic staff need to decide what technologies to use for their disciplinary practices and needs.

Learning designers advocated for academics to regularly attend professional learning seminars to stay updated on new e-learning tools and technologies that could enhance their teaching practices. However, LDs also acknowledged a potential risk wherein academics might become overly reliant on a specific technology, leaving them adrift if that technology is eventually replaced by something new. Hannah emphasised the importance for academics to remain aware of technological advancements to avoid falling behind due to the dynamic and rapidly evolving nature of e-learning. Hannah emphasised that academics cannot rely solely on one technology, such as discussion forums, throughout their entire teaching careers. There are various other platforms and arenas where discussions and interactions are taking place, and academics need to be aware of these alternatives.

> *E-learning is a fast-developing, evolving area. You cannot stick to discussion forums for the rest of your teaching life, there are other platforms, other arenas where discussion forums are happening, and you need to be aware of that. (Hannah, LD, Alpha University)*

The provision of sustainable professional learning support was also important for LDs. Alice argued that academics need long-term support mechanisms to help them to take the lead in implementing e-learning. It could not be a "set and forget one-off professional learning session" (Alice, LD, Alpha University). It needed instead to be an ongoing journey. Hannah also talked about sustainable PL and provided an example involving an academic who initially wanted to use email instead of a discussion forum, even though the latter was a more suitable choice. To ensure a sustainable PL strategy, Hannah provided support for the academic throughout the semester. Her goal was to assist the academic in effectively incorporating discussion forum technology into their teaching practice. Hannah established support mechanisms that allowed the academic to take the lead and implement a discussion forum strategy. This involved having regular meetings with the academic every two weeks during the course delivery to discuss the progress and effectiveness of their discussion forums. The objective was to guide the academic in adopting the practice and helping them realise that the strategy didn't need to be overly complex but instead focused on sustainability.

So, it was a matter of creating support mechanisms so that he would take the lead and implement a discussion forum strategy. So, that meant having a meeting with him during the delivery of the subject every fortnight to discuss how his discussion forums are going. And it was getting him into that practice and getting him to realise it didn't need to be this elaborate strategy, but it needed to be a sustainable strategy. (Hannah, LD, Alpha University)

Beth, another LD, pointed out that the e-learning professional learning seminars offered at her university were not ideal. These seminars primarily focused on what was immediately necessary for the upcoming teaching session without addressing the specific needs of the academics. Moreover, the just-in-time delivery approach meant that academics did not receive a holistic understanding of the potential affordances and benefits of e-learning. Beth expressed concern that the university's approach did not involve effectively introducing and promoting the benefits of educational technology or e-learning to academics. Instead, the focus was solely on quickly diving into practical aspects without building a foundation or providing ongoing support for developing skills in e-learning. She also commented that there was a lack of commitment to continuous professional learning as academics progressed in their careers.

We don't necessarily take people on board and tell them about the benefits of educational technology or e-learning or why we think a particular educational technology is good – we just sort of plough straight on into it. We don't have an ongoing commitment to building their skills in e-learning or to ongoing professional learning as people move through their careers. (Beth, LD, Alpha University)

When delivered as group sessions, the effectiveness of professional learning seminars in building academic e-competence raised concerns among LLs. John highlighted the inherent challenges of running a workshop for groups of 30 participants. Without assessing participants, it was difficult to gauge how much information they retained. John acknowledged that attendee evaluation would be unpopular.

You can only achieve so much in running a workshop that 30 people attend collectively because at the end of the day unless you do an exam or put them through a text or something – and there's some case for doing that, but I'm sure there'd be lots of opposition – you have no idea when they walk out of that room how much of it has stuck so to speak. (John, LL, Alpha University)

Local leaders highlighted that attendance at professional learning seminars was often low. John highlighted a possible reason for the lack of attendance in professional learning sessions, which was the need for more data on academic performance in online teaching. Local leaders faced challenges in providing professional learning that truly met the needs of academics because they lacked an understanding of academics' specific requirements. Without access to this information, conducting a thorough needs analysis became impossible. Quantitative data such as student classifications, progression, and attrition were generally available. However, qualitative feedback from students about their experience of learning and teaching within their units was only available to the academics and their line manager, usually the Head of the School.

Academics had varying opinions on whether they preferred to keep qualitative feedback private or openly discuss it with LDs to receive guidance for improvement. Moreover, many academics felt uneasy about their university's student evaluation survey process, as they perceived it as unfair scrutiny. Some academics were so concerned about student evaluations that they would invite union members to accompany them when discussing their student feedback with their line managers. John acknowledged the situation's sensitivity, declaring he wished it was otherwise, as the data would be helpful to understand what specific professional learning staff needed.

> *We really lack data on how well we're doing. I guess it's always when you get into this space, and people think it's Big Brother out to get the academic, and people like unions get involved and jump up and down. But really, I think we need something like that to be able to help staff. (John, LL, Alpha University)*

Lucy, another LL, offered another reason for low attendance at PL seminars, which was that the pedagogical rationale for why an academic might utilise a particular technology in their teaching was rarely addressed. Instead, Lucy observed that professional learning seminars at her university focused on using a specific technology. She asserted this was unnecessary as there were plenty of online help and technology-focused trainers to help academics.

> *Academics don't understand pedagogy "the why". Why you'd want to use…you know, a virtual classroom, the Zoom session in your units. That's the question people need most help with. There is plenty of help on how to use a particular technology, we have a Trainer to do that, and there's plenty of materials online. (Lucy, LL, Beta University)*

Harry discussed how his university promoted a DIY professional learning strategy for academics, which manifested as brief training events targeted toward explicit technologies and their affordances. Then, after training, it was up to the academics to translate the technology into their teaching practice. Such a DIY approach, Harry contested, might work for some, but it did not work for academics who required more individual support.

> *So, we give them some PD, some short sessions, maybe a half day, some training on specific applications and possibilities, and then they're on their own, and it's like, 'do it, go teach online', and sometimes that works really well, and sometimes it doesn't work so well. (Harry, LL, Beta University)*

Local leaders claimed that providing professional learning about e-learning was easier when a school-based LD was available to work with academics. Hilary suggested that a locally based LD, particularly one with good interpersonal skills, could work one-on-one with academics, focusing on their professional learning needs. Additionally, the LD could show the academic what pedagogical approach was appropriate and match the technology to the unit's learning outcomes, thereby building the academic's capability and confidence. Hilary suggested that a capable LD could develop a good working relationship with academics and help them visualise the possibilities and improvements for themselves and their students.

> *An ED who was innovative, technically really competent and also had the kind of disposition that could win academics over and help them enough to believe that what was going to happen was going to be a better outcome for the students and for them. (Hilary, LL, Alpha University)*

To further improve the impact of e-learning PL, LLs advocated for one-on-one support from LDs as an effective way to enhance academic e-competence. John acknowledged that this individualised approach was labour-intensive and hard to resource. However, he suggested that it needed to be at least part of the professional learning solution to support the development of staff e-competence. John believed that adopting a customer service-oriented approach from LDs to academics could work well. He proposed that providing academics with one-on-one support from an LD, similar to a patient-doctor consultation, would be an excellent method for improving their e-learning capabilities. This personalised approach would involve LDs working closely with academics, understanding their specific needs and tailoring support accordingly.

One-on-one support for academics from an LD, almost like a patient-doctor consultation, would be a great way to improve academics' e-learning capability. (John, LL, Alpha University)

Lucy also supported the idea of establishing individual coaching-type relationships between academics and LDs, but she believed that senior leadership endorsement was necessary for its success. She suggested that academics' line managers should mandate that academics work with LDs, as LDs could not compel academics to work with them if they were unwilling. Lucy explained, however, that simply providing technology to academics without proper guidance and support would not solve the underlying issues. Acquiring a software license was not the problem; the challenge lay in encouraging people to effectively utilise the technology and allocate time to explore its potential.

I don't think just putting the technology in front of somebody ever helps. The technology's not the problem; we can buy a licence that's easy. Making people use it, use it well not…or not even just use it well if you use it all and get the space to look at it, um, that's the hard bit. I think the solution is probably one-to-one LD with academics. But, of course, this raises the issue of authority vs responsibility. It needs to be supported from higher up. (Lucy, LL, Beta University)

Local leaders also noted a contradiction in some academics' disposition towards working with LDs. Academics oscillated between not wanting LDs to dictate what changes to their units should be made and wanting LDs to make changes for them. Hilary claimed the oscillation between embracing or rejecting professional learning support from LDs was directly related to uncertainty about the changes they needed to make when implementing e-learning.

There's something about people being fearful of change; people sometimes feeling insecure that they might not know what the answers are, so therefore, they are resistant; they want someone else to provide them…to say we could do x, y and z. (Hilary, LL, Alpha University)

Harry pointed out that some academics displayed a tendency to shift responsibility to LDs in certain pedagogical decisions, such as modifying marking criteria for a course. Some academics felt apprehensive about making such changes and preferred for LDs to implement them. On the other hand, when it came to making content more accessible for online teaching, some academics resisted collaborating with LDs. This oscillation between extremes was characterised by a possessive mindset, where academics considered their content as precious

and solely their responsibility. However, at other times, academics relinquished decision-making authority, believing it to be the sole responsibility of LDs, to implement a task such as determining the marking criteria.

> *So, they swing from this is mine, all mine, it's my precious, you know, so their content is their precious – through to 'oh no, this is all your responsibility, I can't possibly take a decision like what we'll mark it out of… (Harry, LL, Beta University)*

In summary, LDs and LLs collectively considered PL as essential for academics to develop their e-learning capability. In contrast, only one academic mentioned PL, but only in relation to expressing concerns about poorly structured sessions and inconvenient scheduling, which hindered their engagement in professional learning. Learning designers emphasised the importance of contextualised professional learning that aligns with specific academic disciplines, considering the unique characteristics and requirements of each field. They also advocated for long-term support mechanisms and individualised coaching relationships between academics and LDs to enhance e-learning competence. Low attendance at professional learning seminars was attributed to the lack of pedagogical rationale, focus on specific technologies and a DIY approach. Local leaders highlighted the need for more data on academic performance in online teaching to tailor professional learning effectively.

4.3.5 Elbow Support

"At-the-elbow support", as defined by Feist and Reid (2017, p. 87), refers to the provision of timely and effective technology professional development support to teachers. Its purpose is to enable teachers to concentrate on supporting students rather than dealing with technical issues and troubleshooting. However, it became apparent in this research that LLs and LDs utilised the expression "elbow support" as a term for an individual – usually a LD – who provides dedicated assistance and support to academics with e-learning and related technologies. The LD is typically located nearby (or online) and is readily available to assist as needed.

Mike, an academic, considered that whilst it was important to know how to build his online unit himself, it was valuable to have learning and teaching support staff available to help with more technical aspects.

> *I try and learn as much as I can in terms of doing things myself, so, the Interact Home Page using Adobe Captivate, I didn't know how to do those initially. Now I'm confident*

in doing them, but I don't want to do every single aspect of the design of the site, so certain aspects I let the EDs or ESCs do. (Mike, Academic, Beta University)

Learning designers also believed that "elbow support" for academics was an essential enabler in implementing e-learning for two reasons. Firstly, it acknowledged that it was acceptable not to "get it right the first time" (Penny, LD, Alpha University). This understanding relieved the pressure on academics and motivated them to explore new e-learning approaches without fear of failure. They could experiment and take risks, knowing that the LDs were available to provide support and assistance if anything went wrong.

I think a lot of the time, if you can give them [academics] immediate support, you can make them feel like they can do something. If they stuff it up, it's not a problem because you can be there to help them. (Penny, LD, Alpha University)

Secondly, LDs identified that academics were more likely to try something new if they felt supported in doing so. The presence of "elbow support" increased the likelihood of academics persevering and trying again, even when faced with challenges and setbacks. Freya noted that most people who try something that does not work as expected are less likely to attempt it again, making it difficult to re-engage individuals to try new approaches.

Most people are the same. They will try something, and if it doesn't work, they won't try it again, and then it's hard to get people back on board. (Freya, LD, Alpha University)

Learning designers reported that lack of finances were a barrier to providing academics with more "elbow support" at their university. A strategy for saving money by providing other institutions' training videos on how to use a new LMS rather than bespoke recordings resulted in suboptimal training. Additionally, too few face-to-face professional learning sessions were provided, making it even more difficult for academics to learn how to use their institutions' LMS effectively.

It's sad that we don't have all our own professional development. You know, short sharp videos, short sharp how-to do things that are embedded in our version that showcase our university using it rather than relying on generic BlackBoard or another university. (Freya, LD, Alpha University)

The question of how to provide more elbow support and how to create space for academics to embrace new technologies was seen as a challenge by LLs. Lucy observed that some academics, whilst open to learning about implementing e-learning, declared they could

only do so if they could drop something else and even then only if they had learning design support.

> *Tell us what to drop if we look at something new and how you are going to support us with it. We need elbow support…and we don't have the time to learn yet another technology or yet another toolset or even changes to toolsets. (Lucy, LL, Beta University)*

Harry expressed concern that there were just not enough support staff at his university to assist academics with implementing e-learning. More specifically, he claimed his university needed experienced LDs who could support academics individually with their capability building for up to a year.

> *A key barrier to capability building is lack of human resources. So, experienced educational technologists and LDs who have been set aside to sit with academics for 3-12 months to establish strategy capability, building templates, on-the-spot guidance, all that kind of thing. (Harry, LL, Beta University)*

Students emphasised that while learning technical skills in addition to discipline-specific content was valuable for their university studies and their workplace, they needed more support to obtain those skills. When they had to figure out how to utilise technology too much on their own, students believed it was a barrier to their e-learning. Nick, for example, declared that he found it challenging to develop the necessary academic and technical skills to complete all the requirements of an assignment simultaneously.

> *When you've got to pick up a skill set that isn't necessarily a skill set needed to understand a particular field, but you've got to present your learnings or what you want to be able to communicate on a platform you know nothing about, like PowerPoint or through a spreadsheet and formulas, that is where it's a challenge for me. (Nick, Student, Alpha University)*

Melanie expressed her belief that students are capable of figuring out how to use technologies on their own. However, she also emphasised that additional support from lecturers would be welcomed. By receiving proper instruction, she explained that students would be able to save valuable cognitive energy that is currently expended on independently figuring out technology-related challenges.

> *I think we do a brilliant job of figuring things out, but we could be so much better. We could be better, and we could not expend all that cognitive energy trying to figure*

something out if somebody would just give us a little bit of formal training. (Melanie, Student, Alpha University)

Melanie noted a double standard in the expectations placed on students compared to academics when it came to technology proficiency. While students were frequently required to meet digital graduate learning outcomes in multiple units, a similar expectation did not seem to apply to academics. This observation led Melanie to question whether lecturers were receiving any support or assistance to develop their digital literacy skills.

We, you know, talk about making the students digitally literate; we're doing nothing to help the academics be digitally literate. (Melanie, Student, Alpha University)

While academics value the importance of being self-sufficient, they also appreciate the availability of learning and teaching support staff to aid them with technical aspects. LDs believe that such support is crucial for academics to successfully implement e-learning, as it relieves pressure, encourages exploration, and provides assistance in case of setbacks. Financial constraints pose a barrier to providing sufficient elbow support, resulting in suboptimal training and limited face-to-face professional learning sessions. Furthermore, learning leaders face the challenge of creating space and support for academics to embrace new technologies while juggling existing responsibilities. Limited availability of experienced LDs further hampers the provision of adequate support for implementing e-learning. Students, on the other hand, express the need for more assistance in acquiring technical skills alongside their subject-specific content, finding the lack of support to be a barrier to their e-learning experience. They believe that receiving proper instruction from lecturers would save valuable cognitive energy currently expended on independently solving technology-related challenges. Moreover, students observe a double standard in technology proficiency expectations between themselves and academics, questioning whether lecturers receive support in developing their digital literacy skills.

4.3.6 Workload Allocation

Workload allocation refers to how an academic's working hours are allocated to specific roles and responsibilities throughout an academic year. Workload allocation played a significant role in the experiences of academics, LDs, and LLs when implementing e-learning. Mike explained that when it came to teaching a brand-new subject that he had not taught before, there was no workload allocation provided for designing the new course.

If it's a brand-new subject you're teaching, in other words, I haven't taught the subject before; you certainly don't get any workload allocation for designing it yourself. (Mike, Academic, Beta University)

Insufficient workload allocation raised a significant concern regarding work-life balance. According to Mike, teaching online blurred the boundaries between work and leisure, leading to a sense of responsibility towards students even when he was not working.

In some ways, with e-learning, I think you are always sort of, at least I feel, always on standby to some extent. (Mike, Academic, Beta University)

Student demands could be disproportionate to the workload allocation academics received to teach a unit, and academics found they had to work weekends and evenings to fulfil their duties. Mike reported that the volume of student emails and forum postings, coupled with students' expectations of a quick response, was onerous. It caused him to feel under pressure to be available at all hours to respond to students queries.

Generally, my experience is, students want responses pretty quickly, and a response such as I'll get back to you next week about this, which I don't do, but I know some lecturers do, certainly from their perspective, would not be satisfactory. So, the disabler is it's part of your life, not seven hours a day but to some extent all your waking hours every single day. (Mike, Academic, Alpha University)

To help manage their workloads, choices had to be made between how academics would like to implement e-learning versus what was possible within their time constraints. One academic, Kay, reasoned that she was more motivated to create e-learning resources for units if they had durability.

If you can foresee some longevity in the material or in your actual teaching of the material, then I think there's more motivation to produce good quality resources. (Kay, Academic, Alpha University)

Theresa, a LD, highlighted a common issue for academics was when their manager expected them to redesign units without providing sufficient time within their workloads to fully engage with the task. Theresa observed that although this problem was widely acknowledged at her university, it had not been effectively addressed, making it a significant unresolved challenge.

It's a real elephant in the room in that everyone wants to see change but it is something that we have not effectively addressed yet. (Theresa, LD, Beta University)

The issue of insufficient workload allocation for academics implementing e-learning was also prominent in the responses of LLs. A key complaint from Harry was that academics were not allocated enough time to work with a LD to implement e-learning that was innovative or of quality. He pointed out that to develop innovative e-learning implementation, academics and LDs needed to spend a reasonable amount of time together rather than brief slots of time here and there.

The SMEs (Subject Matter Experts) need to have time away from their regular teaching responsibilities because it really does take time, and good innovative development requires a good LD to sit down with the SME for quality amounts of time over an extended period. They can't give you a brief for an hour on a Tuesday afternoon and then come back in three months and say, 'Is it done now?' You know, that's not realistic. (Harry, LL, Beta University)

Although workload allocation and release from teaching were considered important steps in implementing e-learning, they were not viewed as a complete solution on their own. Harry noted that even if teachers were given sufficient time for implementing e-learning, there was no guarantee that they would actually utilise that time if they lacked the necessary skills and knowledge. If academics were unsure of where to begin or what their specific tasks were supposed to be, their lack of clarity and direction could hinder their progress in implementing e-learning effectively.

So, there's always a risk if you give teachers relief from their regular duties; they actually still won't get on to the things that you wanted them to do. I've actually seen situations when SMEs are given substantial release from their regular duties, but they don't have the capability, and they go, 'Well, I don't really know where to start' and 'What am I meant to be doing anyway? (Harry, LL, Beta University)

The responses from academics, LDs, and LLs about inadequate workload are an example of how the change from face-to-face teaching to e-learning disrupts academics' established work patterns and does not meet authentic academic workload requirements that are essential to implementing e-learning. This workload issue aligns with the findings of Martins and Baptista Nunes (2016b).

Overall, workload allocation played a significant role in the implementation of e-learning for academics, LDs, and LLs. Insufficient workload allocation for designing new courses emerged as a concern, impacting work-life balance and blurring the boundaries between work and leisure. Academics often found themselves working beyond regular hours to meet student demands and respond promptly to inquiries. Managing workloads required prioritising e-learning implementation within time constraints, with considerations for resource durability. However, the lack of sufficient time allocated for redesigning units and collaborating with LDs hindered innovation and quality. Although workload allocation and release from teaching were important, they alone did not guarantee effective e-learning implementation. Clarity in tasks and the necessary skills were also vital factors for success.

4.3.7 Individual Capability Summary

In summary, individual capability is vital for successful e-learning implementation. E-competence, digital narrative, self-efficacy, professional learning, elbow support, and workload allocation are key factors that influence the ability of academics to embrace and excel in e-learning. E-competence encompasses proficiency in using the university's LMS, digital literacies, and the ability to adapt to and manage technological advancements. It is essential for academics to enhance their e-competence to effectively engage in e-learning. However, some academics face barriers in developing their e-competence, such as discomfort with technology, resistance to online teaching, and a lack of pedagogical knowledge. Variations in academic e-competence can have a direct impact on student engagement and the overall learning experience.

Digital narrative refers to the stories academics tell themselves about their digital skills and their willingness to embrace e-learning. Academics with a fixed mindset regarding their digital abilities may resist learning new skills, while those with a growth mindset are more open to adopting new concepts. The development of e-competence is a complex process tied to professional identity, agency, and self-worth. Some academics find it challenging to adapt to online teaching if it is too far removed from their familiar teaching methods.

Self-efficacy, the belief in one's ability to succeed in specific situations or tasks, is a significant factor in implementing e-learning. Instructors' self-efficacy is influenced by challenges related to technology, unfamiliarity with online pedagogy, doubts about the quality of online learning, and the absence of face-to-face interactions. Academics who take personal

responsibility and have the motivation to enhance their e-learning capabilities are more likely to succeed. Similarly, students also value self-efficacy when seeking help in the context of e-learning, although they may find it challenging to reach out in the remote learning environment.

Professional learning is a continuous process aimed at acquiring new knowledge, skills, and competencies relevant to one's professional role. It includes activities such as workshops, conferences, collaborative projects, research, and staying updated with advancements in the field. Collaborative professional learning and contextualised learning are emphasised in the context of e-learning. However, poorly structured sessions, inconvenient scheduling, and a lack of pedagogical rationale can hinder academics' engagement in professional learning. To enhance e-learning competence, there is a need for long-term support mechanisms and individualised coaching relationships between academics and LDs.

Elbow support, both in terms of timely, effective technology professional development assistance and the dedicated assistance provided by LDs, is crucial for academics to successfully implement e-learning. LDs play a significant role in relieving pressure, encouraging exploration, and providing assistance in the case of setbacks. However, limited availability of experienced LDs due to financial constraints can hinder the provision of adequate elbow support. Students also express the need for more assistance in acquiring technical skills alongside subject-specific content, finding the lack of support to be a barrier to their e-learning experience.

Workload allocation, the distribution of working hours for specific tasks, is another important aspect of implementing e-learning. Insufficient workload allocation for designing new courses can have an impact on academics' work-life balance and blur boundaries between work and leisure. Prioritising e-learning implementation within time constraints, collaborating with LDs, and considering resource durability are essential for successful implementation. Clarity in tasks and the necessary skills are also vital factors for academics to engage effectively in e-learning.

4.4 Teaching

Teaching encapsulates three themes, namely complexity, e-classroom management, and currency. This section describes these three themes in detail in Sections 4.4.1-4.4.3, followed by a summary of the teaching category in Section 4.4.4.

4.4.1 Complexity

Complexity characterises the intricacies of implementing e-learning and the extent of change required of the individuals responsible for implementation. Facilitation of technical skills for students within a subject in addition to the discipline content was perceived as a complexity associated with implementing e-learning. Whilst viewed as extra work for themselves and their students, Jo considered the experience positive. It taught students technical skills and encouraged them to develop problem-solving skills overall, and it increased students' employability. Jo highlighted that she had read research reporting that those students with technical skills and experience obtained through studying online tended to get jobs ahead of students who had only studied face-to-face.

> *There was research that year that said that people who do an online degree end up making, I think, 35 cents more an hour. They had all this technology experience on top of the content that they had covered that they could bring to the workplace, so the workplaces were just drinking them up. (Jo, Academic, Alpha University)*

On the other hand, Kay, another academic, considered that adding interactive resources alongside traditional static text documents within an online unit was a complexity that was not necessarily positive. Kay provided an example of incorporating video clips into her online unit to enhance interactivity. However, she found that some of her students referenced the video clips rather than the academic journal articles, which she considered as laziness on their part.

> *So, I actually put into my sites some YouTube clips, and it was interesting because there were a lot of students who wrote an essay, and instead of referencing the actual article that was in the module, they actually just referenced the YouTube clip. So, you know, sometimes I think the more interactivity, the lazier the students. (Kay, Academic, Alpha University)*

Local leaders discussed how the transience of educational tools, the challenge of designing engaging e-learning synchronous activities, and the issue of bandwidth prohibiting some student access were all complexities of e-learning. John, a LL, also pointed out that as a regional university, some of their very remote students could have an issue with low bandwidth affecting their access to e-learning. How online activities could be designed to consider access issues was a challenge that added further complexity to implementing e-learning.

> *I guess that's the challenge with us as a regional university delivering our courses to parts of Australia which even now have poor internet access. And so you couldn't*

design your subjects with significant e-learning individual components. (John, LL, Alpha University)

Another complexity in implementing e-learning was the need for regular software and infrastructure updates to maintain a smooth and effective online teaching environment. Harry emphasised that if the software became outdated and vendors ceased providing technical support or updates, academics could face challenges in resolving technical issues during their online teaching. Harry shared an example of a successful project he had participated in, which involved developing adaptive e-learning activities using the Smart Sparrow tool for large classes of first-year science students, totalling 500-600 students. Through collaboration among academics, specialised media staff, and software vendors, the project yielded positive results. Evidence-based data indicated that the tool had facilitated student learning. Unfortunately, shortly after the project's completion, the software company, Smart Sparrow, disbanded, and the university discontinued its support for the tool. Harry expressed disappointment over the situation, as the previously successful online learning experience for students was abruptly abandoned, resulting in wasted time and resources.

It was really hands-on learning, and we had the data to show that it really improved threshold learning outcomes in areas where first-year science students really struggled. It was a bit disappointing to find out Smart Sparrow is gonna give up the ghost this year. Our university had invested quite a bit in a small number of Smart Sparrow products. (Harry, LL, Beta University)

John commented that a complexity of online teaching was not being able to make eye contact with students in a virtual classroom. He explained the challenge of creating engaging synchronous interactions in an online environment. John found it particularly difficult to foster student engagement, as some students preferred typing in the chat rather than actively verbally participating. He further emphasised that although activities can be designed to encourage interaction, it is impossible to force students to actively engage. He felt it was easier to achieve interaction in a physical classroom with eye contact compared to the online setting, where students may choose to respond only in the chat box.

You can design activities that you think elicit interaction, but ultimately you can't put them in a headlock and make them do it. It's easy; I think to do that when you've got eye contact in a classroom; much harder to do when you can't see them and they won't speak; they'll just respond in the chat box. (John, LL, Alpha University)

Students' responses shed light on the complexity of e-learning related to student collaboration. Ben recognised the difficulty of striking a balance between students' desires and their actual needs as a complexity of e-learning. He observed that some students adopted an instrumentalist approach to their studies, showing little interest in engaging with technology or interacting online with their peers or lecturer. Their primary focus was on swiftly completing their studies.

> *They want to get their qualifications, and they want to go home. (Ben, Student, Beta University)*

Nick described his struggle with the amount of online reading required. He shared that he found reading from a screen physically uncomfortable compared to reading from a physical book. He attributed this difficulty to the formatting differences between the two mediums. In a physical book, there might be around 15-25 words across an A4 page, whereas on a computer screen, there could be approximately 45-60 words across the page. This increased density of text made the reading process more challenging for Nick, particularly given the substantial amount of reading involved in his subjects.

> *I find reading a book a bit easier than trying to sit there in front of a screen trying to interpret and learn new knowledge. I think, firstly, it's the way it's formatted on the screen on the computer compared to the book because where you might have 15-25 words across the page of an A4 book, you'll have probably 45-60 words across the page. There's a lot of reading to do in these subjects. (Nick, Student, Alpha University)*

Melanie expressed her preference for not having to rely solely on online access to study materials. Instead, she preferred printing out some of the content and annotating it with a pen as she worked through the material. She explained that even though the course content was delivered online, and there were online meetings and discussions, she still enjoyed the process of offline learning.

> *I will still print out the modules so that I can get my pen and write. And so, although the content is delivered online, and there are online meetings, and the discussions happen online, yeah, I still like to learn offline. (Melanie, Student, Alpha University)*

Ben highlighted the convenience of having instant access to online resources. However, he emphasised that despite this, students might still feel isolated or encounter technical difficulties when retrieving the materials. Additionally, they might require assistance in

reaching out to the lecturer to discuss the resources, adding another layer of complexity to the e-learning experience.

> *Nowadays, I can download that resource and read it immediately; you know, the transformation, the conquest of time and space in distance education, is amazing. Now that doesn't mean that there are still not a host of obstacles for distance education students. Isolation from the rest of the community, isolation from lecturers, problems in getting material, I mean, they still exist. (Ben, Student, Beta University)*

Implementing e-learning involves complexities that require significant changes from those involved. These complexities include facilitating technical skills alongside subject content, which can be positive as it enhances problem-solving skills and employability. However, adding interactive resources may introduce complexities if students rely on them instead of more academic sources. Other complexities arise from challenges related to educational tools' transience, designing engaging synchronous activities, limited student access due to bandwidth issues, and the need for regular software and infrastructure updates. Additionally, the virtual classroom environment lacks direct teacher-student interaction, making student engagement more challenging. Student collaboration can be complex, as some prioritise completing their studies over technology engagement. Online reading presents challenges with increased text density and physical discomfort. However, some students still value offline learning by printing out modules and annotating them. While instant access to online resources is convenient, students may feel isolated, encounter technical difficulties, and require assistance in reaching out to lecturers.

4.4.2 E-Classroom Management

In this study, e-classroom management refers to the strategies and techniques that academics use to maintain a productive online classroom. Students were concerned about e-classroom management and emphasised three examples of how inadequate e-classroom management negatively affected their online learning. Firstly, academics' lack of intervention and monitoring of forums resulted in students not receiving guidance on interacting or developing written arguments with their fellow students. Nick noted that he posted regularly to forums and responded to fellow students. In contrast, some other students appeared too worried about upsetting each other to post anything that might be perceived as controversial.

I'm one of the most, probably one of the two most prolific weekly responders to a post. If there's a grade in it but in part, I'll just write stuff, and I'm not even sure if it's 100%, but the idea of the post is to say well, you know, I think you're wrong, Nick, and I'm ok with that, but I think people are a bit hesitant to offend people, other students within that dialogue area. (Nick, Student, Alpha University)

Secondly, students complained that communication issues could occur when academics did not manage online spaces effectively. For example, some academics did not regularly monitor forums, were hard to contact outside the forum, and made it clear that they preferred students to contact them by email only. Students pointed out that communication exchanges could become onerous, and it could also be a problem for students to get help when needed. Melanie criticised some academic forum postings as being difficult to interpret when they were in written form only. She believed a verbal response that included non-verbal cues could aid further understanding.

Some of the responses an academic might give on the discussion board because it lacks all those other nuances, you know they can be quite difficult to interpret sometimes. (Melanie, Student, Alpha University)

Nick also cast doubt on the clarity of written communication, claiming it could be more complex than verbal communication because it was impossible to ask clarifying questions at the point of misunderstanding. Furthermore, he pointed out that composing a written communique took longer than a verbal one, particularly if it was a technical question.

Sometimes it's quite technical the question that you want to ask the person, and you can spend an hour and a half trying to type out the email trying to put together something that reads well, as opposed to a phone call where you can talk backwards and forwards, to gain the answer or further understanding. (Nick, Student, Alpha University)

Thirdly, a criticism raised by students was the lack of guidance from academics on the practical aspects of participating in online tutorials. This led to a situation where students were unsure of how to properly manage their microphones or videos, resulting in distracting background noise that made it difficult to follow the discussion. Nick suggested that it would be helpful if the lecturer explained to students how to mute and unmute their microphones, as well as how to turn their videos on or off. By allowing students to practice these actions before

actively engaging with other students and the lecturer in online tutorials, the overall experience would run more smoothly.

> *Like, it's a part of the process of preparation for the internet class that the teacher takes you through how to mute and unmute, and everyone has a go, and it's really basic. Once that's done and people know how to do it, they're not trying to learn how to do it while the class is going on. (Nick, Student, Alpha University)*

Students expressed concerns about inadequate e-classroom management, highlighting three key issues. Firstly, students felt hindered by the lack of intervention and monitoring in online forums, which deprived them of guidance on interacting and developing arguments with their peers. Secondly, communication problems arose when academics did not effectively manage online spaces, making it challenging for students to seek assistance and understand written forum posts. Thirdly, students criticised the clarity and complexity of written communication compared to verbal interaction, as the former lacked non-verbal cues and the opportunity for immediate clarification. Lastly, the absence of guidance on practical aspects of online tutorials, such as microphone and video management, resulted in distracting background noise and difficulties in following discussions. Addressing these concerns through proactive management and clear instructions can enhance the online learning experience for students.

4.4.3 Currency

In the context of this study, the term "currency" refers to how up-to-date and accurate the information or content is in reflecting the current knowledge, data, or trends related to a specific topic. Students expressed their concerns regarding the content of certain university units, stating that it lagged behind professional practice. They found that some units contained outdated content, including learning activities and assessments that felt inauthentic, and failed to recognise their professional knowledge and experience adequately. When outdated content was coupled with a lack of discipline-specific technical knowledge, it not only frustrated students but also undermined the credibility of the academics.

Ben, a student, shared an example from one of his units where students were assigned a project based on obsolete technology. This posed a significant challenge for him, as it raised doubts about the value of the assessment and the credibility of the lecturer. Ben described the situation where the assignment required him to address a topic that was no longer relevant in the field. He explained that the curriculum often falls behind real-world practice, causing a

disconnect and creating difficulties for students who are expected to engage with outdated concepts.

> *No one has O-packs. We have discovery layers. The assignment says, "tell me what you're going to do about this," and I'm thinking, well, I can't because I don't do that. No one in the field does that anymore, you know. So that was wrenching a bit because the curriculum often lags behind real-world practice. (Ben, Student, Beta University)*

Students expressed their frustration with lecturers who failed to recognise their professional knowledge and experience. They claimed that some lecturers struggled to interact effectively with mature students who were already working in the profession and possessed more up-to-date knowledge. As a result, these students felt compelled to downplay their professional knowledge and opinions because they were not appreciated by the lecturers. For instance, Ben shared an experience where a lecturer discussed a system that Ben was well-versed in, yet the lecturer did not acknowledge or value Ben's expertise when he contributed to the discussion. This left Ben feeling undervalued and also raised doubts for him about the credibility of the lecturer.

> *Some of the lecturers knew far less about modern libraries than they actually thought they did. I got a lecture on Primo, a system I administer, and I'm not going to mention who did it, but he didn't understand how the system worked. It was like, "This isn't serious". This is not actually how Primo works. (Ben, Student, Beta University)*

Nick raised concerns about the discipline knowledge of some lecturers, as he believed he had more experience in the field than them. He shared instances where he engaged with other lecturers in discussions related to industrial relations. However, upon reviewing the resumes of these lecturers, Nick noticed that he possessed a significantly greater level of expertise and practical experience in the subjects they were teaching. He acknowledged that he did not intend to be disrespectful, but the difference in their backgrounds and expertise led him to doubt the lecturers' depth of knowledge in their respective fields.

> *But other lecturers I've spoken with them, but because it was industrial relations, I'd have life experiences, and when I looked at the resume of the lecturer, I don't want to be disrespectful, but I had far more [experience] in the fields of endeavour they were teaching in. (Nick, Student, Alpha University)*

Consequently, lecturers who had professional experience and were connected to industry or perhaps still practising in some capacity were highly valued by students. Nick

expressed appreciation for being exposed to the most up-to-date content and how to use that knowledge effectively in the workplace by one of his lecturers. Nick wished he had been aware of this knowledge in his previous position.

> *When I did [name of lecturer's] subject, I was blown away. I didn't even know all that kind of stuff, and here I am as a senior person in the union movement, and if I had been armed with this type of knowledge, I could have projected a far better and confident figure having had that experience and having had some of this training. (Nick, Student, Alpha University)*

Melanie expressed her concerns about group work as an authentic assessment, arguing that it created a barrier to learning. She believed that expecting students to collaborate effectively in an online setting without face-to-face meetings was unrealistic and hindered their learning experience.

> *I think it's a frustrating experience because it's so artificial, and you're expected to become this working functioning group without – again, it's not human, you know – talking to people. (Melanie, Student, Alpha University)*

In contrast, Melanie believed that an authentic assessment was one where the knowledge and skills acquired could be directly applied in a real workplace setting. She provided an example of an assignment that required her to write a funding proposal, which she considered an authentic assessment because she could directly apply that knowledge and skill in her workplace. Melanie valued this assessment because it had practical relevance and allowed her to see the direct impact of her learning in a professional context.

> *The assessment was to write a funding proposal, an application for funding. And I thought that was brilliant. I think that had been the first time that I'd had an authentic assessment because that's something that I would potentially be doing out in the real world. (Melanie, Student, Alpha University)*

Students expressed concerns about the currency of information or content, emphasising that some university units lagged behind professional practice with outdated and inauthentic content. This issue was compounded by a lack of recognition for their professional knowledge and experience, leading to frustration and questioning of the credibility of the academics. Examples were shared, such as assignments based on obsolete technology that raised doubts about their value and lecturers' credibility. Lecturers' failure to acknowledge students' expertise further exacerbated the problem, causing students to downplay their knowledge.

Additionally, some students noticed a disparity in discipline-specific technical knowledge between themselves and their lecturers. However, lecturers with professional experience and industry connections were highly valued. Concerns about the efficacy of online group work without face-to-face interaction were also raised, which hindered the learning experience. In contrast, students valued authentic assessments that directly applied to real workplace settings, providing practical relevance and demonstrating the impact of their learning.

4.4.4 Teaching Summary

Implementing e-learning involves various complexities that require significant changes from all stakeholders involved. The complexities encompass technical skills, subject content, and the use of interactive resources. While facilitating technical skills can enhance problem-solving abilities and employability, there is a risk that students may overly rely on interactive resources at the expense of academic articles. The transience of educational tools, designing engaging synchronous activities, limited student access due to bandwidth issues, and the need for regular software and infrastructure updates add further complexities. Moreover, the absence of direct teacher-student interaction in the virtual classroom environment makes student engagement more challenging. Collaborative work among students can be complex, with some prioritising completing studies over engaging with technology. Challenges also arise from increased text density and physical discomfort in online reading, although some students still find value in offline learning through printed modules. While online resources provide instant access, students may feel isolated, encounter technical difficulties, and require assistance connecting with lecturers.

Regarding e-classroom management, students expressed concerns about inadequate management in three main areas. Firstly, the lack of intervention and monitoring in online forums deprives students of guidance in interacting and developing arguments with their peers. Secondly, communication problems arise when academics fail to effectively manage online spaces, making it challenging for students to seek assistance and understand written forum posts. The clarity and complexity of written communication compared to verbal interaction also pose challenges, as written communication lacks non-verbal cues and immediate clarification. Lastly, the absence of guidance on practical aspects of online tutorials, such as microphone and video management, leads to distracting background noise and difficulties following discussions.

Students also raised concerns regarding the currency of information or content. Outdated and inauthentic content in certain university units, coupled with a lack of recognition for students' professional knowledge and experience, results in frustration and doubts about the credibility of academics. Students have provided examples of assignments based on obsolete technology, questioning their value and lecturers' expertise. Disparities in discipline-specific technical knowledge between students and lecturers further exacerbate the issue. However, lecturers with professional experience and industry connections are highly valued. Online group work without face-to-face interaction is viewed as hindering the learning experience. At the same time, authentic assessments directly applicable to real workplace settings are valued for their practical relevance and demonstration of learning impact.

4.5 Organisation

The *organisation* category incorporates the four themes of communication, policy enactment, culture, and organisation structure. This section describes these four themes in detail in Sections 4.5.1-4.5.4, followed by a summary of the organisation category in Section 4.5.5.

4.5.1 Communication

Communication in this study refers to how senior leadership communicates e-learning initiatives and strategies across the institution, particularly to academics and learning designers. Inauthentic consultation with academics about e-learning strategies and over-formal communication structures with senior leadership were criticised by academics as a barrier to implementing e-learning. Ben criticised the lack of genuine consultation with academics regarding e-learning strategies and the overly formal communication structures with senior leadership. He specifically highlighted what he called the pretence surrounding the consultation process, where both parties engage in a superficial exchange of ideas without truly listening or considering each other's perspectives.

> *They pretend to consult us. We pretend to listen, and we pretend to feed back to them what they want to hear because we know they are not listening. (Ben, Academic, Beta University, Student, Alpha University)*

Jo, another academic, expressed her perspective that the communication within her university was predominantly top-down and excessively bureaucratic. She felt that there was a lack of bottom-up communication, and even when feedback was invited, it was done in a rigid manner that involved multiple layers of filtering.

> *I just don't feel like there's a lot of that bottom-up communication. If it's invited, it's invited in a very rigid manner that's filtered through many, many layers. (Jo, Academic, Alpha University).*

Academics expressed their dissatisfaction with the leadership at their university, noting a prevalent top-down communication style that prioritised achieving specific outcomes within strict deadlines. They believed that this approach did not foster their commitment to the university's goals. Ben went a step further and suggested that the leadership adopted an autocratic communication style because they lacked competence in effectively managing change. Ben drew a comparison between university vice-chancellors and Russian tsars, who held absolute control over Russia. He pointed out that despite their authoritative position, the vice-chancellors were unable to effectively manage the diverse and complex aspects of the university, similar to how the tsar could not control what was happening in Siberia.

> *The problem is that vice-chancellors are like Russian tsars……the tsar is an autocrat who controls all of Russia. And in fact, he can't control anything that's happening in Siberia (Ben, Academic, Beta University & Student, Alpha University)*

Jo suggested that senior leaders should provide a clear and detailed process for achieving the desired outcome instead of simply issuing a directive threatening job loss for non-compliance. Jo expressed the desire to see Deans, Sub-Deans, and other higher-level personnel engaging in a collaborative discussion about the university's goals. Jo believed that breaking down the required steps into a manageable and structured plan, whether it be 5,000 steps, 500 steps, or 50 steps, would be more effective.

> *I would love to see Deans and Sub-Deans and all the people at the higher level saying ok, where do we want to be? Ok, what are the 5,000 steps we need to take to get there, or what are the 500 steps or the 50 steps? As opposed to going, we're just going to get there by next year, and everyone has to do it, and if they don't want to, they can leave the university. (Jo, Academic, Alpha University)*

There are some significant similarities between these findings and Hardaker and Sing's (2011) hypothesis that academics must be involved in the strategic change that is likely to

influence their academic roles. Hardaker and Sing (2011) argue that if lecturers are not consulted, they will reject the changes entirely or be falsely compliant towards top-down directives. Simply communicating strategies, policies, or directives from the top through formal channels or e-mails is unlikely to influence academics. Senior management needs to engage the staff whom they rely on to implement their initiatives by appreciating that drivers for e-learning are significantly different from the institutional pressures.

Academics' feedback highlighted the importance of consultation and effective communication between themselves and senior leaders. LDs on the other hand specifically criticised the top-down communication style used by leaders when delivering e-learning directives to academics. Theresa observed that senior leadership were disconnected from the staff responsible for implementing their strategies because they did not actively participate in the communication of their strategies. As a result, LDs were left to explain, disseminate, and translate e-learning strategies into practical implementation on the ground.

> *There's three of four levels of separation between the senior leadership and the people on the ground, and you know, senior leadership calendars are such that a lot of the comms work does end up being done by people on the ground organically. (Theresa, LD, Beta University)*

Learning designers expressed their concern about the lack of bottom-up communication to senior leaders, which resulted in unresponsive leaders who were unaware of the issues, slow to react, and unsupportive of staff implementing e-learning. LDs also criticised LLs responsible for e-learning projects for their infrequent check-ins and communication with academics and LDs. Hannah, a LD, believed that overcoming barriers to e-learning required leaders to actively listen to experienced teaching staff who had expertise in delivering e-learning. This listening needed to be accompanied by providing academics with necessary support, leadership, and resources. Furthermore, maintaining ongoing communication among academics, LDs, and LLs was seen as essential for the successful implementation of e-learning. This collaborative communication approach would ensure that all parties were informed about challenges and could respond in a timely and effective manner.

> *If implementing e-learning practices comes from, um, let's call them the masses, in other words, the teaching staff who are at ground zero, who teach every day and already appreciate the importance of e-learning. If implementing e-learning practices came from that area from that level and were then fed by support from leadership and*

operations and strategic teams across the learning institution, then I think it actually alleviates a lot of barriers. (Hannah, LD, Alpha University)

Hannah further highlighted the importance of establishing open and two-way communication channels between LLs and LDs. She viewed this level of communication as crucial for facilitating the adaptation of decisions and implementing necessary changes. By maintaining a continuous feedback loop, LDs and LLs could reassess their decisions and take appropriate actions as needed. This approach allowed for flexibility and ensured that adjustments could be made to optimise the implementation of e-learning initiatives.

Two-way communication channels for decisions are really important because they [LDs and LLs] are then flexible enough to rethink their decisions and make a change (Hannah, LD, Alpha University)

In addition to responsive and communicative leaders, LDs highlighted the need for leaders to be collaborators who were willing to consult other experts where necessary and to use open and transparent processes. Alice pointed out that collaboration was paramount because it allowed for critique, regular evaluation, and continuous improvement, which was essential to the team learning more about enablers and barriers to implementing e-learning.

You are never going to come up with a new process and have it work beautifully right from the start. So, what's really important is that the team is enabled to be able to critique what worked, what didn't work, what do we want to change and then document those changes in the process to learn from each other. (Alice, LD, Alpha University)

Local leaders concurred with LDs about the importance of effective communication from leaders to staff regarding e-learning strategy. Hilary emphasised that such communication should include clearly outlining the vision to the staff, setting achievable deadlines, and providing support to facilitate implementation. Additionally, Hilary stressed the need for a project management plan that runs in parallel with a clearly articulated institution-wide e-learning vision. According to Hilary, it is essential to establish objectives, ensure clarity in communicating them to the staff, and allocate realistic timeframes and resources to make them a reality. Furthermore, Hilary considered that assembling the right people and resources as crucial to successfully achieving stated objectives.

You have to set objectives, and you have to make them clear to people, and you have to set realistic timeframes and the resources to make that happen…you've then got to get

the right people and resources in place to make those things happen. (Hilary, LL, Alpha University)

However, in addition to communication, Harry, a LL, commented on the need for a balance between too short-term or too long-term focused objectives. The former, he pointed out, was at risk of becoming a checklist of key performance indicators (KPIs) to be ticked off by short-term contractors or fixed-term senior executives. The latter could be in danger of becoming so long-term that objectives were unlikely to be sustained or ultimately completed. In addition, Harry stated that even with a clear vision, achievable timelines, and supportive staff, an ambiguous strategy could still pose a barrier. He expressed scepticism towards vague strategies such as "to be innovative", "future-facing", or "committed to student success", noting that they lacked meaningful contextualisation. Instead, Harry advocated for a more focused approach with fewer and well-defined goals.

It's got to be really specific and just come up with 3-5 bullet points that we can define that's research-based, and let's work towards that and let's sustain that over a long period of time knowing that higher education actually does move quite slowly so we've got to be thinking 3, 5, 7 years. (Harry, LL, Beta University)

Effective communication is crucial for implementing e-learning initiatives and strategies involving senior leadership, academics, and learning designers. Academics criticised the lack of genuine consultation and over-formal communication structures, which hindered progress. A top-down communication style and excessive bureaucracy were identified as barriers, and dissatisfaction with the leadership's autocratic approach was expressed. Clear and detailed processes, collaborative discussions, and breaking down steps were emphasised. Ongoing communication among academics, LDs, and LLs was seen as essential. Establishing open and two-way communication channels between LDs and LLs allowed for flexibility and continuous improvement. Collaboration, critique, and evaluation played vital roles in understanding implementation enablers and barriers. Effective communication, achievable deadlines, support, and a project management plan were highlighted. Balancing short-term and long-term objectives, avoiding vague strategies, and focusing on well-defined goals were advocated for success.

4.5.2 Policy Enactment

In this study, policy enactment refers to the process by which universities and stakeholders interpret and put into action policies related to e-learning initiatives (Braun et al., 2010). Academics, LDs, and LLs all provided comments on various aspects of policy enactment in relation to the implementation of e-learning initiatives. One of the academics, Ben, expressed his concern about the absence of a policy at his university, which hindered the transition from physical textbooks to online resources. According to Ben, without a clear policy to guide the process, academics were free to continue using their preferred physical textbooks instead of embracing online resources. Ben emphasised that mere discussions about eliminating textbooks would not lead to any progress unless there was a policy framework in place to drive the transition.

> *You can talk about getting rid of the textbook all you like, but unless you put in a policy environment that drives that transition, you won't achieve anything. (Ben, Academic, Beta University & Student, Alpha University)*

Ben acknowledged the challenging nature of policy development and recognised that compromises may be necessary. He argued that it is preferable to achieve a modest improvement in e-learning implementation university-wide rather than having isolated units that excel while others lag behind. Ben emphasised that making practical choices sometimes requires difficult decisions. In order to ensure a more realistic and balanced approach, he suggested aiming for an overall 20% improvement across the board rather than focusing solely on isolated areas of excellence.

> *They may have to make really hard decisions. To make realistic decisions, sometimes they will have to settle for being 20 per cent better across the board rather than having pockets of excellence. (Ben, Academic, Beta University & Student, Alpha University)*

Learning designers also highlighted the significance of policy enactment in the context of e-learning. Hannah stressed the importance of clear and well-enforced policies as a fundamental element for the successful implementation and long-term sustainability of e-learning initiatives. She emphasised that sound policy serves as a crucial foundation for supporting and facilitating the effective implementation of e-learning.

> *If e-learning implementation is successful, certainly, it is supported by sound policy. (Hannah, LD, Alpha University)*

Freya emphasised the correlation between policy, standards, and accountability in learning and teaching. She highlighted the importance of having specific standards and accountability measures in place across all forms of teaching and learning. Furthermore, Freya emphasised that the infrastructure supporting these standards and accountability measures should be robust and reliable.

> *There should be particular standards, there should be accountability in all forms of teaching and learning, and the infrastructure should support it (Freya, LD, Alpha University)*

Beth advocated for a comprehensive approach to e-learning that extended beyond the mere implementation of policies. She emphasised the importance of supporting and fostering innovative e-learning practices. Beth proposed incentivising research efforts by offering promotions or scholarships, allowing educators to dedicate their focus to utilising e-learning effectively. She also underscored the significance of exploring new approaches to e-learning and stressed the need for support in embracing innovation. This support could include opportunities for rewards, promotions, or scholarships, enabling individuals to fully leverage the potential of e-learning.

> *There needs to be support for taking on innovation, so if there's rewards or promotions or scholarships where people can take on the opportunity to make effective use of e-learning. (Beth, LD, Alpha University)*

Lucy observed that while policies supporting the implementation of e-learning were helpful, she stressed the need to differentiate between policy and procedure. She noted that the e-learning policy at her university primarily focused on procedural aspects, such as meeting deadlines for uploading online units to the LMS. However, Lucy emphasised that there was a lack of guidance regarding the art of teaching and its specific implications within their university context. While there were policies in place regarding deadlines, she felt there needed to be a greater understanding of the essence of teaching, effective teaching practices, and the establishment of comprehensive rules or guidelines in that regard.

> *We have policies about deadlines for when units need to go online etc., but they are actually procedural documents. I think there is a gap for us in that space of what does it mean to teach…How do we teach…What is our set of rules or guidelines around that? (Lucy, LL, Beta University)*

These findings underscore the complexity of policy enactment, aligning with the perspectives of Braun et al. (2010), Ball et al. (2012), and Evans et al. (2019). These scholars argue that policy enactment should not be seen as a straightforward and linear process of implementation. Instead, they emphasise that it involves interpretation, translation, and contextualisation within institutions that operate in distinct local contexts and diverse discourses.

4.5.3 Culture

In this study, the term "culture" refers to a collective set of shared beliefs and assumptions developed by a group as they navigate external challenges and foster internal cohesion. These beliefs and assumptions, which have demonstrated their effectiveness, are then transmitted to new members as the accepted framework for understanding and approaching those challenges (Schein, 1985).

The findings reveal various cultural beliefs related to student evaluation. Alice, a LD, highlighted that some academics hesitated to embrace e-learning out of concern that they might receive negative feedback from their students if their implementation was ineffective. Their worry stemmed from the potential negative consequences it could have on their Student Evaluation Survey (SES) scores.

> *There's this fear that, ok, this is going to go bad for me in my SES. (Alice, LD, Alpha University)*

John, a LL, also highlighted the impact of a low SES score on academics. He explained that some academics were concerned that if their e-learning implementation approaches within their units received less than the expected average score on the SES, it could prohibit their promotion. John advocated for creating a culture that encourages innovation without fear, empowering staff members who have the desire to innovate. He emphasised the importance of providing academics with the freedom to experiment and even make mistakes without worrying about the consequences on their subject evaluations. By doing so, John suggested that academics might not be so hesitant to explore new software or approaches in the future due to past negative experiences.

> *We need to give academics the space to trial things and even to fail…without worrying what the subject evaluations are…..so they're not once bitten, twice shy…and won't touch a piece of software with a barge pole again. (John, LL, Alpha University)*

Conversely, whilst academics were concerned about student feedback, students expressed concern that their lecturers and university leaders were not listening to the feedback that they provided via the SES. Melanie for instance, mentioned that she consistently provided feedback for all her courses, often repeating the same feedback across multiple units. Despite this, subsequent units she studied still required improvements.

> *Sometimes it feels like I'm giving the same feedback over and over again, each session, and it's not being taken on board. (Melanie, Student, Alpha University)*

These findings align with Hoel and Dahl (2019), who find that students' perception that their feedback is not valued can affect their motivation to complete evaluations.

Another significant barrier to the implementation of e-learning identified in the data was the prevailing culture in universities that prioritises research over learning and teaching. LDs expressed concern that without a fundamental shift in values to ensure the focus on learning and teaching is deeply embedded within the university, the situation would remain unchanged. Theresa pointed out several factors at her university that contribute to this barrier, including the reward systems, the prevailing mindset regarding teaching and learning, the prioritisation of research, and the structure of the university's enterprise agreements. Theresa argued that these factors collectively pose significant obstacles to fostering an environment that values and supports effective teaching and learning practices.

> *The way that things are set up, the reward mechanisms, the way that we think about teaching and learning, the way that we privilege research, the way that we structure our enterprise agreements, all of these things are, at the moment, significant barriers. (Theresa, LD, Beta University)*

Ben also pointed out that at his university, academic promotion was primarily based on research accomplishments, resulting in teaching and learning being undervalued. He advocated for addressing this imbalance by giving equal importance to teaching and learning alongside research and by recognising and rewarding outstanding teaching.

> *We have to reward exemplary teaching, we have to change the research-teaching balance because, at the moment, if you want a promotion, you push ahead with your research (Ben, LD, Beta University)*

Concerns were raised about the potential negative impact of student evaluation on academics embracing e-learning. The fear of receiving negative feedback on Student Evaluation Surveys (SES) was mentioned as a barrier to e-learning implementation, which

could hinder academics' promotion prospects. Advocacy was expressed for creating a culture that encourages innovation without fear, empowering staff members to experiment and learn from mistakes. Students expressed concern that their feedback provided through SES was not being taken into account. The prevailing culture that prioritises research over teaching and learning was identified as a significant barrier to e-learning implementation. Factors contributing to this barrier include reward systems, mindset regarding teaching and learning, prioritisation of research, and university structure. The imbalance in academic promotion, primarily based on research accomplishments, undervalues teaching and learning. There was a call to address this imbalance by giving equal importance to teaching and learning alongside research and recognising outstanding teaching.

4.5.4 Organisation Structure

Organisation structure in the context of this study refers to the location of LDs in relation to academics and how LDs were allocated to e-learning implementation work. LDs highlighted that the way staff were organised within faculties and divisions at their universities posed a significant barrier to implementing e-learning. Alice noted the lack of collaboration among LDs due to their diverse placements in various faculties and the central learning and teaching division. This resulted in LDs working on the same units at different times, leading to criticism and inefficiencies. Alice emphasised the necessity for a more streamlined and cohesive model that fostered effective collaboration among LDs.

> *We have a really messy model at the moment with some people in faculties, some people in DLT (Division of Learning and Teaching), a lot of crossovers between even different sections with DLT; I just don't think we've got that right. (Alice, LD, Alpha University)*

Beth expressed concerns regarding the division of e-learning tasks, with one group of LDs assigned ongoing tasks while another group focused on more innovative implementation work. This separation created a demotivating effect on some LDs, as they perceived the ongoing tasks to be less valued in comparison to the more exciting and innovative work.

> *One group of LDs does the fun stuff, and another group of LDs do the more routine work. (Beth, LD, Alpha University)*

Beth emphasised the need to address the existing division among LDs and ensure equal engagement and motivation in all aspects of e-learning. She expressed concerns about recent structural changes in learning and teaching roles, where the responsibility for innovation and

creativity has been shifted primarily to the online learning unit. Consequently, LDs were no longer recognised as being in innovative or transformative roles but rather as performing foundational tasks for others. Beth found this shift disappointing and emphasised the importance of LDs reclaiming their innovative and transformative roles in e-learning.

> *The way we've been structured recently for learning and teaching, I guess some of our roles and responsibilities have been taken away in that regard, so now we're not being as innovative and creative because that's not our key business anymore. It's actually gone to the online learning unit, so educational designers and educational support coordinators are not really seen as being innovative or transformational anymore, they're really just being seen as doing the groundwork for people, and that's sort of disappointing. (Beth, LD, Alpha University)*

The fragmented location of learning design teams led to confusion among academics regarding the available support from LDs. This lack of clarity created the perception that less learning design support was accessible to academics than was actually the case. Additionally, Penny observed that instead of collaborating comprehensively with LDs to enhance online units, academics had to approach different teams for assistance with various tasks. This approach hindered the LDs' ability to establish relationships with academics and limited their opportunities to drive meaningful change in e-learning implementation.

> *I'm not sure that the structure it's currently moved to is the best structure for supporting academics because I think the personal relationships have been taken out of it. (Penny, LD, Alpha University)*

According to Beth, the restructuring of learning design teams had negatively impacted the relationships between LDs and academics, resulting in a deterioration compared to the past. Beth considered this weakened rapport as a significant hindrance to the successful implementation of e-learning. She emphasised that the absence of the strong relationships they once had was one of the main barriers preventing substantial changes in their collective outlook.

> *We don't have that rapport that we had in the past; I think that's probably one of the big barriers to implementing any great change from our perspective. (Beth, LD, Alpha University)*

In addition to losing rapport with academics, LDs reported that much of their job satisfaction had gone due to the need to account for every task via a service request system

(SRS). Having to log every job request resulted in a transactional type of relationship and prevented LDs from being able to develop relationships with academics to provide them with the ongoing support they wanted. Penny claimed that LDs in her team reported feeling undermined by the new process and resented spending time writing reports and keeping minutes rather than supporting academics with e-learning implementation.

> *It's become much more; you've got an hour here and an hour there, and ok, well, that's three hours' worth, now you've finished that one, now you're going on to another project. I've actually spoken to a number of EDs (Educational Designers), and they find that there's less in terms of their enjoyment of the job. I think a lot of the satisfaction has actually gone. (Penny, LD, Alpha University)*

These findings share similarities with Aitchison et al. (2019), who note a tension caused by a perceived change in institutional focus from "people development" to "product development". This shift involves moving away from enhancing the capabilities of educators and towards the development of curriculum resources, specifically for the online environment.

Local leaders, like LDs, believed that the structure of the Learning and Teaching division at their university was fractured. They noted that different named entities and their acronyms, such as the Learning Design Unit (LDU), Learning Resources Unit (LRU), the Online Unit (OL), and Learning and Teaching Transformation (LATT), were confusing. The roles of the staff who worked in those entities, such as Educational Designer (ED), Learning Designer (LD), Instructional Designer (ID), Educational Support Coordinator (ESC), and Education Support Officer (ESO), were also not always easy to understand. The allocation of responsibilities among different entities and staff roles created challenges for LLs in identifying the appropriate point of contact for assistance. The lack of clarity and multiple points of contact for support created a barrier to the implementation of e-learning. John emphasised the need for a centralised and unified location to request support.

> *We don't have a one-stop shop where staff can go to find resources and the help they need to enhance every aspect of their learning and teaching but particularly e-learning. (John, LL, Alpha University)*

Local leaders reported that a further barrier caused by infrastructure at their university was that the faculty managed courses (or a programme of study), whereas schools managed units (or subjects). This meant that units within a course could be supported by different LDs, resulting in less holistic constructive alignment than there might be. Local leaders

acknowledged, however, that the challenge of whether LDs were best located in a school or faculty or centralised and located in a division was difficult to resolve.

> *Talking about the issue of decentralised/centralised LDs, we go round and round in terms of structure of divisions and faculties re learning and teaching support. (Lucy, LL, Beta University)*

The location and allocation of LDs posed a significant barrier to implementing e-learning. Lack of collaboration among LDs in different faculties and divisions led to inefficiencies and criticism. A more streamlined and cohesive model for effective collaboration among LDs was deemed necessary. The division of e-learning tasks between ongoing and innovative work demotivated LDs. Recent structural changes shifted the responsibility for innovation to the online learning unit, diminishing the transformative roles of LDs. The fragmented location of learning design teams caused confusion and limited support for academics. Restructuring negatively impacted relationships between LDs and academics. LDs reported decreased job satisfaction due to transactional task logging. The complex and confusing structure of the Learning and Teaching division hindered support and created challenges in identifying points of contact. The lack of a centralised support location was identified as a barrier. The university's infrastructure, where faculties managed courses and schools managed units, hindered holistic alignment.

4.5.5 Organisation Summary

Effective communication is crucial for successful e-learning initiatives, but barriers such as top-down communication and excessive bureaucracy hinder progress. Clear processes, collaborative discussions, and ongoing communication are essential. Policy enactment involves interpreting and implementing policies within educational institutions, and clear policies, standards, accountability measures, and robust infrastructure are vital for effective implementation. Fostering innovation and addressing the imbalance between research and teaching are key considerations. The organisational structure poses significant barriers, including a lack of collaboration among LDs, fragmented location of LD teams, and complex divisions within the Learning and Teaching division. Restructuring has diminished the transformative roles of LDs and led to decreased job satisfaction. Resolving the location of LDs and creating a centralised support system are challenges. The university's infrastructure

and the division between faculties and schools also hinder holistic alignment. Addressing these structural issues is crucial for the successful implementation of e-learning initiatives.

4.6 Summary of Findings in Relation to Research Questions

4.6.1 What are the Perceived Barriers and Enablers to E-Learning From the Perspectives of the Different Stakeholders? (RQ1)

The barriers and enablers to e-learning implementation, as perceived by academics, LDs, LLs, and students, fall into four categories: *collaboration, individual capability, teaching,* and *organisation*. Within these categories, there are specific themes that highlight both factors that facilitate successful e-learning implementation and challenges that hinder its progress. These categories provide a comprehensive framework for understanding the various perspectives and considerations involved in adopting e-learning in educational settings.

Collaboration plays a vital role in the successful implementation of e-learning initiatives. Conversely, when stakeholders do not collaborate effectively, e-learning implementation is hindered. By sharing practices and exchanging innovative ideas, academics and LDs can enhance online offerings. Collaboration among LDs, LLs, and academics helps bridge knowledge gaps and ensures that strategic decisions from senior leaders align with practical considerations. Additionally, collaboration involving leadership, academics, LDs, LLs, and students is crucial when selecting a suitable LMS that balances flexibility, user experience, and long-term viability. If stakeholders are not consulted, a LMS can be selected that does not enable academics to teach effectively. To address challenges such as limited staff, support, and resources, and to make informed decisions, collaboration between senior leadership, support services, academics, LDs, and LLs is crucial. Without collaboration, as these findings show, support provision is unclear, and relationships between academics and LDs do not occur, resulting in a lack of innovation and more transactional type relationships. Lastly, collaboration between LDs and academics is essential in navigating role dynamics and integrating disciplinary expertise with pedagogical knowledge. As the findings show, a lack of collaboration with and understanding of each other's expertise results in resentment and power play.

Individual capability plays a significant role in the successful implementation of e-learning. E-competence, which involves proficiency in using the LMS and adapting to technological advancements, is crucial for academics. However, some academics face barriers

due to their discomfort with technology or resistance to online teaching. The stories academics tell themselves about their e-learning capability – their digital narrative – influenced either a fixed or a growth mindset, impacting academics' willingness to embrace e-learning and develop their e-competence. Self-efficacy, the belief in one's ability to succeed, is important for both academics and students in the e-learning context. Challenges related to technology and online pedagogy can affect self-efficacy. Engaging in PL is necessary to acquire new knowledge and skills, with emphasis placed on collaborative PL and contextualised learning. Elbow support, including both technology professional development and assistance from LDs, is crucial for academics for sustainable e-learning implementation. Additionally, workload allocation has an impact on work-life balance and the ability of academics to effectively engage in e-learning.

Teaching involves complexity in terms of technical skills, subject content, and interactive resources when implementing e-learning. The need to keep up with frequent technological updates adds to the complexities of academics. Designing online learning experiences that engage students can also be challenging in virtual classrooms due to the absence of direct teacher-student interaction. Adequate e-classroom management by academics is crucial to address students' concerns regarding etiquette in online forums, communication issues between students and academics, and the practical aspects of delivering effective e-tutorials. Ensuring the currency and authenticity of information is important to students, and disparities in technical knowledge can impact the credibility of academic content. Lastly, students value authentic assessments that have practical relevance to real-world settings.

The findings culminating in the fourth category, *organisation*, emphasise that to ensure sustainable e-learning, effective communication, clear processes, and ongoing discussions are of utmost importance. It is crucial to have clear policies, standards, accountability measures, and robust infrastructure in place to enact policies effectively. Additionally, fostering innovation and addressing the research-teaching imbalance are key considerations. However, there are barriers posed by the organisational structure, such as a lack of collaboration among LDs, and fragmented location of LD teams. Complex divisions within the Learning and Teaching division result in diminished transformative roles for LDs and a decline in job satisfaction. Resolving the challenges related to LD location and creating a centralised support system is necessary to enable e-learning implementation. Additionally, divisions between faculties and schools in universities hinder holistic alignment. It is crucial to address these

structural issues to improve the chances of implementing e-learning initiatives more effectively.

4.6.2 How do the Experiences of E-Learning Designers Correspond With Those of Academics With Regard to Implementing E-Learning? (RQ2)

The experiences of academics and LDs when implementing e-learning are complex and diverse. From the four categories of *collaboration, individual capability, teaching,* and *organisation* that emerged from the data, 11 out of the 18 themes transpired as critical to academics and LDs. These were e-learning knowledge, recruitment, and roles (*collaboration*); e-competence, digital narratives, professional learning, and work allocation (*individual capability*); complexity (*teaching*); and community and culture (*organisation*). Some of the themes were of equal concern to academics and LDs, but the issues raised about each theme related to different factors. In other cases, the experiences of some academics and LDs did not correspond much, and some themes were of considerable concern to academics but not mentioned by LDs (and vice versa).

4.6.3 How do the Decisions of Organisational Leaders Affect the Implementation of E-Learning? (RQ3)

Implementing e-learning is affected by seven decision areas made by organisational leaders. Authentic consultation is vital, as top-down communication coupled with a lack of clear vision and support can lead to resistance. Choosing a suitable LMS in collaboration with academics and LDs is crucial. A system that is not fit for purpose can restrict technical capabilities and hinder effective teaching through restrictive technical capabilities. Adequate financial resources must be provided to recruit sufficient LDs to support academics. Workload allocation for academics needs to be applied realistically to enable sustainable top-quality e-learning implementation. The structure of central learning and teaching divisions needs to be well-considered to avoid confusion about access for academics and to foster collaboration among LD teams. Clear e-learning implementation policies that promote good pedagogy and a focus on teaching frameworks rather than procedures are needed to encourage the adoption of best practices. Heads of School must prioritise their involvement in e-learning implementation initiatives. Finally, comprehensive, collaborative professional learning and support must be

provided to ensure its integration into academic roles rather than just-in-time technology training. Overall, the decisions in these seven areas affect e-learning implementation.

4.7 Chapter Summary

This chapter identifies 18 themes grouped into the four overarching categories of *collaboration, individual capability, teaching,* and *organisation*. These categories, derived from the perspectives of academics, LDs, LLs, and students, encompass themes that either facilitate or impede e-learning implementation. The themes within the *collaboration* category are sharing e-learning knowledge, LMS, recruitment, and roles. The themes within the *individual capability* category comprise e-competence, digital narrative, self-efficacy, professional learning, support, and workload allocation. The themes in the *teaching* category include complexity, e-classroom management, and currency. The themes within the *organisation* category consist of communication, policy implementation, and organisational structure. These findings are discussed in the context of the three research questions to gain insight into the overarching focus of this thesis, namely to construct an understanding of the critical organisational factors for sustainable e-learning implementation within a university setting. The next chapter provides a more detailed discussion of the study's findings.

Chapter 5: Discussion

5.1 Chapter Overview

Building on the findings presented in the previous chapter, this chapter endeavours to draw out the pathway to sustainable e-learning implementation through an analysis of the experiences of academics, learning designers, local leaders, and students. Section 5.2 discusses the enablers and barriers to e-learning implementation identified by participants (RQ1), Section 5.3 explores how the experiences of e-learning designers correspond with those of academics with regard to implementing e-learning (RQ2), and Section 5.4 analyses how the decisions made by organisational leaders affect e-learning implementation (RQ3). This is followed by a discussion of the theoretical (Section 5.5) and practical implications (Section 5.6) of this study for stakeholders. Drawing on the findings that highlight the intricate and context-dependent nature of the university setting, Section 5.7 presents a novel heuristic designed to guide leaders to implement sustainable e-learning in university settings. Section 5.8 acknowledges and discusses the potential limitations of the study. Finally, Section 5.9 concludes with a chapter summary.

5.2 What are the Perceived Barriers and Enablers to E-Learning From the Perspectives of the Different Stakeholders? (RQ1)

Drawing on the experiences of academics, LDs, LLs, and students, this study identifies four overarching categories (namely, *collaboration, individual capability, teaching,* and *organisation*), encompassing eighteen distinct themes associated with enablers and barriers to implementing e-learning. *Collaboration* involves sharing practice, e-learning knowledge, the LMS, recruitment, and roles. *Individual capability* focuses on e-competence, digital narrative, self-efficacy, professional learning, elbow support, and workload allocation. *Teaching* encompasses complexity, e-classroom management, and currency. *Organisation* includes communication, policy enactment, culture, and organisational structure. Table 5.1 provides a summary of these categories and themes mapped to the implementation of Fullan's (2016) change model. For a complete list of the code book categories and definitions, refer to Table 3.4. Some of these themes correspond to previous research and are also consistent with Fullan's (2016) change model, while others represent novel additions to the chosen theoretical

framework of this study. In this section, the study discusses significant findings and recommendations about collaboration (Section 5.2.1), individual capability (Section 5.2.2), teaching (Section 5.2.3), and organisation (Section 5.2.4) in the context of the literature and theoretical framework of Fullan's (2016) change model and Ball's (2003) theory of performativity.

Table 5.1: Enablers and Barriers to Implementing e-Learning Mapped to Fullan's (2016) Change Model and Existing Literature Review Categories

Category	Theme	Does the theme map to Fullan's (2016) Change Model?	Does the theme map to the literature review categories?
Collaboration	Sharing practice	Yes – *teacher*	Yes – *capability building*
	E-learning knowledge	No	Yes – *leadership and management*
	Learning management system	Yes – loosely to *district*	No
	Recruitment	Yes – loosely to *district*	No
	Roles	No	Yes – *multi-profession teamwork and process*
Individual capability	E-competence	No	Yes – *capability building*
	Digital narrative	No	No
	Professional learning	No	Yes – *capability building*
	Self-efficacy	Yes – *teacher*	No
	Elbow support	No	Yes – *leadership and management*
	Workload allocation	No	Yes – *leadership and management*
Teaching	Complexity	Yes	No
	E-classroom management	Yes – loosely to *complexity*	No
	Currency	No	No
Organisation	Communication	Yes – loosely to *community*	No
	Policy enactment	No	No
	Culture	No	Yes – *institutional infrastructure*
	Organisation structure	No	Yes – *institutional infrastructure*

5.2.1 Collaboration

In the following section, an examination of the significant findings associated with the themes within the overarching category of *collaboration* (namely, sharing practice, e-learning knowledge, learning management system, recruitment, and roles) will be presented and discussed in detail.

5.2.1.1 Sharing Practice

The sharing practice theme from the *collaboration* category strongly aligns with Fullan's (2016) change model, which underscores the significance of teachers sharing and learning about their teaching practice together to foster continuous improvement. There is not, however, a specific category in the implementation aspect of Fullan's (2016) change model that refers to sharing practice. Nor is there any reference to academics sharing practice beyond their academic colleagues. Notably, what this research uncovered was that whilst both academics and LDs acknowledged the importance of sharing practice, they tended to limit such sharing within their respective groups. Academics tend to share practices predominantly among themselves, while LDs primarily share practices within their own community and also with academics whenever possible. This situation did not concern academics. Learning designers, however, expressed a desire for greater sharing of practice between academics and themselves. Learning designers viewed sharing practice with academics as a fundamental part of their role but lamented that academics do not necessarily consider it part of their role to share their practice with LDs.

This finding is intriguing because it indicates that the restricted exchange of practices between academics and LDs has negative consequences. It hinders collaboration, obstructs mutual learning, and slows down the development of strong relationships between these groups. Additionally, it could lead to individuals becoming entrenched in their own perspectives, which in turn, impedes their ability to learn about and develop innovative e-learning approaches. One possible explanation for this is that academics prioritise the experiences of their fellow academics, feeling a sense of shared understanding and connection. Consequently, they may not view LDs as equal partners, which negatively impacts collaboration opportunities. In contrast, LDs expressed a strong desire to share their practice with academics, highlighting the pivotal role they ascribe to advancing e-learning, teaching pedagogy and cultivating robust relationships with academics. This distinction in how

academics and LDs approach sharing practice also sheds light on the challenges that can arise when they need to collaborate in implementing e-learning initiatives. My findings align with Sidhu & Gage's (2021) research that indicates that in order to optimise the adoption of innovation adoption leadership needs to foster a sense of self-efficacy and enhanced competence amongst academics through sharing practice via teaching networks so that they can seek like-minded colleagues who are engaged in implementing e-learning.

5.2.1.2 E-Learning Knowledge

My findings reveal that an insufficient understanding of e-learning among senior leaders poses a significant challenge for academics and LDs when implementing e-learning. Academics clearly expect their senior leaders to have academic credibility, but at the same time, they also expect their leaders to understand the teaching commitments that e-learning imposes. Senior leaders' lack of e-learning knowledge, coupled with minimal or even no firsthand experience in online teaching experience, created a lack of confidence among academics towards the quality of the e-learning strategies developed by those leaders. Additionally, insufficient detailed guidance on implementing those e-learning strategies was an illustration of ineffective leadership. Further, such lack of clarity about the process of implementation strategies significantly increases stress and anxiety for those tasked with carrying out these new initiatives and strategies (Debowski, 2022). One explanation for why senior and faculty leaders may not develop their e-learning knowledge could be because they are promoted based on their academic accomplishments and service to the university rather than their learning and teaching practices. It is interesting, however, that senior leaders do not necessarily have e-learning knowledge yet are developing e-learning strategies. This suggests either an element of not knowing what they do not know or not being committed to understanding the specific challenges associated with implementing e-learning.

On the other hand, LDs questioned senior leaders' credibility, firstly if they lacked technical understanding of e-learning implementation and secondly, if they had mainly traditional teaching experience. Interestingly, LDs demonstrated even more expectations that senior leaders had specific e-learning knowledge and practical experience for them to feel confident in their decisions than academics. Furthermore, LDs were frustrated by observing senior leaders making strategic decisions that they did not understand the ramifications of, as LDs often had to manage subsequent necessary workarounds. For instance, insufficient

collaboration with technical staff by senior leaders when selecting the LMS for their university often resulted in significant technical limitations that made it harder for academics and students to navigate the LMS. As a result, LDs had to provide extra support to academics learning to use an LMS that could have been more intuitive and user-friendly. Additionally, LDs had to address technical problems that arose when the LMS was not operating at its optimal capacity or when external tools required better integration than they had because a fully integrated LMS had not been purchased, resulting in suboptimal functionality.

Implementing e-learning faced an extra challenge for LDs when the Head of School within a faculty lacked sufficient knowledge about e-learning. This deficiency could result in a general lack of commitment to adopting e-learning practices. Since the Head of School plays a pivotal role in guiding academics, a lack of clarity in conveying the importance of e-learning implementation could lead academics to perceive it as less significant. Consequently, some academics might choose not to prioritise the integration of e-learning into their teaching. This situation often strained the relationship between LDs and academics, as the latter were less inclined to collaborate with LDs on e-learning implementation.

My findings present an interesting conundrum. Heads of School are critical in leading their academics to embrace e-learning but simultaneously can be least knowledgeable about e-learning. The expectation for leaders in universities to have discipline-specific expertise, teaching proficiency, leadership capability, e-learning knowledge, and technical competence is a tall order. Additionally, leaders in universities frequently lack the necessary preparation for their positions, and a significant number of them are placed in crucial roles without sufficient support or guidance (Debowski, 2022). It appears then that the university sector is in need of capable and informed leaders who can ensure successful planning, execution and integration of new initiatives. This need is particularly pressing as the sector's stability is more uncertain than ever following the post-COVID era. Considering this situation and based on my findings that a lack of cooperation between academics and LDs hinders the sustainable implementation of e-learning, it becomes evident that combining the collective expertise of academics, LDs, LLs, and Heads of School is essential for achieving success and sustainability. Moving forward, the solution clearly lies in collaborative efforts involving multiple stakeholders that must be led and facilitated by Heads of School or other faculty leaders who can effectively work with their staff to generate desired outcomes.

My research underscores the importance of senior leaders gaining a better understanding of e-learning, and this aligns with the concept of knowledge-oriented leadership,

as discussed by Iqbal et al. (2019). Iqbal et al. (2019) delved into knowledge-oriented leadership, investigating how leaders who emphasise knowledge management and sharing impact an organisation's outcomes. Their research revealed that leaders who prioritise these practices foster innovation, effective problem-solving, and overall organisational success. This approach cultivates a culture of continuous learning and knowledge exchange, which contributes significantly to the organisation's performance and achievements.

Further, Rehman and Iqbal (2020) conducted research that focused on the role of leadership in fostering employee creativity and innovation. They found that leadership styles emphasising empowerment, open communication, and supportive environments positively influence employee creativity. Both studies highlighted that leaders who encourage idea sharing, provide autonomy, and create a psychologically safe space tend to enhance employee innovation and contribute to the organisation's overall innovative capacity. It seems then that the literature, whilst clearly placing importance on knowledge, perhaps places more emphasis on leaders fostering their teams. This is interesting as it suggests a dichotomy between whether leadership skills or specific e-learning knowledge is most critical for Heads of Schools. Analysis of my findings also showed some misalignment around the importance of e-learning knowledge and leadership skills between academics and LDs. Learning designers considered specific e-learning knowledge as paramount, whilst LLs placed more importance on project management and change management abilities.

As a distinct category, e-learning knowledge does not feature directly in Fullan's (2016) change model. This is not surprising, as Fullan's (2016) model is aimed at the implementation of all innovations in high schools, and I am explicitly focusing on e-learning implementation in my study. What is intriguing, however, is that my findings highlight how the situated complexity of the university environment differs from school settings. For instance, the principal of a high school typically has a teaching background and educational expertise. In contrast, a senior leader at a university generally (but not exclusively) has an academic background but may not have an educational background, teaching experience or pedagogical knowledge. This discrepancy underscores the unique challenges universities face in implementing e-learning, as academics and individuals in leadership positions may not possess the knowledge and expertise in technical, pedagogical, content knowledge (Mishra & Koehler, 2006) to either implement e-learning in their own practice or lead academics with a specific discipline.

Mishra and Koehler's (2006) TPCK theory, often referred to as TPACK, is a framework that emphasises the intricate interplay between technology, pedagogy, and content knowledge in effective teaching and learning within technology-enhanced contexts. TPCK requires educators to possess a nuanced understanding of how to teach specific subject matter while harnessing the potential of technology. TPCK builds on the concept of Pedagogical Content Knowledge. (PCK) introduced by Shulman (1987). Shulman, an influential scholar in the field of education, and his work on PCK has had a significant impact on teacher education and the understanding of how teachers should possess not only content knowledge and pedagogical knowledge but also the ability to integrate them effectively for teaching specific matter. TPCK further encompasses awareness of students' preconceptions, common misconceptions, and the most effective instructional strategies for conveying complex ideas using technology. This theory underscores that educators with a strong TPCK foundation can bridge the gap between their subject matter expertise and technology integration into their teaching methods, ultimately leading to improved student learning outcomes.

One significant aspect of TPCK is its adaptability to the evolving e-learning landscape. While e-learning technologies have rapidly evolved, the fundamental principles of good teaching and learning have remained stable. Mishra and Koehler's (2006) TPCK framework can be seamlessly applied to new technologies, offering guidance for educators seeking to integrate them effectively. It provides a stable foundation for educators in the dynamic e-learning landscape, aiding them in navigating the constant influx of new technologies by offering a consistent framework for evaluation and incorporation. This stability ensures that pedagogical principles remain at the forefront, despite rapid technological change.

Mishra and Koehler's (2006) TPCK framework also serves as a valuable resource for professional development in e-learning, enabling educators and LDs to stay current with the latest e-learning tools and strategies while grounding their practice in sound pedagogical principles. Moreover, their research continues to be a reference point for scholars and practitioners alike, influencing subsequent research and serving as a foundation for ongoing discussions surrounding technology-enhanced learning.

When implementing e-learning, educators need expertise in their subject matter and a deep understanding of how to effectively convey that knowledge through online teaching methods. Educators must navigate the nuances of digital platforms, interactive tools, and online communication while adapting their pedagogical strategies to suit the virtual environment. Knowing how to effectively teach a particular subject in an online environment, taking into

account technological capabilities and instructional methods, is a crucial component of successful e-learning implementation. While academics in education disciplines are expected to possess both subject expertise and PCK (Shulman, 1987), many academics in other fields might not have this combination nor technical knowledge. This underscores the importance of collaborating with those who do possess this expertise.

The inclusion then of e-learning knowledge as an additional essential component in Fullan's 2016 change model is crucial to render the change model useful for the distinct complexities inherent in the university environment. Unlike traditional school settings, where pedagogical expertise is commonly assumed, universities often have leaders with academic backgrounds but potentially limited experience in educational practices, especially in e-learning. This gap highlights one of the unique challenges universities face in successfully implementing e-learning initiatives. Incorporating e-learning knowledge into the change model acknowledges the need for leaders to possess not only academic expertise but also a deep understanding of effective online pedagogy and technical aspects.

By extending Fullan's (2016) change model to encompass e-learning knowledge, the multifaceted demands placed on leaders to foster innovation, manage change, and facilitate effective e-learning implementation are recognised. This addition emphasises that successful implementation of e-learning strategies requires leaders who are well-versed in technological tools, pedagogical content knowledge for online instruction, and the capacity to lead in a domain where traditional educational models may not apply directly. In the ever-evolving landscape of education, acknowledging the significance of e-learning knowledge within Fullan's (2016) change model is a response to the modern demands and challenges of educational leadership.

5.2.1.3 Learning Management System

My findings highlight that a university's selection of its LMS plays a pivotal role in implementing e-learning. Regarding categorisation, the LMS theme aligns with the District category of Fullan's (2016) change model, which pertains to the support provided by the larger organisation. However, my findings emphasise that the usability and functionality of the LMS are of such importance to all stakeholders that it surpasses its classification within the change model as general support provided by the university. My findings suggest that the LMS is perceived by students to be the face of the university and therefore how it looks and feels has

a profound impact on the effectiveness of their online learning experiences. For academics it was evident from my findings that the LMS did not simply serve as a technical tool but also influenced the overall ability of academics to afford quality student e-learning experiences.

5.2.1.4 Recruitment

The recruitment theme that surfaced in my findings loosely corresponds to the District category in Fullan's (2016) change model, which refers to overall support from the broader organisation. However, Fullan's (2016) model overlooks the need for the recruitment of specific staff to support academics in implementing e-learning which my findings highlighted as vital. This oversight fails to recognise the criticality of support staff within the university context. This observation is interesting as it highlights a gap in understanding the significance of support staff and their contributions to the e-learning implementation process. This finding also indicates a lack of awareness about the necessity for collaborative efforts when implementing e-learning rather than expecting academics to work in isolation, which align with Aitcheson et al.'s., (2020) research.

A further interesting discovery from my study is that academics, LDs and LLs all acknowledge the need for adequate support staff to assist academics. However, what is perhaps more noteworthy is that their perspectives on the nature of this support differed. Learning designers and LLs, stressed the requirement for both on-demand and long-term support to aid academics in developing innovative and sustainable e-learning implementation practices. In contrast, academics emphasised the criticality of the availability of support staff on demand. In my findings, academics did not discuss extended collaborations with LDs to build capabilities over time. Instead, their concern lay in how to access prompt assistance from LDs exactly when they needed it.

An emphasis on short-term assistance from academics implies that they perceive LDs primarily as technical problem solvers rather than pedagogical experts or collaborators with whom they can build long-term working relationships. This incongruence is intriguing as it underscores a disparity in perception regarding the kind of professional learning academics and LDs consider is needed for implementing e-learning. Clearly, some academics view support staff as solely responsible for technical assistance, suggesting a need for training, while LDs have a broader and more comprehensive understanding of the professional learning needs of academics and how they can meet those needs. Another significant concern arising from the

difference in perception of the type of assistance academics wanted that my findings uncovered was related to the perceptions academics and LDs had of each other. This was discussed so emotively that I realised the importance of this topic warranted its own theme and is therefore discussed in the next section.

5.2.1.5 Roles

My findings reveal that insufficient understanding of each other's roles which often led to a lack of mutual respect for each other's roles, was an impediment to effective collaboration between academics and LDs. Within this context, some LDs encountered challenges when attempting to assist academics due to the academics' misunderstanding of the LD role. This perceived lack of respect manifested in two ways: firstly, some academics failed to recognise the value of collaborating with LDs, placing their discipline knowledge above pedagogical considerations and disregarding the LDs' specialised knowledge. Secondly, conflicts emerged when academics assigned LDs tasks that exceeded their typical responsibilities and simultaneously overlooked the LDs' pedagogical expertise. A lack of respect from academics greatly concerned LDs because it impeded their ability to support academics with implementing e-learning as effectively as they wanted to. Relatedly, LDs strongly advocated for robust collaboration between academics and themselves as they considered it a pivotal means for leveraging the collective expertise of academics and LDs to advance e-learning implementation and foster better e-learning teaching practices.

The theme of roles from my findings does not align with any of the implementation categories in Fullan's (2016) change model. This is understandable since school teachers, who are qualified educators with shared pedagogical expertise, possess a mutual understanding of each other's responsibilities. Consequently, the distinctions in roles and responsibilities for support staff are likely to be more clearly delineated in this context too. However, in universities, academics might not always have an educational background; their expertise often centres around specific academic disciplines. As a result, the distinction regarding the support they need when implementing e-learning is less clear. This lack of clarity has implications not just for the specific type of support academics may seek from LDs but also for how much they value and respect the knowledge and input of LDs in assisting them with e-learning implementation.

The findings on the importance of role clarification for LDs and the potential for conflicts between academics and LDs when roles are not clear from my study have similarities with the research of Miller and Stein (2016), Halupa (2019) and Bennett and Albrecht (2022), who also identify conflicts between academics and LDs when working together. Miller and Stein (2016) frankly discuss challenges and conflicts from the LD perspective. They posit that academics consider themselves the only experts even though they do not have any experience or education in teaching or learning. They also suggest that academics believe their discipline expertise "supersedes an instructional designer's knowledge of good instructional design" (p.1)). In other words, academics believe they know how to teach because they have been doing it for so long. However, in general, Miller and Stein (2016) observe that academics are not knowledgeable about quality practices in instructional design, such as the Quality Matters Rubric and accessibility standards, and that they actually view quality standards as an "impingement" on academic freedom (p. 2). Further conflict between academics and LDs can occur because some faculty are very resistant to teaching differently from the way they have done in the past. This can be due to a lack of pedagogical knowledge or a lack of knowledge on how to use instructional technologies that are used in online education.

The findings from my study on the friction that can occur between academics and LDs when working together also align with Halupa's (2019) research which examines the collaboration between LDs and academics as a crucial element in creating high-quality online courses within higher education. Within this collaboration, despite LDs being recognised as the design experts and academics' expertise as discipline-specific, conflict issues still arose when there was a lack of clear role differentiation. According to Halupa (2019), open discussions regarding the roles of team members and their contributions to the project are vital in preventing conflicts during collaborative e-learning projects. It is interesting that Halupa's (2019) research, unlike Miller and Stein's (2016), primarily centres on the academic viewpoint. Halupa (2019) exhibits writing from an academic perspective by noting that it is important that LDs adhere to their designated roles and refrain from overstepping their responsibilities. This resonates with the outcomes of my study, which indicates that some academics perceive LDs as their subordinates – a sentiment that LDs interpret as a lack of recognition for their roles, leading to a noticeable sense of dissatisfaction. Could this perception of superiority perhaps be attributed, in part, to academics prioritising research over teaching proficiency and, therefore, not taking learning and teaching as seriously? If this is the case, it suggests that some academics

do indeed consider themselves superior to LDs, leading to reluctance to cooperate with them to implement e-learning.

Claiming that academics universally do not respect LDs obviously can not be true, as attitudes and opinions toward LDs may differ among individuals. Nevertheless, certain factors may contribute to a perception of inadequate respect from academics towards LDs. Some academics clearly do not have a complete understanding of the role of LDs, an understanding of their expertise or an understanding of the need for an e-learning implementation design process, which can cause misunderstandings or misconceptions about the importance of collaboration by academics. This lack of comprehension could lead to a perception that LDs do not add value to the learning and teaching process. In addition, academics and LDs may prioritise distinct aspects of learning and teaching. For instance, an academic may give more importance to course content, whereas an LD may focus on creating engaging and effective learning experiences. Such differences in priorities can create tension and a perception that the other party is not entirely committed to the course's success. Some academics may oppose the implementation of e-learning or other design interventions, completely in any form leading to tension and a perception of disrespect towards LDs who are advocating for change both in how academics teach as well as their process of working.

My findings align with Bennett and Albrecht's (2022) research which builds on the prior work of Halupa (2019). Similar to Halupa (2019), their study places significant emphasis on the necessity of clearly defining the roles of LDs roles – or, as referred to in their study, instructional designers – as well as faculty members when collaborating on e-learning implementation efforts. Additionally, Bennett and Albrecht (2022) identified an uncomfortable situation where LDs find themselves acting as project managers for course design projects whilst at the same time occupying a subordinate position in relation to the academics and administration staff they are leading. My findings mirror this exact predicament, with LDs and LLS in my study expressing similar challenges related to the difficulty of managing projects where they lack authority, do not necessarily receive respect from academic colleagues, and frequently have an inadequate number of LDs or support staff to fulfil the required tasks. This often leaves LLs attempting to manage an e-learning implementation project, build good working relationships in a complex environment and develop resources simultaneously.

Through interviewing academics and LDs, my results highlight their different lived experiences when implementing e-learning. This is interesting as it suggests something deeper than just issues of role descriptions is playing out. Bennett and Albrecht (2022) suggest the

cause of this conflict can be put down to university policy labelling LDs as professional staff rather than academic and therefore positioning them as “information technology professionals who have a high degree of technical knowledge but little knowledge about the academic side of course development and online teaching” (p. 12). This observation is noteworthy because it points to assumptions about roles that are truly inhibiting the potential for collaboration, which could otherwise benefit and assist academics in improving their teaching practices when implementing e-learning. This scenario brings to light a situation where too much emphasis might be placed on the titles of individuals rather than their function. The result is considerable power dynamics at play around the authority associated with the labels of academic versus professional staff.

Foucault (1990) contends that “where there is power, there is resistance” (p. 95). By this token, there are clearly power dynamics at play then when academics and LDs collaborate. These are exacerbated by a lack of role definition on the one hand in terms of the expertise LDs have and, on the other hand, demarcation as having a technical role, labelled as professional staff. This power play is clearly having a significant impact on the success of e-learning implementation efforts. In their seminal work, Foucault (1990) asserts that power is inherent in all forms of relationships and interactions and that a specific entity or individual does not merely exercise power but is woven into the very fabric of social dynamics. This implies that power is not a solitary force but dispersed among societal elements. Foucault’s (1990) perspective highlights that power is not confined to authority figures; it is also present in daily interactions, language, knowledge, and societal norms. This idea underscores power's intricate and pervasive nature, emphasising its constant influence on human interactions and institutions.

The notion that power is intrinsic to all relations has implications for the collaboration between LDs and academics during e-learning implementation. In this context, power dynamics are not confined to traditional hierarchies; they intertwine within their interactions. Within this intricate power dynamic, academics and LDs collaborate where authority is not solely dictated by roles but by knowledge, expertise, and perceived contributions. Academics might wield power due to their subject expertise and academic status, while LDs hold influence through their technical and pedagogical knowledge. These power dynamics can influence how decisions are made, ideas are presented, and strategies are implemented.

Furthermore, power can manifest in allocating resources, decision-making processes, and even framing e-learning initiatives. For instance, academics might assert authority over the

content, curriculum, or instructional approach, whereas LDs might impact technological aspects and design considerations. Disparities in power can result in conflicts, resistance, or even a lack of collaboration if not managed effectively.

Power dynamics can manifest in various ways within this context, encompassing disparities in expertise, levels of authority, goals, priorities, and resistance to change. Academics and LDs may have different levels of expertise in their respective fields, which can create power imbalances. For instance, academics may feel that LDs do not fully understand the specific needs of their discipline, while LDs may feel that academics underestimate the potential of e-learning technologies. Depending on the institutional structure, LDs may have more or less authority than academics and vice versa. Understanding Foucault's concept of power becomes instrumental in realising that power is not inherently negative but rather an inherent element in the collaboration between academics and LDs. By recognising these power dynamics, partnerships can become more transparent, inclusive, and equitable. By understanding that power operates beyond formal roles, both parties can navigate interactions more effectively, ensuring that the expertise and perspectives of all stakeholders are valued and integrated into the process of e-learning implementation.

In addition to some academics perceiving LDs as subordinate to them, they might also see them as “outsiders” who are brought in to implement change. Outsiders not only because of being seen as professional staff rather than academics but also in terms of LDs' physical location outside the faculty. Academics may resist e-learning implementation efforts, therefore, because they feel that the changes are being imposed on them from outside their faculty or their ‘tribe’ and because they are concerned about the impact of e-learning on their traditional practices. My findings reveal that the organisational structure of the division they belong to in addition to their physical location is of major concern to LDs. They complained that when they were not located in a faculty close to academics, it prevented the building of relationships with academics as well as prevented consistency in the development of e-learning implementation for an academic’s subject. Academics also complained about the inconvenience of externally located LDs. In addition to preventing academics from being able to access help from LDs when they needed it, they were not sure which ‘team’ or ‘unit’ or ‘department’ to ask for help from. The whole process of help-seeking ended up feeling so onerous that some academics gave up asking for help at all

The depth of concern regarding whether the location of LDs was centralised or decentralised revealed in my findings has similarities with Wheeldon et al. (2023), who argue

that the physical placement of academics and support staff significantly affects power dynamics. Wheeldon et al.'s (2023) research findings reveal that the impact of centralising support staff, such as learning designers, goes beyond just causing conflict among staff. They contend that this centralisation can also have negative effects on the mental well-being of academics. According to their study, when universities centralise professional staff, relationships between academics and professional staff such as LDs are damaged through separation, increased monitoring that feels controlling rather than collaborative and reduced collegiality. These negative changes ultimately lead to poorer operational outcomes due to increased staff conflict. Despite this evidence, Wheeldon et al. (2023) indicate that university leaders are often enticed by the mistaken belief that centralising professional staff will result in improved student support and greater operational efficiencies. As a result, university leaders continue to centralise professional staff, including LDs, even though this action has the opposite effect and hampers collaboration between academics and LDs on e-learning implementation projects.

In addition to the issue of location previously discussed, my findings highlighted additional issues concerning power dynamics and decision-making in the initiation and cessation of e-learning implementation projects. Learning designers found it frustrating when collaborative e-learning projects with academics were abandoned by those academics once the LDs shifted to other projects. This response was disheartening to LDs and was seen as further evidence of a negative perception of the LD role and further evidence of a lack of commitment to e-learning implementation.

The phenomenon of academics discontinuing e-learning initiatives when LDs move on to another project, however, might not be directly tied to the LD role; instead, it may be an example of "fabrication" (Ball, 2003, p. 224). When individuals or institutions engage in fabrication, they outwardly show compliance with e-learning initiatives or requirements but do not genuinely embrace or fully implement the intended changes. Academics may feel pressure to implement e-learning, even if they are unsure of how to do so effectively, because they do not fully understand the principles and benefits of e-learning. As a result, they might fabricate the appearance of e-learning adoption to look as though they are meeting external performance measures rather than genuinely enhancing students' learning experiences. In this context, the LD might also be viewed by academics as an external performance indicator that academics feel pressured to respond to. Therefore, giving up on implementing e-learning when the LD

moves on may have nothing to do with the LD role itself. Instead it could be rooted in the broader context of external pressures for meeting performance metrics.

Whilst understandable when managing a high workload, this situation is concerning. If the academic only implements e-learning when the LD is present, this suggests that they do not see the value in the approach nor see it as an integral part of their teaching practice. This is further evidence of fabrication (Ball, 2003), illustrating that the academic is not fully engaged with the e-learning approach and is not motivated to use it sustainably and meaningfully, driven by a genuine desire to improve learning and teaching outcomes.

Fabrication of e-learning implementation in universities can have significant implications for various aspects of university operations. Firstly, when individuals do not genuinely embrace e-learning practices, their effectiveness is compromised. As a result, the potential benefits of e-learning, including improved education access, increased student engagement, and flexibility, may remain unrealised, hindering the overall success of the initiatives. Secondly, fabrication results in the wastage of valuable resources invested in technology, training, and infrastructure. This inefficiency creates a perception that e-learning is ineffective, leading to a reluctance for further investments in the future. Thirdly, fabrication generates resistance among staff and students towards e-learning. If they sense a lack of genuine commitment from the institution, their motivation to adapt to the changes or actively participate in the e-learning process diminishes. Fourthly, genuine compliance with e-learning enables for continuous improvement through constructive feedback, monitoring, and evaluation. Fabrication inhibits this feedback loop, missing opportunities for enhancing the e-learning experience. Moreover, if fabrication persists over time, inconsistencies in e-learning practices arise across different subjects, schools or faculties. This lack of coherence disrupts teaching and learning as students and faculty struggle to adapt to varying approaches.

Additionally, not fully embracing e-learning as part of the institution's business continuity strategy can jeopardise the university's adaptability and resilience in the face of future challenges. Without a genuine commitment to e-learning, the university becomes ill-prepared to handle unexpected events, such as public health crises or natural disasters, which can threaten its long-term stability. To ensure the success of sustainable e-learning therefore, it is vital to address fabrication and foster a genuine commitment to e-learning throughout the university community.

Furthermore, my findings revealed that an academic's view on their identity can also affect their interactions with LDs. How an academic sees themselves as a teacher discipline expert and professional can shape their attitudes and behaviours towards collaboration with an LD. An academic with a strong identity as a subject matter expert may be less likely to seek input or guidance from an LD and may be more resistant to suggestions or feedback. On the other hand, if an academic sees themselves as a collaborator and partner in the design process, they may be more open to working with an LD and may value their expertise and insights. Furthermore, an academic's disciplinary background and culture can also shape their interactions with an LD. Academics in more traditional disciplines may be more sceptical of design interventions. As a result, they may resist input from an LD, while academics in more innovative or interdisciplinary fields may be more open to collaboration and may see the value in incorporating different perspectives and expertise. Additionally, some academics' discomfort with their lack of technical ability might not sit well with their identity as subject experts and could, therefore, prevent them from asking an LD for help. Differing objectives and priorities regarding the adoption of e-learning can also lead to conflicts between academics and LDs. Learning designers might focus on developing scalable, standardised and streamlined solutions that are applicable across multiple courses or disciplines. On the other hand, academics could place a higher emphasis on ensuring that e-learning technologies address the unique requirements of their individual subjects.

5.2.2 Individual Capability

In the following section, an analysis of the significant findings associated with the themes within the overarching category of *individual capability* (namely, e-competence, digital narrative, professional learning, self-efficacy, elbow support, and workload allocation) will be presented and discussed in detail.

5.2.2.1 E-Competence

From my findings, the theme of e-competence emerged as an emotionally charged one for LDs, who firmly believed that academics should continuously work on developing their e-competence. Interestingly, the academics interviewed in this study did not discuss their e-competence. There are several possible explanations for this. It could be that academics were completely confident in their e-competence and saw no need to address it. Alternatively, they

might have avoided discussing e-competence, treating it as an uncomfortable topic or 'the elephant in the room' due to their lack of confidence. Lastly, it is also possible that academics felt uneasy discussing their e-competence with the interviewer, perceiving them as someone proficient in e-learning. E-competence as a theme is not referred to specifically in Fullan's (2016) change model, which is unsurprising as the model relates to all innovations not specifically e-learning or indeed any technologies per se. Additionally, the model primarily focuses on the school context, where capability is perhaps assumed. Interestingly, the term competence is not utilised in Fullan's (2016) change model in any context.

With regard to LDs, my findings show that not only did LDs view academic e-competence as critical to e-learning implementation, they also considered developing e-competence as part of an academic's job. Learning designers defined e-competence as proficiency in using the institution's LMS, confidence in utilising different teaching approaches and technologies, and knowledge of how to support students to engage more effectively online. My findings also revealed a connection between an academic's mindset, disposition, and e-competence. This manifested specifically as the development of a story some academics internalised about their own and their perceived students' e-learning capabilities. I use the phrase 'digital narrative' for this phenomenon. My analysis divulged that an academic's digital narrative significantly impacts their willingness and ability to adopt and integrate e-learning into their teaching practices. Notably, when an academic's digital narrative is negative or focused on perceived deficits, it conflicts with their self-perception as experts, leading to reluctance to engage with technology or to collaborate with LDs.

The attitude of an academic towards their e-competence was invariably related to their digital narrative. The story academics told themselves about their digital capability acted as an enabler or a barrier and was therefore critical in academics' openness to embracing e-learning. Relatedly, whether the academic had an open or closed mindset to developing their e-competence could directly impact whether they were open or closed to collaborating with an LD. These findings regarding an academic's digital narrative are closely related to the concept of a growth mindset (Dweck, 2014) explained as the belief that one's abilities and intelligence can be developed through effort, learning, and perseverance. Those with a growth mindset welcome challenges, view failures as opportunities to learn and grow, and believe that hard work can lead to improvement in their skills and abilities. Dweck (2014) contrasts the "growth mindset" with a "fixed mindset", where individuals believe their intelligence and talents are

fixed traits and cannot be significantly changed. As a result, people with a fixed mindset may avoid challenges, see effort as futile, and become discouraged by setbacks.

In the context of e-learning implementation, the findings of my study show that those academics with a growth mindset were more likely to engage in discussions about pedagogical issues or explore new e-learning approaches with LDs to learn from them. In contrast, academics with a fixed mindset tended to avoid seeking pedagogical help, fearing it would expose their lack of knowledge or e-learning capabilities, leading to embarrassment. From the LDs' perspective, academics' avoidance of seeking pedagogical assistance from them resulted in LDs feeling undervalued and viewed as 'glorified technical support persons' instead of being appreciated for their pedagogical expertise. Whilst the cause for academics attitude may have nothing to do with the LD, it can have implications for the relationship between them when needing to work together to implement e-learning.

5.2.2.2 Digital Narrative

The findings related to the concept of 'digital narrative' in this study are intriguing. Although the terms 'digital narrative', 'mindset', and disposition are not explicitly mentioned in Fullan's (2016) change model, there is some connection to the self-efficacy aspect within their teacher category. Therefore, the digital narrative theme does align loosely with Fullan's (2016) change model. The results around the concept of a 'digital narrative' also revealed an outdated belief among academics regarding the idea of 'digital natives' (Duncan-Howell, & Lee, 2007; Prensky, 2001a; Prensky, 2001b; Tapscott, 1997) in the context of their own digital technical competence and their perception of their student's technical competence. Prensky's (2001a, 2001b) theory on digital natives contends that individuals born in the digital era, known as digital natives, possess unique skills and characteristics due to their early exposure to technology. Digital natives are described as proficient multitaskers, preferring digital media and communication and being comfortable in digital environments. Prensky (2001a) argues that traditional educational methods may not effectively engage digital natives and calls for approaches that align with their digital inclinations and learning preferences.

The findings of my study also revealed that some academics who believed that their students were digital natives also believed, as a consequence, that they did not need to scaffold their students' learning when implementing e-learning. It is interesting that some academics have internalised the view of digital natives, as Prensky's (2001a, 2001b) theory has faced

criticism from researchers who emphasise the diversity of technological skills and experiences among individuals, cautioning against generalising the characteristics of digital natives (Helsper & Eynon, 2010).

Critics (see Bennett et al., 2008; Helsper & Eynon, 2010; Jones & Czerniewicz, 2010; Kennedy et al., 2009; Selwyn, 2009; Spiegel, 2021) contend that Prensky's (2001a, 2001b) theory lacks empirical evidence and overgeneralises an entire generation based on their exposure to technology. It is seen as neglecting the diversity of skills and experiences within the digital native cohort and disregarding the influence of other factors on individuals' development and learning. Furthermore, the theory overlooks the digital divide and inequalities in access to technology, fails to emphasise critical thinking and digital literacy, and does not account for the evolving nature of technology.

Bennett et al. (2008) assert that the theory oversimplifies the concept and overlooks the diversity of skills among young people, a point echoed by Helsper and Eynon (2010), who draw attention to the socioeconomic disparities in digital literacy. Jones and Czerniewicz (2010) further challenge the theory's binary distinction between digital natives and immigrants, emphasising that digital skills can be developed at any age. Selwyn (2009) critiques the deterministic view of technology inherent in Prensky's theory, while Kennedy et al. (2009) highlight the considerable variation in digital competence within age groups. Moreover, Bennett et al. (2008) stress the critical importance of digital literacy. Collectively, these critiques underscore the need for a more nuanced understanding of digital skills that considers diverse experiences, socioeconomic factors, and the pivotal role of education in cultivating digital competencies. This multifaceted critique effectively challenges Prensky's theory, highlighting its limitations in accounting for the complexities of the digital landscape and the diverse pathways individuals take in developing digital skills.

The perception by academics that their students are digital natives is clearly an example of the use of digital natives as an outdated and inaccurate label (Spiegel, 2021). Firstly, the term implies that all students can be categorised in one way and suggests they all are competent with using multiple forms of technology. In reality, different types of technology users can be defined by the way they use different technological tools, such as "digital creators" (Palfrey & Gasser, 2008), "digital socialites" (Boyd, 2014), "digital gamers" or "digital workers" (Spiegel, 2021). Secondly, at the universities in this study, many students are of mature age and cannot be assumed to be either a 'digital native' or a 'Luddite'. Spiegel (2021) argues that each of these different technology user groups uses and learns technology differently, and tend towards

only studying what interests them. Viewing students as digital natives is, therefore, an unhelpful way to consider either school leavers or mature students when they enter university. Neither group is necessarily competent in the relevant technical skills they need for their online studies. While 18-year-old students might have competence in using social media, for instance, they still need support in gaining digital literacies in the same way their fellow mature students do. Thirdly, assuming their students are digital natives results in some academics thinking they do not have to scaffold their students' online learning.

Simultaneously, some academics, while using the outdated term 'digital natives', considered they were so far from being 'digital natives' themselves that it prohibited them from embracing e-learning more enthusiastically. Furthermore, this negative view of their own digital proficiency was exacerbated by an assumption that their students, in contrast would inevitably surpass them in digital skills and knowledge. Consequently, some academics exhibited resistance to enhancing their digital proficiency altogether.

My analysis indicates that an academic's view of their digital capability can significantly impact e-learning implementation. If an academic has a positive view of their digital capability, they are more likely to be open to e-learning and see the potential benefits it can bring to their teaching and student learning outcomes. They are also more likely to be confident in using e-learning tools and technologies and may be more willing to experiment with new approaches to teaching. On the other hand, if a lecturer has a negative view of their digital capability, they may be more resistant to e-learning and see it as a burden or distraction from their core teaching responsibilities. They may also be less confident using e-learning tools and technologies, leading to frustration and reluctance to implement e-learning interventions.

This misconception of their students' digital capabilities may provide insight as to why some academics do not consider it necessary to apply pedagogical approaches to scaffold their e-learning to support their students' learning experiences. This lack of understanding perhaps also explains why some academics do not prioritise working with LDs, as they just do not comprehend the importance of providing comprehensive support when implementing e-learning for their diverse student populations.

5.2.2.3 Self-Efficacy

My results illustrate that some academics acknowledged the importance of self-efficacy when implementing e-learning and expressed a willingness to develop their technical skills and

e-competence. It is difficult to draw conclusions from such minimal findings; however, there may be some similarity with Fullan's (2016) view that teachers' experiences and career stages influence their sense of efficacy, impacting their motivation to take action and persist in successful implementation efforts. This is interesting, as in this study, the academics who discussed self-efficacy were mid-career, which could suggest they are interested in new approaches and an expectation that it is up to them to be responsible for building their own e-learning capability and to develop new skills to enhance their career. The self-efficacy theme was not mentioned specifically by LDs. Rather, LDs expressed the view that academics should develop their e-competence as part of their job.

5.2.2.4 Professional Learning

The findings from my study underlined that academics do not particularly want to attend PL on implementing e-learning. In the responses gathered, none of the academics specifically mentioned a need for PL, but they did criticise when PL sessions were scheduled, and they also questioned the credentials of presenters delivering PL sessions. On the other hand, LDs and LLs were fully committed to providing PL but acknowledged that it was not easy to do. Learning designers' and LLs' concerns about PL revolved around issues of attendance, ensuring retention of learning by attendees, and the desire for data about academics e-competence so they could conduct training needs analysis to better design PL content.

One possible explanation for why it is difficult to attract academics to PL in line with Sidhu and Gage's (2021), research is that academics who adopt e-learning practices are more likely to attend PL sessions provided by their university and vice versa. This is an interesting conundrum where academics who do not engage in PL are less inclined to adopt e-learning practices and are less likely to actively seek out PL opportunities to learn about e-learning implementation. In other words academics who need e-learning implementation PL the most are the least likely to attend. Another explanation could be that academics are not interested in formal PL seminars. Instead, as the findings of this study show academics seem to prefer to seek on-demand assistance from LDs when they need it rather than participating in formal PL sessions. This may reflect a lack of understanding around training versus PL and an equating of e-learning with technical proficiency rather than a combination of technical proficiency and pedagogical knowledge.

My findings also highlight the importance of the focus and timing of PL. Whilst LDs and LLs emphasised that academics should actively participate in PL sessions regularly to foster effective e-learning practices, they also acknowledged that PL sessions at their universities mainly focused on just-in-time delivery, catering to immediate teaching needs rather than providing comprehensive and sustained support for developing academic skills in e-learning in the long term. This approach impacted how academics perceived the relevance of PL seminars to their specific needs, leading to varying levels of willingness to attend.

To address this issue, LDs advocated for e-learning-focused PL that includes long-term support mechanisms to assist academics in implementing e-learning effectively. Because digital literacies evolve over time, different tools and approaches are context-dependent and require personal engagement in a meaningful way. Additionally, the importance of tailoring e-learning approaches and technologies to align with the specific disciplines of academics is critical. This idea aligns with the notion that professional learning should be rooted in the actual learning and teaching contexts of academic staff (Reid, 2014). These findings also correlate with the research of Forbes and Walker (2022), who suggest that sustainable learning for online teachers requires a multifaceted approach encompassing situational relevance, flexibility, active engagement, social interaction, and creativity. Individual requirements will vary over time and in response to evolving teaching contexts and practices. Failing to align professional learning with these principles may impede the effective transfer of knowledge into learners' future practices, thus hindering successful knowledge application.

My findings align with Walker and Forbes's (2022) research that highlights the criticality of the need for a fundamental reconsideration of how universities support their academics in developing their e-learning teaching practice. It is clear from my findings that planning and providing PL is not easy. Additionally, my findings highlight difficulty in encouraging academics to attend PL sessions. These findings align with Loughland and Ryan, 2022 who argue that it is critical to acknowledge that the common vision of simply scheduling PL will not lead to automatic improvement in classroom performance, nor will simply attending group sessions or sharing. Achieving true mastery of subject and teaching skills requires fostering collaboration, trust, and respect, as well as utilising effective learning and leadership approaches. To ensure progress, Durksen et al. (2017) and Loughland and Ryan (2022) argue that it is essential to prioritise strategies that actively promote these elements throughout an ongoing PL program. The increased importance of continuing professional learning and development (CPLD) in equipping instructors who are new to online teaching

with the necessary skills and strategies to navigate the online teaching domain is highlighted by Walker and Forbes (2022). It is interesting that the leadership of PL programs and approaches emerges as so critical to the provision of meaningful PL. This emphasises two points that have previously been discussed. Firstly, the need for a Head of School or other senior leaders to demonstrate commitment to e-learning implementation by leading change towards e-learning implementation. Secondly, through focusing on fostering collaboration within PL sessions. Both of these are strongly repeated themes from the findings of this study.

5.2.2.5 Elbow Support

The desire for elbow support surfaced prominently in my findings. Academics, LDs, LLs, and students all referred to the value of having available on-demand support from LDs. For academics, LDs, and LLs, this manifested in desiring LDs to be available to support academics when they needed it. Students were less clear about who should be available to support them, but they clearly advocated for support with the technical challenges they faced when studying online. My findings are consistent with research conducted by Walker and Forbes (2018), in which they emphasise the significance of dedicated support in ensuring high-quality learning experiences for students. Walker and Forbes (2018) argue that institutions must acknowledge and address the workload implications associated with providing this essential support and resources, and university leaders must take proactive steps to alleviate the workload burden on staff and provide the necessary support. Elbow support of any kind is not referred to at all in Fullan's (2016) change model.

5.2.2.6 Workload Allocation

The topic of workload allocation surfaced in my findings as a deal breaker when implementing e-learning. Lack of time to work on implementing e-learning often resulted in academics having to make a trade-off between how they might wish to implement e-learning within their subject or course and what changes were possible in the time available. For an academic, insufficient workload allocation for implementing e-learning often resulted in a blurring of the boundaries between work and leisure. The responses of academics, LDs, and LLs about inadequate workload exemplify how the change from face-to-face teaching to e-learning disrupts academics' established work patterns and does not meet authentic academic workload requirements that are essential to implementing e-learning (Martins & Baptista

Nunes, 2016b). This is interesting as it might indicate that the need for interaction and immediacy reported by academics as a requirement for online teaching is not being matched by university workplace metrics. It is worth noting that Boncori et al. (2020) do not differentiate between work allocation for e-learning or face-to-face teaching. However, they do view workload allocation models as managerial tools that can be used either as resistance or empowerment. This depends on whether the models are collaboratively developed, fair, and transparent in the way they assign tasks and responsibilities to avoid creating unmanageable workloads.

For the academics interviewed in my study, workload allocation predominantly still relied on traditional workplace metrics designed for in-person teaching. As a result, the workload allocation model did not adequately account for the higher demands of e-learning delivery compared to in-person teaching. Specifically, it failed to consider the need for immediate responses from academics to students in response to email and online forum postings or the significant variation in workload depending on the size of online enrolment. This discrepancy suggests that the existing workload allocation system may not effectively accommodate the unique requirements and challenges associated with e-learning delivery patterns. Further, the volume of academic responses to students can vary considerably, depending on the enrolment size, which does not automatically receive extra workload allocation. Academics expressed the pressure of needing to be constantly available online, so they could respond promptly to students in order to uphold high satisfaction scores. This pressure to respond quickly to online students' emails and forum posts is an example of performativity (Ball, 2003).

A critical issue identified in my findings through LD's responses was that when academics were not given a realistic workload allocation for implementing e-learning, it could lead to a range of negative outcomes. These included failure to meet content deadlines, failure to allocate time for meetings with LDs, implementing e-learning in a superficial manner, and showing a lack of meaningful engagement with the e-learning approach (or all of the above). As a result of an overwhelming workload, academics are less likely to collaborate with LDs to implement e-learning. This was because they felt unable to invest the necessary time and energy required for effective engagement with the learning design process to enhance their online subjects. Even if they did participate, their approach was often superficial, merely adopting e-learning tokenistically without providing sufficient support for their students. In the worst-case scenario, some academics did not attempt to implement e-learning within their

subjects at all, potentially hindering progress towards incorporating effective e-learning strategies.

The issue of inadequate workload allocation became especially challenging when academics were expected to redesign units without their workload being adjusted to accommodate the extra task. It is not surprising that inadequate workload allocation manifested as irritation for academics at having to implement e-learning when they have more pressing tasks to attend to. What is interesting, however, from my findings is that this frustration could lead to academics superficially or ineffectively meeting the role expectations. When academics face constraints such as limited time or resources that prevent them from fulfilling their job responsibilities properly, they sometimes resort to 'fabrication' as a way to cope (Ball, 2003).

5.2.3 Teaching

In the following section, an analysis of the significant findings associated with the themes within the overarching category of *teaching* (namely, complexity, e-classroom management, and currency) will be presented and discussed in detail.

5.2.3.1 Complexity

Findings from my study showed that academics were concerned about the additional complexity of implementing e-learning. The need to facilitate the introduction of technology in addition to discipline content for the benefit of students was considered as extra work. This is interesting as it suggests a separation of content and pedagogy, indicating that some academics perceive learning and teaching as an adjunct to their content delivery work. Doubt about the benefits of inserting YouTube videos presenting content into their subject sites was viewed as "dumbing down" the content. This suggests that some academics lack an understanding of how to scaffold and support online resources for students for their effective use. Moreover, the data suggests that inserting media without scaffolding exemplifies fabrication (Ball, 2003) because academics might be responding to the edict of incorporating media within their subjects without truly understanding how to leverage them as meaningful learning experiences. Utilising online modes of delivery without truly understanding why can affect teacher autonomy and professional judgement regarding what is best for the student. Academics might feel compelled to incorporate media into their subjects, leading to a sense of reduced control over their classrooms and diminished freedom to teach in the manner they

consider most effective for their students. Additionally, they may experience pressure to use technology merely for the sake of using it. The findings from my results regarding complexity broadly support Fullan's (2016) definition: "the difficulty and extent of change required of the individuals responsible for implementation and incorporate difficulty, the skill required and extent of alterations in beliefs, teaching strategies and use of materials" (p. 71).

5.2.3.2 E-Classroom Management

The results from my study identified three key student concerns about inadequate e-classroom management. Firstly, students felt hindered in learning online by the lack of intervention and monitoring of online forums by academics, which deprived them of guidance on how to generally interact with their peers and, more specifically, how to develop written arguments. Secondly, communication problems arose for students when academics did not effectively manage online spaces, making it challenging for students to seek assistance or to receive timely responses. Thirdly, students criticised the clarity and complexity of written communication, such as forum posts or emails, compared to verbal interaction. They found that because written communication lacked non-verbal cues and the opportunity for immediate clarification, they could be more difficult to understand. Fourthly, the absence of guidance from academics on practical aspects of online tutorials, such as microphone and video management, resulted in distracting background noise and difficulties in following discussions. The lack of ability among lecturers to manage their e-classroom is another complexity of implementing e-learning. In this example, the academic does not seem to have realised the need to develop technical skills to support their teaching strategies and use of materials, which maps directly to the complexity category in Fullan's (2016) change model.

The students' concerns about academic e-classroom management proficiency and their own ability to decipher online communication are interesting as it indicates that both academics and students may need to make changes in their practices to function more effectively online. Academics might need to change their approach towards the practical aspects of managing the technology in their subjects, but also, in terms of realising, they need to help students to adjust to online communications. Students might need to make changes in terms of learning how to communicate better online, such as the realisation that whilst the mode is perhaps less formal online, the writing skills used for communication do need to be structured properly.

5.2.3.3 Currency

My findings identified that students were concerned about the currency of some of their online subjects. They discussed how some of their subjects lacked up-to-date information or content, leading to outdated and inauthentic material. These concerns were specifically related to subjects with technical components. For instance, they described an assignment based on obsolete technology, which raised doubts for them about the value of the subject as well as doubts about the lecturers' credibility. Of further concern was when academics had notably less discipline-specific technical knowledge than they did. Interestingly, LDs and LLs did not raise the issue of the currency of subjects at all. One explanation for this is that LDs and LLs avoid discussing subject currency, as they see it as the sole responsibility of academics. This aligns with the view that LDs should not exceed their roles and act as subject matter experts, as proposed by Halupa et al. (2019). However, it may be that LDs are more up-to-date with technologies that the academic could be using and so the discipline divide could be a little tenuous here.

The concept of subject currency is not mentioned in Fullan's (2016) change model or identified in the literature review. This is intriguing because it is critical in universities for academics. An explanation for this could be because teachers in high school are assumed to be current in their discipline as a matter of course.

5.2.4 Organisation

In the following section, an analysis of the significant findings associated with the themes within the overarching category of *organisation* (namely, communication, policy enactment, culture and organisation structure) will be presented and discussed in detail.

5.2.4.1 Communication

My findings highlighted that both academics and LDs identified inadequate communication of e-learning strategies between university leaders and staff as a hindrance to e-learning implementation. Suboptimal communication by senior leaders, however, affected academics and LDs differently. Learning designers were frustrated by how much senior leaders' inadequate communication of e-learning strategies to academics directly affected their own relationships with academics. A lack of clear communication between senior leaders and

academics meant that when academics approached LDs to work with them on implementing e-learning, LDs had to explain to academics how the e-learning strategy translated to practical e-learning implementation within their teaching practices before they could support them in implementing e-learning. This meant that LDs had to spend much time discussing the strategy rather than directly supporting its implementation. This was because senior leadership had not disseminated the strategy strongly enough to the academics in the first place. Such insufficient strategy communication by senior leaders to academics often resulted in difficult working relationships between LDs and academics. It was as if LDs had to convince academics to implement a strategy not of their making and that perhaps they did not fully endorse. For academics, on the other hand, inadequate communication manifested in three ways: inauthentic consultation between senior leaders and themselves, a top-down communication style, and the absence of a clear plan for implementing an e-learning strategy. The combination of these three issues resulted in academics being mistrustful of senior leadership. This finding is interesting because whilst the suboptimal communication is occurring between senior leadership and academics, the resultant conflict is occurring between academics and LDs. As a result, working relationships that are so important for implementing e-learning are further negatively impacted. It seems as if the leadership style of senior leaders is setting the workers against each other.

There are some significant similarities between my findings and the hypothesis of Hardaker and Sing (2011) that academics must be involved in the strategic change that is likely to influence their academic roles. Hardaker and Sing (2011) argue that if lecturers are not consulted, they will reject the changes entirely or be falsely compliant towards top-down directives. Simply communicating strategies, policies, or directives from the top through formal channels or e-mails is unlikely to influence academics. Senior management needs to engage the staff whom they rely on to implement their initiatives by appreciating that drivers for e-learning are significantly different from the institutional pressures. In their research, Hardaker and Singh (2011) also find that decisions to adopt or reject e-learning are not influenced by communication from top management but by the success of near peers and local management. This is interesting as it suggests (as previously discussed) that the HoS is influential in encouraging academics to embrace e-learning through contextualisation at a local level. Without evidence that their academic colleagues are successfully implementing e-learning, it is unlikely to eventuate.

Communication of strategy between leaders and staff is not identified in Fullan's (2016) change model as an explicit theme. Communication, however, is referred to in the community

theme, which notes that leadership and staff must be in agreement about e-learning implementation for it to be achieved. My findings differ slightly, showing more that it is not necessarily the need for e-learning that is in dispute but rather the means of implementing e-learning that causes conflict.

5.2.4.2 Policy Enactment

Analysis of the results from my study findings highlights that policy enactment in the context of e-learning is of concern for academics, LDs and LLs. Responses from academics, LLs, and LDs provided insights into the various challenges of policy enforcement, compromise, standards, accountability, innovation support, and the distinction between policy and procedure. These diverse aspects are interesting because they highlight how multifaceted and complex the nature of policy enactment is, as well as how significant policy enactment is for successfully implementing e-learning within universities.

My findings underline that when a balance between the clarity, enforcement, and compromise of policy enactment is not achieved, it hinders improvements in implementing e-learning and pedagogy. One concern raised, for instance, was the lack of a guiding policy for transitioning from traditional textbooks to online resources. Learning designers stressed the importance of having a clear framework to facilitate this transition to provide consistency for students as well as guidance for academics. Learning designers acknowledged the need for compromises but suggested focusing on overall improvement across the university rather than isolated pockets of excellence. The significance of well-defined and enforced policies, specific standards, accountability measures, and strong infrastructure was emphasised by LDs. Moreover, fostering innovation through incentives and support and addressing the difference between policy and procedure were highlighted as important factors for effectively implementing e-learning initiatives. The acknowledgement of the need for compromise in creating policies demonstrates an understanding of the broader goal of policy enactment, which is to achieve an overall improvement in e-learning implementation. It highlights the importance of making realistic decisions that lead to incremental progress uni-wide.

When promoting sustainable e-learning, LDs were focused on ensuring that policy implementation not only covered essential standards and accountability in teaching and learning methods but also acted as facilitation for effective e-learning implementation and long-term sustainability. In my study, LDs acknowledged that well-defined policies establish

a foundation that fosters e-learning success by outlining expectations and providing guidance for its implementation. However, beyond the mere implementation of e-learning policies, its crucial for policy enactment to actively support and promote the integration of innovative approaches. By understanding the role of policies in steering and motivating educators towards effective and innovative e-learning practices, they align with the broader objective of policy implementation. My findings align with, Priatna et al. (2020), who argue that the two most important elements to focus on within the organisational factors are the creation of a work culture and the establishment of policies that are binding on the academic community to carry out e-learning.

A further finding that surfaced in my study was confusion about the role of policy and procedure. Local leaders observed that policies should not only focus on procedural aspects but also provide guidance on effective teaching methods. This is interesting as it highlights a gap in understanding of the difference between policy and procedure. Further, it provides insight into why academics are frustrated with top-down directives to meet procedural deadlines whilst simultaneously desiring clear guidelines on what good e-learning implementation looks like. While policies should offer direction on effective teaching methods, they should also provide pedagogical guidance and aspiration. Procedures, on the other hand, should address practicalities like meeting deadlines for publishing sites. This finding from my study underscores the importance of policy enactment that ensures comprehensive support for teaching practices in e-learning through a balanced consideration of both instructional and procedural aspects.

The findings of my study on the intricate nature of policy enactment align with the perspectives of other researchers (see Ball et al., 2012; Braun et al., 2010; Evans et al., 2019). According to these scholars, policy enactment should not be seen as a straightforward and linear process but rather involves interpreting, translating, and contextualising policies to suit the unique local contexts and diverse discourses of each institution. Deliberate design and successful implementation of policies, practices and strategies are a crucial element of senior leaders' role in preparing the academic workforce for the future and underscores the crucial role of senior leaders in preparing the academic workforce for the future (Debowski, 2022). This influence stems from the deliberate design and successful implementation of their strategies, policies, and practices. This finding is interesting as it highlights the important role, yet again, of leaders such as HoS in contextualising policy for their staff. Policy enactment is not explicitly referred to in Fullan’s (2016) change model.

5.2.4.3 Culture

The findings from my study show that a culture of "performativity" and "fabrication" (Ball, 2003, p. 215) is impacting the implementation of e-learning. Interestingly academics did not specifically acknowledge performativity culture as a factor affecting their e-learning. Learning designers, however, vicariously highlighted the influence of performativity that they saw on academics they worked with. Learning designers observed that some academics were very concerned about negative student evaluations impacting their career prospects and would either avoid implementing e-learning altogether if they could or approach it cautiously. Their fear of a negative student evaluation score, particularly if they tried a new approach, caused some academics to prioritise how much they perceived they were liked as teachers by their students rather than focusing on improving their teaching methods. In essence, the culture of performativity influenced academic behavioural practices. It is intriguing that academics in my study did not mention cultural performativity when it is apparent that their behaviour is affected by it.

The concerns from academics about student evaluation scores align with Ball's (2003) performativity theory. Ball (2003) posits that focusing on evaluation scores to evaluate teacher effectiveness may compel academics to 'teach to the test' by focusing on content that is likely to appear on exams or in assessments rather than more broad learning goals. Consequently, this could lead to a narrowing of the curriculum, as academics feel pressure to prioritise more easily measurable content. It can also push academics to ensure that their courses meet specific standards and that their students achieve certain outcomes, fostering a culture of performativity in university teaching. In such an environment, academics might feel obligated to prioritise measurable results and targets over other essential aspects of teaching and learning. A performativity culture can also lead to increased workload and stress for academics. When accountability measures are tied to academic evaluations, academics may feel that their jobs are constantly on the line. This can create a culture of fear and anxiety as academics work to meet specific targets and outcomes.

The performativity culture theme that emerged from interviewees' responses does not map to any of Fullan's (2016) change model implementation categories. Culture as a more general theme does, however, map to the *institutional infrastructure* category from the literature review.

5.2.4.4 Organisation Structure

My research highlighted that the organisational structure of learning and teaching divisions within universities, especially the placement of LDs within these divisions, significantly impacts how academics perceive both the support available and the ease of accessing that support. This impact became evident in four distinct ways. Firstly, when LDs were positioned centrally in divisions and locally within schools and faculties, it led to confusion among academics about whom to approach for assistance with e-learning implementation. Secondly, the presence of multiple LD teams with varying titles further complicated the process for academics seeking help. Academics struggled to understand the specific roles of each LD team and the type of assistance they could provide. Thirdly, the confusion surrounding processes and titles often resulted in duplicated efforts, where different LDs might work with the same academic on the same subject. Lastly, assigning a separate LD team to handle new e-learning implementation instead of the team responsible for existing e-learning created an artificial division of tasks. This division was challenging as academics often needed to implement e-learning in both new and existing contexts within their subjects. Additionally, the frequent restructuring of divisions unsettled LDs, making collaboration with their peers difficult due to being placed in different teams. LDs were also frustrated by the forced allocation to introducing new e-learning innovations or working on existing e-learning, as this division seemed artificial and counterproductive.

I was surprised to discover the significant depth of frustration expressed by academics and LDs regarding the organisational structure within the learning and teaching division. Their dissatisfaction was notably heightened by whether the division operated under a centralised or decentralised model and how these organisational factors influenced their respective roles and overall job experiences. In both universities examined in my study, LDs had recently gone through a process of increased centralisation. While university professional staff are accustomed to structural organisational changes, my research revealed a significant dissatisfaction linked to frequent restructuring. This dissatisfaction was directly connected to the challenges faced in developing good working relationships to implement e-learning initiatives.

While university professionals are used to organisational restructuring, my findings indicated profound fatigue related to the frequency of restructuring and a direct correlation to the issue hindering e-learning implementation. My findings resonate with the research of Wheeldon et al. (2023), which draws parallels. Their study highlighted that relationships with

academics tend to deteriorate when professional staff are centralised within a university and they view this centralisation as a form of "symbolic violence" (p. 192). Further this approach is tied to managerialism which treats students as customers and focuses on competing through student satisfaction scores. Despite aiming for control, efficiency, and standardisation, centralisation leads to staff conflict, reduced cooperation, mistrust, and lowered operational outcomes. In essence, the concerns expressed by academics and LDs in my study align with Wheeldon et al.'s (2023) findings, showing the detrimental effects of centralisation on university dynamics and subsequently implementing e-learning.

5.3 How do the Experiences of E-Learning Designers Correspond With Those of Academics With Regard to Implementing E-Learning? (RQ2)

The experiences, perspectives, and requirements of academics and LDs connect and interact when implementing e-learning. Inherent challenges relate to their respective roles (Section 5.3.1), digital narrative (Section 5.3.2), workload allocation (Section 5.3.3), policy enactment (Section 5.3.4), and culture (Section 5.3.5).

5.3.1 Roles

When academics and LDs collaborate to implement e-learning, they encounter challenges related to understanding and respect for the LD role (Bennett & Albrecht, 2022; Halupa, 2019). Some academics prioritise their subject knowledge over pedagogical expertise, leading to conflicts with LDs (Miller & Stein, 2016). Power dynamics (Foucault, 1990), differing expertise, authority, goals, and resistance to change also create tensions during their interactions (Wheeldon et al., 2023). Academics' identity and disciplinary background influence their attitudes towards working with LDs. Moreover, some academics only implement e-learning when LDs are present, indicating a lack of genuine commitment. This "fabrication" (Ball, 2003, p. 224) has significant consequences, including compromised effectiveness, wasted resources, resistance to change, lack of coherence, and reduced adaptability for future challenges.

5.3.2 Digital Narrative

When academics and LDs collaborate, some academics' belief in the outdated concept that their students are digital natives (Prensky, 2001a; 2001b), does negatively affect e-learning implementation. Academics who assume their students have innate technological proficiency may not provide sufficient support during e-learning implementation. This misconception hampers the adoption of effective teaching methods and scaffolded e-learning (Spiegel, 2021). Moreover, some academics perceive themselves as lacking digital skills compared to their students, leading to resistance and reluctance towards implementing e-learning. This digital narrative significantly influences how academics approach e-learning, with those having positive views being more open to experimentation (Dweck, 2014), while those with negative views are more hesitant to use e-learning tools. Addressing these misconceptions and promoting a nuanced understanding of digital skills among academics is vital for effective e-learning implementation to enable them to provide more support for diverse student populations.

5.3.3 Workload Allocation

Workload allocation for academics has a critical role in the successful implementation of e-learning (Boncori et al., 2020). Inadequate time allocation for e-learning projects creates a trade-off for academics between their desired implementation and what is realistically achievable. This leads to blurred work-life boundaries and challenges in meeting e-learning demands. Existing workload allocation models often fail to accommodate e-learning delivery needs, (Martins & Baptista Nunes, 2016), resulting in delayed content, superficial implementation (Ball, 2003; 2016), and limited collaboration with LDs. Unrealistic allocations lead to negative outcomes, including missed deadlines and reduced engagement with e-learning. The overwhelming workload also hampers collaboration with LDs and impedes effective e-learning integration. To ensure successful e-learning adoption, institutions must adjust workload allocation models to better suit e-learning demands and encourage effective collaboration between academics and LDs.

5.3.4 Policy Enactment

Policy enactment in the context of e-learning is a multifaceted and complex process that impacts equally on academics and LDs (Evans et al., 2019). It involves various aspects, including policy enforcement, compromise, standards, accountability, innovation support, and

the distinction between policy and procedure. Clear and effectively enforced policies by senior university leaders are necessary to support e-learning practices while allowing room for compromise to achieve incremental progress (Debowski, 2022). Sound policies also establish a supportive framework for e-learning success and encourage innovative approaches. Differentiating between policy and procedure is crucial to providing comprehensive support for teaching practices in e-learning and giving guidance on both pedagogical and academics operations for academics and LDs alike.

5.3.5 Culture

The culture of performativity has a significant impact on how e-learning is put into practice (Ball, 2003; 2016). When there is a strong emphasis on measurable outcomes, academics may become overly focused on standardised assessments and predefined learning objectives, potentially neglecting the nurturing of students to reach their full potential and the promotion of critical thinking and creativity.

Although not directly acknowledged by academics, LDs highlighted that the notion of performativity indirectly plays a role in shaping academics' attitudes towards e-learning and collaboration with them. Some academics, driven by the fear of receiving negative student evaluations, tend to either avoid implementing e-learning altogether or approach it cautiously. Rather they prioritise how they are perceived as teachers over improving their teaching methods. This culture of performativity can potentially limit the scope of the curriculum and increase the workload and stress for academics. While academics may not explicitly mention performativity, its influence on their teaching practices is apparent. Addressing this peformativity culture is essential for a more balanced and effective approach to implementing e-learning in universities.

5.4 How do the Decisions of Organisational Leaders Affect the Implementation of E-Learning? (RQ3)

The success of e-learning implementation is influenced by seven key decisions made by organisational leaders, namely inauthentic consultation (Section 5.4.1), LMS selection (Section 5.4.2), recruitment (Section 5.4.3), workload allocation (Section 5.4.4), structure (Section 5.4.5), policy enactment (Section 5.4.6), and Heads of School (Section 5.4.7).

5.4.1 Inauthentic Consultation

Inauthentic consultation with academics about e-learning strategies, coupled with top-down and authoritarian style communication, a lack of a clear vision outlining obtainable deadlines, and the failure to provide support all create resistance to implementing e-learning (Hardaker & Singh, 2011). If organisational leaders do not consider the diverse perspectives and multiple realities of those involved in implementing e-learning, then false compliance (Ball, 2003) can occur. False compliance refers to a situation where academics appear to be complying with expectations, but their compliance is superficial or insincere.

5.4.2 LMS Selection

An LMS serves as the central platform for course delivery, content distribution, assignments, assessments, and communication. The choice of LMS can significantly influence how academics teach and how students learn. A user-friendly, effective LMS can enhance the educational experience, while a poorly chosen one can hinder it.

If the LMS chosen by organisational leaders is not suitable for its intended purpose, does not address the technological environment or considers human factors (Turnbull et al., 2022), it can create significant technical limitations that hinder academics' ability to effectively teach their online students. Furthermore, if organisational leaders endorse the continued use of bespoke technology rather than adopting newer and more user-friendly options (Giannakos et al., 2022) that can be integrated into the LMS, it places an additional burden on academics and staff. They have to put in extra effort to navigate a collection of non-user-friendly components rather than having a seamlessly integrated LMS.

5.4.3 Recruitment

The growing utilisation of LDs in universities signifies a broader recognition that the interaction between student and educator experiences holds great importance for high-quality learning and teaching. It underscores the idea that specific forms of expertise are valuable in enhancing this interaction (Aitchison et al., 2020). When organisation leaders do not recruit sufficient LDs to support academics, it is difficult to make much progress either in implementing new e-learning approaches and strategies or in sustaining e-learning already in place.

5.4.4 Workload Allocation

Workload allocation models are managerial tools, and their impact can go in two directions: either they can be used for resistance or empowerment (Boncorini et al., 2020). When organisational leaders do not provide adequate workload allocation for academics to implement e-learning or collaborate with LDs who can support their e-learning implementation, it can lead to a situation resembling fabrication (Ball, 2003). In this scenario, academics might seem to be fulfilling their work requirements, but in reality, it masks misleading representations of educational performance.

5.4.5 Structure

If organisational leaders overlook the significance of how learning and teaching divisions are structured and whether LDs are located centrally or locally, it can lead to confusion among academics regarding whom to approach for assistance with e-learning implementation. Additionally, unclear marketing of LDs support services can result in repetition of effort, where more than one LD might input to the same subject. This lack of coordination and coherence of support services, particularly among LD teams, hinders collaboration with their fellow LDs with academics preventing the establishment of an environment focused on continuous improvement in e-learning implementation. More insidiously locating LDs centrally can lead to so much conflict with academic staff that it affects operation efficiency (Wheeldon et al., 2023).

5.4.6 Policy Enactment

Deliberate design and successful implementation of policies, practices and strategies are a crucial element of senior leaders' role (Debowski, 2022). When organisational leaders have unclear e-learning implementation policies, conflate policy with procedure, or fail to translate policies to suit the unique local contexts (Evans et al., 2019), the likelihood of effective implementation decreases. Moreover, when organisational leaders prioritise procedural aspects such as meeting deadlines for uploading e-learning units to the LMS instead of emphasising a teaching framework that highlights the art of teaching, it does not help to motivate academics to adopt best teaching practices.

5.4.7 Heads of School as e-learning implementation leaders

When organisational leaders appoint a Head of School (HoS) primarily based on their research profile and do not assign them the responsibility of leading e-learning implementation or driving change (Rehman & Iqbal, 2020), it sends a signal to academics that learning and teaching are not a priority. This represents a missed opportunity for the HoS, who occupies a pivotal position to influence, guide and support the implementation of e-learning across their institution (Debowski, 2022). Neglecting the prioritisation of e-learning perpetuates the belief that it is secondary to the primary responsibilities of academics.

5.5 Theoretical Implications

This study contributes new knowledge to the field by extending Fullan's (2016) work to the university sector and addressing gaps in Fullan's (2016) change model. While Fullan's (2016) model is valuable for guiding the implementation of e-learning, it is crucial to acknowledge that it does not encompass the entire range of complexities and diverse experiences that can emerge during such efforts in universities. To better comprehend the new themes that surfaced from the data, Ball's (2003) performativity theory framework was additionally utilised to understand the challenges facing academics and LDs when collaborating on implementing e-learning.

Whilst my findings illuminate the challenges stemming from implementing e-learning in a university setting, they also highlight a significant disparity with the theoretical framework underpinning my research. This suggests the need for a more comprehensive theoretical model that encompasses the intricate dynamics of e-learning implementation within the context of universities. By incorporating the missing elements, such as sharing practice, e-learning knowledge, the LMS, recruitment, roles, e-competence, digital narrative, self-efficacy and PL, the revised theoretical framework can offer a more accurate representation of the enablers and barriers faced by those tasked with implementing e-learning.

Another critique of Fullan's (2016) change model is that it does not pay sufficient attention to the power dynamics that shape educational systems. In this study, for example, the change model does not address how the power dynamics between academics and LDs can affect the success of implementing e-learning. My study shows that when discipline knowledge and research are privileged over pedagogical expertise and learning and teaching, the necessary collaboration process for implementing e-learning is undermined.

A further criticism of the model is that it places too much emphasis on the role of leadership in driving change without adequately considering the broader social, economic, and political contexts in which change takes place. For example, in a university context, HoS (and other equivalent leaders) are not necessarily tasked with leading learning and teaching innovations. Whether knowledgeable about or committed to implementing e-learning or not and despite allocating workload to academics to implement e-learning, if the HoS – who is the academics' line manager – does not openly support e-learning implementation, then it can be interpreted as secondary to research. Additionally, Fullan's (2016) change model does not adequately address the political context in which educational change occurs. For instance, the standard practice of rotating leadership, such as HoS at school and associated deans of learning and teaching at university levels, can significantly impact the success of change efforts.

A final criticism of Fullan's (2016) change model is its inadequate consideration of relational characteristics that influence interpersonal connections. These characteristics play a pivotal role in determining the nature and quality of connections between individuals. They are essential for fostering positive and productive collaborations, as highlighted by the critical findings from my study.

When implementing e-learning, a more nuanced and context-sensitive approach to change is necessary to respond to all stakeholders' needs and perspectives in addition to providing guidance for what might be transient local leaders with little authority. It is essential, therefore, to adapt Fullan's (2016) change model to address specific contextual factors and priorities within universities. By doing so, those responsible for leading e-learning implementation initiatives across schools, faculties, and university-wide can have access to more specific guidance on how to implement e-learning sustainably.

5.5.1 Transition to a revised implementation model

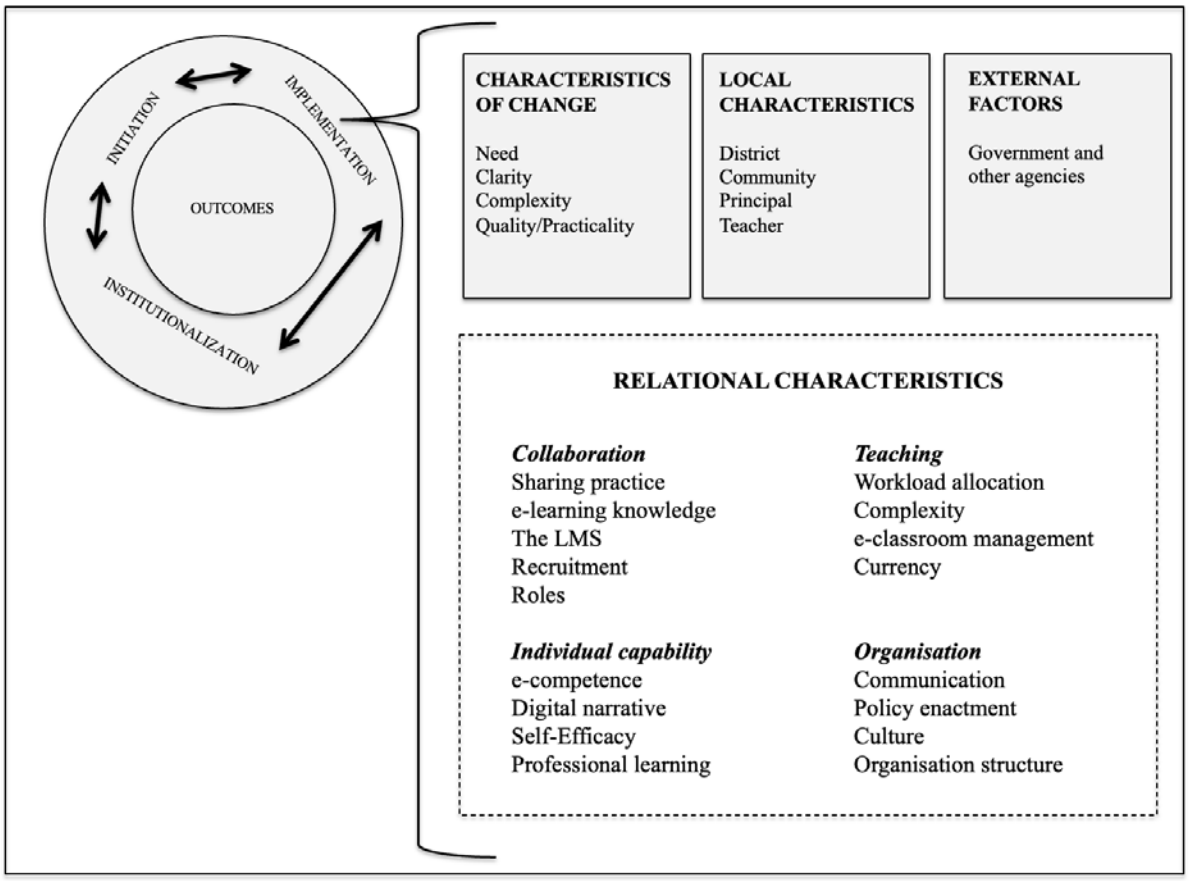
In an effort to better align Fullan's (2016) change model with the complex environment of implementing e-learning in universities, I have thoughtfully incorporated the new themes and categories that emerged from my research (see Figure 5.1). Recognising the distinctive challenges and dynamics present in universities, the revised implementation model introduces nuanced elements addressing the complexity of implementing sustainable e-learning grouped under the title of *Relational Characteristics*. Within this context, relational characteristics encompass the qualities or attributes that pertain to relationships between individuals, entities,

or elements when implementing e-learning. For each of the four primary categories - *collaboration, individual capability, teaching and organisation* - the updated model now includes specialised themes related to sharing practice, e-learning knowledge, the LMS, recruitment, roles, e-competence, digital narrative, self-efficacy, professional learning, workload allocation, complexity, e-classroom management, currency, communication, policy enactment, culture and organisation structure.

The purpose of the Critical Relational Characteristics for Implementing E-learning in University Settings model is to provide a framework for understanding and facilitating successful e-learning implementation. Its primary purpose is to guide academics, LDs, LLs, policymakers, and practitioners in implementing effective e-learning implementation in their universities. The model offers insights into the stages and processes of implementing e-learning, emphasising the importance of the four primary categories of collaboration, individual capability, teaching and organisation.

In Figure 5.1, the Triple I stages (initiation, implementation, institutionalisation) and the Characteristics of Change, Local Characteristics and External Factors from Fullan's (2016) change model are shaded in grey. The newly revised elements of the "Relational Characteristics" are depicted within dotted lines, indicating their new incorporation.

Figure 5.1: Critical Relational Characteristics for Implementing E-learning in University Settings



Full descriptions and definitions of these themes listed in Figure 5.1 under the new heading of Critical Relational Characteristics for Implementing E-learning in University Settings are provided earlier in this chapter, but as an aide memoir for the reader, the definitions of the themes are summarised in Table 5.2.

Table 5.2: Relational Characteristics Definitions

RELATIONAL CHARACTERISTICS	
Collaboration	
Sharing practice	Leveraging the collective wisdom and experiences of colleagues.
e-learning knowledge	Understanding and proficiency in concepts, principles, strategies, tools and best practices.
The LMS	Centralised system for creating, organising, and delivering online courses, as well as tracking learner's progress and performance.
Recruitment	Support staff such as learning designers and educational technologies.
Roles	Expertise of team members.
Individual capability	
e-competence	Knowledge, skills and abilities to navigate and leverage digital technologies.
Digital narrative	Perception of own and student's e-learning capability.
Self-efficacy	Sense of efficacy which leads to taking action and persist in the effort required to bring about successful implementation.
Professional learning	Ongoing process of acquiring new knowledge, skills, and competencies to enhance professional practice and expertise.
Teaching	
Workload allocation	Assigning and distributing academic or administrative tasks, responsibilities, and duties to academics.
Complexity	Intricacies of implementing e-learning and extent of change required of individuals responsible.
e-classroom management	Practices and strategies used by educators to effectively manage and maintain structured and engaging online learning environment.
Currency	Up-to-date content reflecting the most recent and accurate information available.
Organisation	
Communication	Process of exchanging e-learning implementation information and strategies between senior leaders, academics and learning designers.
Policy enactment	Implementing e-learning policies approved by university governance.
Culture	Beliefs, values and behaviours about e-learning implementation, teaching and learning.
Organisation structure	Arrangements of roles, responsibilities, relationships, and processes supporting e-learning implementation across the institution.

Whilst my findings align with existing literature, they provide a unique contribution by shedding light on the challenges of implementing e-learning in universities. My findings also reveal a significant disparity with the theoretical framework underpinning my research. This is

addressed in Section 5.7 via the development of a novel heuristic that incorporates the practical implications of this research, which are discussed in detail in the next section.

5.6 Practical Implications

This study has practical implications for a range of stakeholders, including academics (Section 5.6.1), learning designers (Section 5.6.2), local leaders (Section 5.6.3), and students (Section 5.6.4). There are also implications for other stakeholders beyond those interviewed in this study, such as HoS (Section 5.6.5) and senior leaders (Section 5.6.6).

5.6.1 Implications for Academics

When implementing e-learning, there are several implications for academics that need to be considered. Emphasising the importance of pedagogical knowledge alongside content knowledge is recommended, as academics need to be comfortable with relinquishing their role as the sole expert and collaborating more with LDs to enhance their e-learning capability. Academics may still perceive learning and teaching as secondary to their disciplinary knowledge, which highlights the need to emphasise the importance of integrating teaching and learning into their academic roles. It is crucial to discuss and provide evidence that learning and teaching, as well as PL, are not optional but integral to an academic's role. It is important to address the outdated view of digital natives that academics hold regarding their own and their students' e-learning capabilities, as these can influence their behaviour towards embracing e-learning implementation. An academic's identity is also an important factor to consider when designing and implementing e-learning interventions. It is important to take into account the values, beliefs, and attitudes of academics to promote the successful adoption of e-learning and ensure that it aligns with their professional identities as academics.

Clear communication channels and consultation are essential to ensure effective e-learning implementation. Additionally, the perception that academics consider themselves superior to LDs due to their discipline knowledge can be a challenge that needs to be addressed. Establishing a clear onboarding process for new academics is necessary to ensure their successful integration into e-learning practices. Together with LDs, academics must prioritise supporting their students in becoming more digitally literate by building competencies and strategies for effective navigation of the online teaching landscape.

Academics may lack the pedagogical or technical knowledge or the e-competence capability required to implement e-learning when they begin their careers. However, it should be an anticipated aspect of their role in higher education that they acquire these skills over time. Each individual academic brings a unique set of backgrounds, dispositions, identities, perceptions, and perspectives to their approach to e-learning implementation. Consequently, they require support to bridge those knowledge gaps. Academics, despite their expertise in content and extensive experience in academia, need to adapt their knowledge and experience to the e-learning context. This adaptation often involves learning from and collaborating with technical and pedagogical experts, such as LDs. To enhance their e-learning capability, academics can benefit from understanding the roles and expertise of LDs and fostering mutual respect for each other's strengths when they collaborate on e-learning implementation.

5.6.2 Implications for Learning Designers

When implementing e-learning, there are several implications for LDs that need to be considered. Firstly, the PL they offer to academics should be offered in a variety of formats, including face-to-face, online, and on-demand, to cater to different learning preferences and needs. LDs should ensure that presenters clearly introduce their credentials, set the context, and provide a clear abstract outlining the content and purpose of the PL session. Additionally, LDs should emphasise the importance of clear communication and ensure that the rationale for the PD session is well outlined and advertised. The distinction between the ‘how to’ and ‘why to’ aspects of e-learning should be addressed, ideally with a collaborative approach between technical and pedagogical experts. LDs should also recognise the need for different types of support, such as on-demand assistance and more long-term processes, as well as technical and pedagogical guidance. Ongoing PL is crucial to help academics keep up with emerging trends and technologies. A rolling calendar of PL sessions should be maintained to allow academics to join when relevant to their teaching needs and in response to when they join the university.

The difference between pedagogy and content must be addressed in PL, potentially exploring the different lenses of academic and practitioner perspectives. LDs should not bear the sole responsibility of convincing academics to embrace e-learning; instead, institutions should offer support and foster mutual respect. LDs are frequently responsible for the practical aspects of e-learning implementation tactics, but they usually lack the authority to ensure effective input and collaboration with academics. Therefore, it is crucial for leadership to offer

them the necessary support, including acknowledging and respecting their expertise. This support enables LDs to carry out their role effectively.

LDs clearly have a role in technology translation, educating and modelling the use of appropriate terminology as well as in pedagogy when it comes to e-learning implementation. However, it is equally important for LDs to understand that sustainable improvement in e-learning can only be achieved by working collaboratively with academics to meet their actual real learning and teaching needs.

5.6.3 Implications for Local Leaders

Local leaders within universities often bring a wealth of different experiences derived from their different roles, making them exceptionally well-suited to lead the implementation of e-learning initiatives. Local leaders play a crucial role in the successful implementation of e-learning initiatives, and there are several key considerations they need to address to ensure success.

First and foremost, effective communication and strategic change management planning are foundational. Local leaders must carefully plan and outline specific steps within a well-defined roadmap for implementation. Having a clear process map for projects or initiatives is essential, but equally important is the possession of strong project management and change management skills. A significant concern that LLs have to face is the lack of project management knowledge in learning and teaching divisional managers and HoS, which can impede meeting critical deadlines. Active involvement in planning PL alongside the HoS and LDs is one way to foster effective communication with all stakeholders involved in e-learning implementation, building trust and commitment from academics.

Additionally, LLs can make a substantial impact by actively participating in the development of accessible and well-structured policies. These policies should offer clear guidance and support for the effective implementation of e-learning strategies. It is imperative for LLs to recognise and actively address these implications to ensure sustainable e-learning implementation. Their diverse experiences and leadership roles are instrumental in navigating the complex terrain of e-learning implementation.

5.6.4 Implications for Students

Approaching online learning with an open mindset is of paramount importance for students. It's essential that they recognise the distinction between proficiency in social media and competence in e-learning. While social media skills can be valuable, they do not automatically translate into effective e-learning abilities. A student's preconceived notions and expectations, often shaped by their experiences with traditional in-person lectures, can significantly influence how they engage with e-learning.

In this context, academics play a crucial role in guiding students. They serve as models for what effective online interaction, engagement, and active participation should entail. When educators primarily employ passive, transmissive teaching methods in an online setting, they inadvertently send a message that passive listening is the norm, thus discouraging active participation.

To promote more active engagement among students, educators need to provide increased support. This support should include guidance on how to become digitally literate and proficient in e-learning. Students should be exposed to authentic experiences of using technology in their learning processes and gain a clear understanding of its relevance to their education. Additionally, their progress should be assessed using authentic evaluation methods that reflect the real-world application of their skills and knowledge. By doing so, educators can empower students to navigate and excel in the digital landscape of e-learning.

5.6.5 Implications for Head of School Leadership

The Head of School (HoS) plays a pivotal role in ensuring the successful implementation of e-learning among academics in their school or department. This commitment is vital, as the HoS serves as the primary influence on academics' dedication to e-learning implementation. However, if the HoS lacks knowledge of and commitment to e-learning, it can negatively affect academics' dedication as well.

Furthermore, issues like tribalism and limited collaboration within schools can result in a fragmented approach to subject ownership, hindering improvements in the overall student experience. Faculties and schools must recognise that while they have disciplinary ownership of subjects, collaboration with others is essential for enhancing the student experience. By addressing these challenges, HoS can ensure that their schools can successfully implement e-learning and improve overall educational outcomes.

To address these challenges effectively, the HoS, working in partnership with the academic development team or its equivalent, should take the lead in planning targeted, collaborative, and ongoing PL initiatives. There is a need to shift the mindset and culture around PL, making it a regular part of daily and weekly routines, which will require leadership support and a broader cultural shift. This integrated approach to PL is critical because academics require ongoing support to develop their e-learning capability and digital tool proficiency at various career stages. By addressing these issues, the HoS can facilitate successful e-learning implementation and overall educational improvements within their schools.

5.6.6 Implications for Senior Leader leadership

It would be beneficial for senior leaders to work on effective communication of e-learning strategies at all levels across the university in order to foster a shared commitment to e-learning. Central to this effort is facilitating communication and collaboration between faculty members and learning and teaching divisions. Establishing an innovative and inclusive culture, which might entail dismantling traditional barriers, is crucial for sustainable e-learning implementation. Senior leaders must fundamentally revise their approach to how they support academics in developing their online teaching capability. This involves stressing the significance of continuous professional learning to equip academics with the essential skills and strategies for navigating the online teaching landscape. Moving from a culture focused on meeting specific performance metrics to one that prioritises innovation empowers institutions to excel in rapidly changing environments. This shift promotes creativity and ongoing enhancement and establishes them as frontrunners in their respective fields. In this transformation, senior leaders play a pivotal role by offering guidance, endorsing calculated risk-taking, and advocating for a culture that embraces innovative thinking. Through their actions, senior leaders play a pivotal role in nurturing an environment that fosters innovation and supports the implementation of e-learning initiatives.

Furthermore, the structuring of the division of learning and teaching has implications for how LDs are respected and how they are integrated into the institutional setup. To facilitate effective collaboration in designing and implementing e-learning and teaching interventions, it is vital to promote mutual understanding, communication, and respect between academics and

LDs. This can be achieved by senior leadership through open communication channels, opportunities for PL, and a shared commitment to improving teaching and learning outcomes.

5.7 Building a Foundation of Respect in E-Learning Implementation: A Collaborative Framework

Fullan's (2016) change model primarily addresses the implementation of innovations in schools. However, my study reveals that a more nuanced model is needed to implement e-learning in universities. The results of my research highlight a crucial point: expecting an individual to possess all the essential knowledge and technical skills required for comprehensive and sustainable e-learning implementation is unrealistic. This discovery further emphasises the necessity of collaborative efforts. However, this collaboration entails more than just working together; it involves cultivating empathy and gaining insight into each other's perspectives. This entails grasping the actual situations faced by both academics and LDs as they strive to implement e-learning.

In addition, my study shows that acknowledging the intricacies of power dynamics and the limitations of individual expertise underscores the importance of collaboration. Addressing these power dynamics becomes pivotal in cultivating a productive and collaborative relationship between academics and LDs. To delve deeper into this collaboration, it's crucial for each party to try to see things from the other's perspective. This act of mutual understanding fosters a profound grasp of the challenges and possibilities encountered by both academics and learning designers throughout the process of implementing e-learning.

On careful reflection of my findings, I realised that simply extending Fullan's (2016) model would not be enough to address the important needs of collaboration, trust, and consultation, which my findings suggest are necessary when implementing e-learning. Although my research identified specific themes to improve sustainable e-learning implementation, I understood that the most important factor was when those themes were implemented through collaboration. But it was not just that. I also realised how crucial it is to bring together the different strengths, skills and knowledge of individuals to truly work together, instead of each person looking out for their own interests. This means that academics, LDs, LLs, and university leaders need to understand and respect each other's opinion about each category and theme identified as important in my research under the relational characteristics category. In addition, these individuals need to talk about these critical relational

characteristics with each other so that they have meaningful discussions, can learn from each other, and then collaborate constructively to implement sustainable e-learning.

Further to creating a revised version of Fullan's (2016) change model, I also developed a heuristic in the form of a series of questions addressing the four categories of *collaboration, individual capability, teaching,* and *organisation that* emerged from the findings (Table 5.2). This heuristic is meant to serve as a conversation starter and help people work together with less conflict through a better understanding of each other's perspective when implementing e-learning in universities. My heuristic represents a move away from a procedural step-by-step approach for managing change and towards a process that encourages participants in implementing e-learning to talk, share, trust, and work together. My heuristic approach focuses on the skills, expertise, knowledge, and experiences of everyone involved in implementing e-learning and can be used for any e-learning implementation initiative with any group of people.

During the development of my heuristic, several overarching questions were considered in relation to implications for stakeholders. First and foremost, I needed to explore how to effectively support new leaders of e-learning implementation initiatives as they navigated their roles in the future. What specific knowledge and skills did senior and middle leaders need to know to excel in their positions? Additionally, I needed to consider the concept of mediated understanding and how to facilitate effective communication and collaboration among stakeholders. Another crucial aspect revolved around leadership and understanding its implications for organisational dynamics.

Moreover, I needed to be mindful of the prevailing practices in universities and how they influenced the implementation of e-learning projects. Understanding the intricate relationships within the system, such as potential conflicts between academics and LDs, was essential for creating an effective heuristic that supported e-learning implementation initiatives in university settings. To pull these aspects together, I created a self-reflective question for each theme within each category that stakeholders could answer to encourage discussion of the critical aspects of implanting e-learning.

The heuristic, presented in Table 5.2, contains the four categories of *collaboration, individual capability, teaching,* and *organisation* in the left-hand column. In the middle column, the themes within each category, referred to as constructs, are listed and accompanied by a brief definition. In the third column, reflective questions are listed to promote discussion. The heuristic can be used collaboratively when a group of people first come together to

implement e-learning. In this scenario, an academic, LL or LD can distribute the heuristic and facilitate the group responding to the questions. The advantage of this approach is that wisdom and knowledge can be shared, therefore focusing on a strength-based rather than a deficit-based approach. My heuristic encourages sharing of experiences and the development of a shared understanding of the knowledge and experiences of the group. Building a foundation of respect in e-learning implementation through a collaborative framework works to establish a positive and supportive environment that fosters meaningful engagement and effective communication among all stakeholders involved in the e-learning process. My approach aims to promote trust, open dialogue, and cooperation between educators, administrators, LDs, LLs and senior leaders by prioritising respect. Such a foundation will encourage the exchange of diverse perspectives and expertise, allowing for the creation of innovative and inclusive e-learning implementation experiences that cater to the needs of all participants. Ultimately, the goal is to enhance the overall quality of e-learning implementation and maximise the potential for successful outcomes in the digital education landscape.

Table 5.3: Building a Foundation of Respect in E-Learning Implementation: A Collaborative Framework

Category	Construct	Questions
The questions in the collaboration, individual capability, and teaching categories can be used by academics, learning designers, and local leaders when working together to implement e-learning.		
Collaboration	Sharing practice: leveraging the collective wisdom and experiences of colleagues.	How familiar are you with e-learning initiatives and approaches being implemented by your colleagues?
	E-learning knowledge: understanding and proficiency in concepts, principles, strategies, tools, and best practices.	What is the value of having strong understanding and proficiency in e-learning knowledge?
	LMS: centralised system for creating, organising and delivering online courses, as well as tracking learners' progress and performance.	When using your organisation's LMS, what features do you believe individuals need to be familiar with or proficient in?
	Recruitment: support staff such as learning designers and educational technologists.	How familiar are you with the types of support staff members you can call on to assist you with implementing e-learning?
	Roles: expertise of team members.	How familiar are you with the expertise of all team members?
Individual capability	e-competence: knowledge, skills, and abilities to navigate and leverage digital technologies.	How would I define the essential e-competencies for implementing e-learning? How would I assess my e-competence?
	Digital narrative: perception of own and students' e-learning capability.	How does my perception of my own and my students' e-learning capabilities impact my teaching strategies and support when implementing e-learning?
	Self-efficacy: a sense of efficacy that leads to taking action and persistence in the effort required to bring about successful implementation.	How does my own sense of self-efficacy influence my ability to take action and persist in efforts towards successful implementation?
	Professional learning: ongoing process of acquiring new knowledge, skills, and competencies to enhance professional practice and expertise.	How can I enhance my professional practice and expertise in a constantly evolving environment?
	Workload allocation: assigning and distributing academic or administrative tasks, responsibilities, and duties to academics.	How can I balance workload allocation and e-learning implementation to ensure I am maximising the quality of the learning experience for my students while maintaining a healthy work-life balance?

Teaching	Complexity: intricacies of implementing e-learning and extent of change required of individuals responsible.	What do I need to change about how I teach to ensure I can implement e-learning sustainably in my subject?
	E-classroom management: practices and strategies used by educators to effectively manage and maintain structured and engaging online learning environment.	How can I enhance my e-classroom management practices and strategies to ensure the creation and maintenance of a structured and engaging online learning environment for my students?
	Currency: up-to-date content reflecting the most recent and accurate information available.	How can I ensure the currency of content and that the technologies that I use are up-to-date?
The questions in the organisation category can be used by senior leaders when considering dissemination of e-learning strategies across the university.		
Organisation	Communication: process of exchanging e-learning implementation information and strategies between senior leaders, academics, and learning designers.	How can we ensure the process of communication between senior leaders, academics, and learning designers regarding e-learning implementation information and strategies is authentic and genuinely consultative?
	Policy enactment: implementing e-learning policies approved by university governance.	How can we ensure e-learning policy supports sustainable e-learning implementation in our organisation?
	Culture: beliefs, values, and behaviours about e-learning implementation, teaching, and learning.	How can we promote a positive culture towards e-learning implementation?
	Organisation structure: arrangements of roles, responsibilities, relationships, and processes supporting e-learning implementation across the institution.	How can we ensure the organisation structure supports sustainable e-learning implementation across the organisation?

5.8 Limitations

Interviews are a valuable and commonly used research method for obtaining detailed and nuanced participant data. By using open-ended questions and active listening, I was able to gather in-depth information that I might not have been able to capture by other research methods, such as surveys or experiments. However, like any research method, interviews have limitations. One of the most significant challenges I encountered was the time and resources required to conduct the interviews. Due to these constraints, it was not feasible for me to interview many participants. This limitation may impact the transferability of the findings, as the sample size was relatively small. Nevertheless, I took steps to mitigate this limitation by carefully selecting participants who represented diverse perspectives and experiences relevant to the research questions. I also utilised rigorous data analysis techniques to ensure the validity and reliability of the findings.

Whilst studying two universities provides valuable insights, it is important to acknowledge the limitations of this approach. Firstly, the findings may not be generalisable to other universities or higher education contexts. The unique characteristics of each institution may impact the experiences and perspectives of staff and students in ways that cannot be captured through this study alone. Future research could build on this study by conducting comparative analyses of universities with different characteristics or contexts, such as those located in other regions or countries or with different institutional sizes or missions. This would allow researchers to identify common themes and patterns as well as differences and unique challenges faced by universities implementing e-learning.

Interview data analysis is a crucial step in any qualitative research study, and it can be a complex and challenging process for researchers. This is because the data provided by participants during interviews is often rich, detailed, and complex, which makes it difficult to make sense of without careful analysis. Researchers must navigate a vast amount of data and identify patterns, themes, and meanings that emerge from participants' responses. One of the main challenges researchers face when analysing interview data is dealing with contradictory or ambiguous data. Participants may provide conflicting or unclear responses, making it challenging to develop a coherent understanding of the topic being studied. In these cases, researchers must use their judgement to interpret the data and identify patterns or themes that make sense considering the overall context of the study.

Finally, interviews are typically focused on a specific set of research questions or topics, which means that they may not capture the full range of experiences or perspectives of the participants. Additionally, interviews may not be the best method for exploring complex or abstract concepts, as participants may struggle to articulate their thoughts and feelings in words.

5.9 Chapter Summary

This chapter presented the findings of this qualitative study regarding enablers and barriers to e-learning implementation (RQ1) in addition to how the experiences of e-learning designers and academics (RQ2) and decisions of organisational leaders (RQ3) affect e-learning implementation. The findings are analysed in the context of the literature and theoretical framework of Fullan's (2016) change model and Ball's (2003) theory of performativity. However, the study reveals that a more nuanced model is needed to implement e-learning in universities. Following a discussion of the theoretical and practical implications of the research for stakeholders, a novel heuristic was developed to guide leaders to implement sustainable e-learning in university settings.

Chapter 6: Conclusion

6.1 Chapter Overview

This chapter presents a summary of the key findings (Section 6.2), research contributions (Section 6.3), and future research directions (Section 6.4). Section 6.5 concludes with a personal reflection on the research.

6.2 Summary of Key Findings

The primary objective of this study was to identify the critical organisation factors that contribute to sustainable e-learning implementation in universities. To achieve this, the study explored three research questions, namely the perceived enablers and barriers to e-learning as reported by academics, LDs, LLs, and students (RQ1); a comparison between the experiences of e-learning designers and academics in implementing e-learning (RQ2); and how the decisions made by organisational leaders affect e-learning implementation (RQ3). Seventeen interviews with academics, learning designers, local leaders, and students were conducted. Thematic analysis of the interview transcripts led to the identification of four key e-learning implementation categories, namely *collaboration, individual capability, teaching,* and *organisation*. Each category comprises multiple constructs. *Collaboration* involves sharing practice, e-learning knowledge, the LMS, recruitment, and roles. *Individual capability* focuses on e-competence, digital narrative, self-efficacy, professional learning, elbow support, and workload allocation. *Teaching* encompasses complexity, e-classroom management, and currency. *Organisation* includes communication, policy enactment, culture, and organisational structure.

The findings reveal the need for mediated understanding via communication and collaboration among stakeholders in order to overcome barriers to successful e-learning implementation. Organisational dynamics in the form of the prevailing university culture in addition to faculty, department, and university leadership, influence the practicalities and sustainability of e-learning implementation. This study points to the intricate relationships within the university context that must be considered when implementing e-learning initiatives.

6.3 Research Contributions

This study draws on key literature concepts and the theoretical framework of Fullan's (2016) change model and Ball's (2003) theory of performativity. Several of the findings map to categories of Fullan's (2016) change model, including *teacher, district, complexity,* and *community*. Other findings align more closely with the identified literature concepts of *institutional infrastructure, leadership and management, multi-profession teamwork and process,* and *capability building* providing validation for the identified barriers and enablers in e-learning implementation. However, this study also reveals novel insights into the specific challenges of e-learning implementation within the university setting.

By examining the perspectives of academics, LDs, LLs, and students, this study yields a deeper understanding of contextual factors such as performativity, digital narratives, roles, workload allocation, and policy enactment that shape stakeholders' views and subsequent approaches towards e-learning implementation in the university environment. These findings enhance our knowledge about how e-learning implementation is taking place and inform strategies for more effective e-learning implementation in the future.

This research demonstrates the importance of examining the lived experiences of academics, LDs, LLs, and students when implementing e-learning to better understand the human element of the process and to make it a focus. Too often, researchers of e-learning implementation suggest a checklist of elements that must be put in place by the organisation to enable e-learning implementation without considering the intersection of the culture of the university and the identities of the people within it. This study offers a more complete picture of the critical organisational factors required for sustainable e-learning implementation.

Fullan's (2016) change model and Ball's (2003) theory of performativity were utilised as theoretical frameworks in this study. While Fullan's (2016) change model was used to guide the data collection and analysis, the emergence of new categories related to organisational and cultural factors necessitated the need for a more nuanced model in the context of implementing e-learning in universities. Ball's (2003) theory of performativity was useful in the analysis of these new categories and was leveraged to develop a novel heuristic to guide leaders to implement sustainable e-learning in university settings. This heuristic (presented in Table 5.3) draws on the four e-learning implementation categories identified in this research, namely *collaboration, individual capability, teaching,* and *organisation.* It represents a collaborative approach to e-learning implementation that fosters collaboration and trust between

stakeholders. This framework encourages the exchange of diverse perspectives and expertise, allowing for the creation of innovative and inclusive e-learning experiences that cater to the needs of all participants. Ultimately, the goal is to enhance the overall quality of e-learning implementation and maximise the potential for successful outcomes in the digital education landscape.

6.4 Future Research Directions

Implementing e-learning presents a promising field for future research, but it comes with inherent challenges due to its complexity and the constantly changing technologies involved. By studying the experiences of stakeholders involved in e-learning, it is possible to gain insights into the intricate nature of their journey. It is crucial to consider human factors in order to fully comprehend the complexity of these experiences, as overlooking them can lead to misunderstandings.

Future research could examine the experiences of academics and LDs during the pandemic and post-pandemic. The participants interviewed for this study had experience with implementing e-learning pre-COVID-19 and were generally committed to e-learning. It would be interesting to interview academics who had to move online at short notice, and are now likely to be implementing a hybrid approach, to explore their perceptions of enablers and barriers. For instance, was some of the resistance I encountered removed because there was no choice but to implement e-learning? Has that experience changed any of their views about implementing e-learning? It would also be interesting to further research the experiences of LDs, LLs, and students in response to the pandemic. Of further interest would be to gather casual academics' perceptions of implementing e-learning. With less access to PL and support, would their experiences tell a different story?

Another potential research approach could involve conducting a qualitative study using interviews or focus groups to gather insights and perspectives from different stakeholders regarding their communication needs and preferences throughout the e-learning implementation process. This study could delve into factors that hinder or facilitate effective communication between academics and LDs, such as transparency, clarity, and frequency of communication, while also examining barriers such as trust issues that may impede communication. Overall, conducting research on how to effectively engage and communicate with stakeholders during the implementation of e-learning in universities can significantly

contribute to the successful implementation of e-learning and, ultimately, enhance the learning experience for students.

Investigating strategies for change management, overcoming resistance to change, and facilitating shifts in teaching and learning practices are important considerations. Best practices for project planning and execution, including defining scope, setting timelines, allocating resources, and monitoring progress, warrant further exploration. Evaluation research can focus on assessing the impact of e-learning projects on student learning outcomes, faculty satisfaction, and cost-effectiveness. Moreover, studying effective approaches to integrating new technologies into existing infrastructure, addressing technical challenges, providing user training and support, and ensuring compatibility with other systems is valuable. Lastly, examining strategies for long-term sustainability, including the development of policies, securing funding and resources, and maintaining ongoing stakeholder engagement, could contribute to the success and sustainability of e-learning initiatives.

6.5 Personal Reflection

When I began this research, my main goal was to gain a deeper understanding of organisational change processes and theories. I believed that this knowledge would help me comprehend the challenges surrounding the implementation of e-learning in the universities where I worked and also enhance my skills as a project manager. At the start of my PhD journey, I read Ball's (2003) influential article, "The Teacher's Soul and the Terrors of Performativity". While the topics discussed in the article resonated with me, I confess a tendency to dismiss academics' concerns, as mainly complaints about being overworked. It seemed like a common sentiment among academics. I had never met an academic who did not complain about their high workload.

However, as I continued my research journey and simultaneously engaged in more e-learning implementation projects and initiatives, I started to hear similar concerns voiced by academics, LDs, LLs, and students – issues that Ball (2003) had raised in his article. Gradually, my perspective on the resistance towards implementing e-learning and the potential reasons behind it shifted. I began to take these concerns more seriously and realised that there might be valid and deeper underlying factors contributing to the challenges of e-learning implementation.

Through my investigations into the lived experiences of those individuals actively involved at the 'coal face' of implementing e-learning, I gained a greater understanding of the factors that either hinder or enable sustainable e-learning implementation. Conducting interviews with academics, LDs, LLs, and students proved to be an invaluable approach, allowing me to understand more thoroughly the barriers each stakeholder group faced when it came to implementing e-learning. This was particularly relevant in the context of cultural and organisational factors within universities, which directly influenced whether individuals resisted or embraced e-learning initiatives.

Interviewing academics, LDs, LLs, and students led to my realisation of the importance of having rich conversations together to better understand each other's perspectives. I remember being amazed at some academics' overwhelming belief that implementing e-learning added to their workload but was not duly recognised or rewarded. Since their career progression was typically tied to research publications, academics felt that e-learning efforts were not given the recognition they deserved. Moreover, their frustration increased when they found it challenging to showcase their learning and teaching achievements during the promotion process, leading to increased resistance towards dedicating time to aspects that did not directly contribute to advancing their academic careers.

My research has contributed to the body of knowledge that building a foundation of respect between different stakeholders collaborating to implement e-learning within universities is critical to ensure sustainable e-learning implementation. Implementing e-learning is challenging. Academics bring experience and expertise to their positions but not necessarily pedagogical know-how. Learning designers bring pedagogical and technical knowledge but this is not always understood or taken advantage of by academics. The enablers and barriers to implementing e-learning for academics, LDs, and LLs have to play out within the context of fostering collaboration. As such, this study proposes a novel heuristic in the form of a collaborative framework to enhance the overall quality of e-learning implementation and maximise the potential for successful outcomes in the digital education landscape.

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Appendices

Appendix A: Recruitment Email

This is the text to be sent to Academics or Educational Designers which will be adapted to the target audience and to suit the media/message eg via email (prospective or personal).

Dear [name of academic] [name of educational designer]

I am contacting you to invite you to [participate in/to seek help from you in recruiting] for a research project exploring your experience in implementing e-learning in learning and teaching in universities.

This research, which I am conducting as part of my PhD, aims to explore perceptions towards organisational enablers and barriers to implementing e-learning. So, I am looking for individuals who have an interest in this area and at least two years' experience in implementing e-learning.

The benefits of participating in this project include being able to share experiences of this research and advancing an understanding of the complexities of implementing e-learning in universities.

Participants will be asked to take part in a one hour [face-to-face/Skype] interview.

This research has received ethics approval from the Human Research Ethics Committee at the University of New England. There are no foreseeable risks involved in taking part in this research.

[We were wondering if you could help us in our research by forwarding this e-mail and the attached information letter to faculty/divisional members who you believe may fit the criteria for this study]

Interested participants can contact me directly (hridolfo@myune.edu.au 0448 645761) to express an interest in the study and/or if they have questions about the study.

I am attaching an information letter that provides more details on the research study.

Yours sincerely

Harriet Ridolfo

PhD Candidate, University of New England

Appendix B: Information Letter

University of New England

School of Education
University of New England
Armidale NSW 2351
Australia
Phone 02 6773 2005
Fax 02 6773 2445
ckivunja@une.edu.au
www.une.edu.au/

INFORMATION SHEET
PARTICIPANTS

We wish to invite you to participate in our research project, described below.

My name is Harriet Ridolfo and I am conducting this research as part of my PhD in the School of Education at the University of New England. My supervisors are Associate Professor Charles Kivunja and Dr Jennifer Charteris.

Research Project	**Critical organisational factors for successful implementation of e-learning: A case study of selected universities in New South Wales.**
Aim of the research	The research aims to explore the perceptions of 4 stakeholder groups (academics, students, educational designers and academic leaders) towards organisational enablers and barriers to implementing e-learning. Data will be collected from 36 participants across three selected universities in NSW through interviews.
Interview	We would like to conduct a Skype or telephone interview with you at [CSU/UNE/SCU]. The interview will take approximately one hour. With your permission, we will make an audio recording of the interview to ensure that we accurately recall the information you provide. Following the interview, a transcript will be provided to you to check for accuracy.
Confidentiality	Any personal details gathered in the course of the study will remain confidential. No individual will be identified by name in any publication of the results. All names will be replaced by pseudonyms; this will ensure that you are not identifiable. If you agree we would like to quote some of your responses. This will also be done in a way to ensure that you are not identifiable.
Participation is Voluntary	Please understand that your involvement in this study is voluntary and we respect your right to withdraw from the study at any time. You may discontinue the interview at any time without consequence and you do not need to provide any explanation if you decide not to participate or withdraw.
Questions	The interview questions will not be of a sensitive nature: rather they are general, aiming to enable you to enhance our knowledge of the organisational enablers and barriers to implementing e-learning.
Use of information	Harriet Ridolfo will use information from the interview as part of her doctoral thesis, which she expects to complete in September 2019. Information from the interview may also be used in journal articles and conference presentations before and after this date. At all times, your identity will be safeguarded by presenting the information in a way that will not allow you to be identified.
Upsetting issues	It is unlikely that this research will raise any personal or upsetting issues but if it does you may wish to contact Lifeline on 13 11 14 [or CSU Counselling Services for staff on 1300 361 008 or for students on 1800 275 278. UNE Counselling Services for staff on 02 6738 7200 or for students on 02 6773 2897. SCU Counselling Services for staff and students on 02 6626 9131]
Storage of information	Hardcopy notes and recordings of the interview will be kept in a locked cabinet at the researcher's office. Any electronic data will be kept on a password protected computer. Only the research team will have access to the data.

Disposal of information	All the data collected in this research will be kept for a minimum of five years after successful submission of Harriet Ridolfo's thesis, after which it will be disposed of by deleting relevant computer files, and destroying or shredding hardcopy materials.
Approval	This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No……., Valid to__/../….).
Contact details	Feel free to contact Harriet Ridolfo with any questions about this research by email at hridolfo@myune.edu.au or 0448 645761. You may also contact the Principal supervisor Associate Professor Charles Kivunja (ckivunja@une.edu.au or 02 6773 2005) or Co-supervisor Dr Jennifer Charteris (jcharte5@une.edu.au or 02 6773 3513).
Complaints	Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at: Mrs Jo-Ann Sozou Research Services University of New England Armidale, NSW 2351 Tel: (02) 6773 3449 Email: ethics@une.edu.au Thank you for considering this request and I look forward to further contact with you. Kind regards, Harriet Ridolfo e: hridolfo@myune.edu.au m: 0448 645761

Appendix C: Consent Form

School of Education
University of New England
Armidale NSW 2351
Australia
Phone 02 6773 2005
Fax 02 6773 2445
ckivunja@une.edu.au
www.une.edu.au/

CONSENT FORM for PARTICIPANTS

Research Project: Critical organisational factors for successful implementation of e-learning: A case study of selected universities in New South Wales.

I, ..., have read the information contained in the Information Sheet for Participants and any questions I have asked have been answered to my satisfaction. Yes/No

I agree to participate in this activity, realising that I may withdraw at any time. Yes/No

I agree that research data gathered for the study may be quoted and published using a pseudonym. Yes/No

I agree to be identified in this research. Yes/No

I agree to having my interview audio recorded and transcribed. Yes/No

I would like to receive a copy of the transcription of the interview. Yes/No

I am older than18 years of age. Yes/No

....
Participant Date

....
Researcher Date

Appendix D: Interview Guide

INTRODUCTION

Hello, I am Harriet Ridolfo, and I am phoning/Skyping/meeting you today as arranged to interview you in relation to my research project: Critical organisational factors for successful implementation of e-learning.

From the Participant Information Statement that I sent you, you will know that I am conducting research as part of my PhD in the School of Education at the University of New England. Ethics approval has been obtained from the Human Research Ethics Committee of the University of New England.

Thank you for returning your Participant Consent Form, where you have agreed to …[read through their consent form] including having this interview recorded and transcribed if they have agreed.

This interview will take approximately one hour and will revolve around the six questions you have already received (sent a week before the interview).

Are you happy to start the interview?

START OF INTERVIEW (START RECORDING)

Interview questions (Academics, Learning Designers, Local Leaders)

Question 1: Please tell me about your role.

Prompt Questions

- How long have you been in your role?
- What are your major responsibilities?
- Whom do you report to?
- Who reports to you?

The purpose of this topic along with the prompt questions is to build rapport with the participant, to gain an overall understanding of the context of their role in their workplace, their responsibilities and reporting lines.]

Question 2: What are your experiences of e-learning in your own practice?

Prompt Questions

- How long have you been implementing e-learning in your own practice?
- How would you define e-learning?
- What are some of the e-learning-associated technologies you have used?
- What are your experiences in terms of quality e-learning and the use of associated technologies?
- How do you believe e-learning could improve your teaching practice?
- How do you think e-learning affects the student experience?
- Are you aware of data/research regarding the quality of e-learning?
- If so, what do the data indicate?
- Tell me about your experiences of implementing e-learning in a wider context ie your school or faculty or across the institution.

The purpose of this topic and prompt questions is to find out about participants' general knowledge and understanding of what e-learning is and how they use it.]

Question 3: What are your perceptions of enablers to implementing e-learning?

Question 4: What are your perceptions of barriers to implementing e-learning?

Prompt questions:

- What policies, infrastructure and resources are in place to support you in adopting e-learning?
- Does e-learning align with key practice aspects/issues in your organisation?
- What people or resources are available to support you in implementing e-learning? (eg support capacity from EDs, IT, to help them?)
- How does your organisation/do you create, acquire, manage and transfer knowledge about e-learning?
- What are the relevant sub-cultures concerning learning?
- Do leaders provide role clarity regarding e-learning?
- Do your leaders support the development of effective teams and inclusive decision-making processes?
- Do your leaders engage and communicate with those affected by the change?
- Do your leaders display transformational leadership characteristics?
- Are you provided regular feedback on individual, aggregate (peer review) e-learning use?
- Were you provided data on the quality of your teaching before e-learning implementation?

The purpose of this topic and the prompt questions is to find out what participants' perceptions of enablers and barriers to e-learning are.]

Question 5: How do you think the decisions of organisational leaders affect e-learning implementation?

Prompt Questions

- Was the implementation of e-learning facilitated by a dedicated individual or group?
- If so, who played this role and what specifically did this person do?
- Was he/she external to the organisation?
- Do leaders at different levels (team, unit organisation) explicitly demonstrate moral or material support for implementation?
- Do leaders consider e-learning implementation a priority (and if so, how do they demonstrate this?)
- How have leaders acquired the resources required to implement e-learning (eg new personnel, IT infrastructure)?
- Do leaders perceive a lack of funding affected e-learning implementation and/or expansion?
- What specific strategies and actions were put into place to support e-learning use (eg training/support, time to experiment with e-learning, rewards, incentives, communication, accessibility of e-learning components/associated technologies)?
- Do you view e-learning use as being implicitly or explicitly supported, rewarded, and/or expected by your organisation?
- Did the implementation team/organisation increase user skill level for e-learning use?
- Did the implementation team/organisation provide incentives for use?
- Did the implementation team/organisation remove obstacles to use?
- Does e-learning fit with the values, interests, and perceived responsibilities of educators as well as your professional groups/disciplines and organisations?
- Did a charismatic organisational member (academic and/or managerial) advocate for the adoption and implementation of e-learning?
- Did champions have protected time to advocate the initiative?

The rationale for this question is to find out what participants think about the effects of organisational leaders' decisions but also whom they perceive as leaders of e-learning within their organisation.]

Question 6: How do you feel about your level of e-competence?

Prompt questions

- What level of e-competence do you think is necessary for implementing e-learning?
- How comfortable with your level of e-competence are you?
- How e-competent do you think your students are?
- How e-competent do you think your colleagues are?
- What type of support do you think would help you enhance your e-competence?

The rationale for the inclusion of this topic in the interview is to find out about the participants' perceptions of the e-competence skills they need to be effective in implementing e-learning, whether they feel that have the required levels of e-competence needed and thoughts about

what type of professional development or capacity building format would enable them to upskill.]

Thank you very much for answering all my questions. We have now come to the end of the interview. As soon as the transcript has been typed up I will send it to you for checking.

END OF INTERVIEW (STOP RECORDING)

Interview questions (Students)

1. A little bit about you, your role and your current online studies.
2. Your experiences as an online learner.
3. Your perceptions of enablers to online learning.
4. Your perceptions of barriers to online learning?
5. How do you think the decisions of organisational leaders affect online learning implementation?
6. How do you feel about your level of e-competence?

Question 1: Please tell me about you, your role and your current online studies.

Prompt Questions

- Currently, studying?
- Full-time or part-time?
- Completely online?
- How far into the course?
- Is your work related to your studies?

The purpose of this topic along with the prompt questions is to build rapport with the participant, and to gain an overall understanding of the context of their studies including their role in their workplace, if working.]

Question 2: Please tell me about your experiences as an online learner.

Prompt Questions

- How long have studying online?
- How would you define e-learning?
- What are some of the e-learning-associated technologies you have used?
- What are your experiences in terms of quality e-learning and the use of associated technologies?
- How do you think e-learning affects your study experience?
- Are you aware of data/research regarding studying online?
- If so, what do the data indicate?

The purpose of this topic and prompt questions is to find out about participants' general experiences with studying online.]

Question 3: What are your perceptions of enablers to studying online?

Question 4: What are your perceptions of barriers to studying online?

Prompt questions:

- What policies, infrastructure and resources are in place to support your online learning?
- What people or resources are available to support you in studying online? (eg support capacity from academic skills, library DSS etc?)
- How do you create, acquire, manage and transfer skills/proficiency with online learning?

The purpose of this topic and the prompt questions is to find out what participants' perceptions of enablers and barriers to e-learning are.]

Question 5: How do you think the decisions of organisational leaders affect e-learning implementation?

Prompt Questions

- Was the implementation of e-learning facilitated by a dedicated individual or group?
- If so, who played this role and what specifically did this person do?
- Was he/she external to the organisation?
- Do leaders at different levels (team, unit organisation) explicitly demonstrate moral or material support for implementation?
- Do leaders consider e-learning implementation a priority (and if so, how do they demonstrate this?)
- How have leaders acquired the resources required to implement e-learning (eg new personnel, IT infrastructure)?
- Do leaders perceive a lack of funding affected e-learning implementation and/or expansion?
- What specific strategies and actions were put into place to support e-learning use (eg training/support, time to experiment with e-learning, rewards, incentives, communication, accessibility of e-learning components/associated technologies)?
- Do you view e-learning use as being implicitly or explicitly supported, rewarded, and/or expected by your organisation?
- Did the implementation team/organisation increase user skill level for e-learning use?
- Did the implementation team/organisation provide incentives for use?
- Did the implementation team/organisation remove obstacles to use?
- Does e-learning fit with the values, interests, and perceived responsibilities of educators as well as your professional groups/disciplines and organisations?
- Did a charismatic organisational member (academic and/or managerial) advocate for the adoption and implementation of e-learning?

- Did champions have protected time to advocate the initiative?

The rationale for this question is to find out what participants think about the effects of organisational leaders' decisions but also whom they perceive as leaders of e-learning within their organisation.]

Question 6: How do you feel about your level of e-competence?

Prompt questions

- What level of e-competence do you think is necessary for studying online?
- How comfortable with your level of e-competence are you?
- How e-competent do you think your lecturers are?
- How e-competent do you think your colleagues are?
- What type of support do you think would help you enhance your e-competence?

The rationale for the inclusion of this topic in the interview is to find out about the participants' perceptions of the e-competence skills they need to be effective in implementing e-learning, whether they feel that have the required levels of e-competence needed and thoughts about what type of professional development or capacity building format would enable them to upskill.]

Appendix E: Ethics Approval

Ethics Office
Research Development & Integrity
Research Division
Armidale NSW 2351
Australia
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jo-ann.sozou@une.edu.au
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HUMAN RESEARCH ETHICS COMMITTEE

MEMORANDUM TO: A/Prof Charles Kivunja, Dr Jennifer Charteris & Ms Harriet Ridolfo

School of Education

This is to advise you that the Human Research Ethics Committee has approved the following:

PROJECT TITLE:	Critical organisations factors for successful implementation of e-learning: A case study of selected universities in New South Wales
APPROVAL No.:	HE17-009
COMMENCEMENT DATE:	01 June, 2017
APPROVAL VALID TO:	01 June, 2018
COMMENTS:	Nil. Conditions met in full

The Human Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address:
http://www.une.edu.au/research/research-services/rdi/ethics/hre/hrec-forms

The NHMRC National Statement on Ethical Conduct in Research Involving Humans requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.

Jo-Ann Sozou
Secretary/Research Ethics Officer

21/02/2017 A17/72

Appendix F: Participant Interviews Code Book Mapping

Code Book Academics

Code	Ben	Mike	Theresa	Jo	Kay	Stacy
1. Need (A1)				[JoR26L1-2] [JoR26L15-18] [JoR26L26]	[KayR21L9-13]	
2. Clarity (A2)						
3. Complexity (A3)	[BenR22L21] [BenR28L2-8 [BenR41L3-18]			[JoR17L17-25]	[KayR6L3-9] [KayR6L11-16] [KayR6L18-20] [KayR10L12-17] [KayR6L16-24	[StacyR15L28-30] [StacyR46L4-10] [StacyR47L1-7]
4. Quality/practicality (A4)						
5. District (B5)	[BenR36L10-13]	[MikeR11L11-13] [MikeR11L29-31] [MikeR18L16-20]	[TheresaR19L3-7]			[StacyR33L1-2] [StacyR33L10-14] [StacyR33L18-19] [StacyR38L7-L9] [StacyR41L8-14]
6. Community (B6)						
7. Principal (B7)						
8. Teacher (B8)	[BenR24L1-6]	[MikeR7L1-5]		[JoR21L53-58]	[KayR5L1-7]	[StacyR3L5-15]

Code	Ben	Mike	Theresa	Jo	Kay	Stacy
		[MikeR10L39-47] [MikeR19L4-6] [MikeR19L16-18] [Mike28L3-9] [MikeR28L14-16]			[KayR10L4-6] [KayR10L8-11] [KayR15L5-9] [KayR16L10-13]	[StacyR7L2-6] [StacyR16L12-15] [StacyR19L1-2] [StacyR26L10-13] [StacyR31L1-6] [StacyR41L8-10] [StacyR43L1] [StacyR44L19-21]
Directional vision (LSU1)						
Focused innovation (LSU2)	[BenR37L8-13]					
Reining in or consolidation (LSU3)	[BenR37L8-13]					
Capacity building (CB) (FROM LITERATURE)	[BenR12L43-46] [BenR13L21] [BenR14L3-7] [BenR15L1-6] [BenR15L11-13] BenR16L12-13 BenR16L21-22 BenR18L8-12 [BenR17L3-6] [BenR18L13-18] [BenR22L4-13]	[MikeR11L5-9] [MikeR18L1-6] [MikeR21L1-5] [MikeR22L21-24] [MikeR23L5-7] [MikeR24L6-10] [MikeR25L2-3] [MikeR26L1-3] [MikeR26L9-13] [MikeR27L4] [MikeR22L1-4]	[TheresaR35L2-17]	[JoR10L43-47] [JoR10L51-57] [JoR12L33-40] [JoR14L31-35] [JoR21L8-12] [JoR23L6-12] [JoR23L9-10] [JoR23L20-27] [JoR21L70-72] [JoR21L70-72]	[KayR8L2-3] [KayR9L1-5] [KayR9L6-8] [KayR9L12-14] [KayR11L1-3] [KayR13L1-5] [KayR17L4-7] [KayR18L2-8] [KayR18L9-13] [KayR19L2-3] [KayR20L4]	[StacyR17L11-17] [StacyR19L4-10] [StacyR23L5-15] [StacyR24L3-8] [StacyR25L1-2] [StacyR27L6-9] [StacyR44L23-33]

Code	Ben	Mike	Theresa	Jo	Kay	Stacy
	[BenR23L1-3] [BenR23L7-15] [BenR33L18-20] [BenR19L1-6] [BenR19L16-18]	[MikeR22L21-24] [MikeR29L7-13]			[KayR20L10] [KayR6L3-9] [KayR6L11-16] [KayR6L18-20] [KayR11L1-L3]	
Institutional infrastructure (II) (FROM LITERATURE)	[BenR13L9-13] [BenR13L16-18] [BenR25L1-5] [BenR26L1-3] [BenR29L1-2] [BenR30L1-5] [BenR31L1-5] [BenR32L7-12] [BenR32L15-18] [BenR33L5-12] [BenR35L32-37]		[TheresaR14L4-10] [TheresaR16L3-15] [TheresaR17L5-8] [TheresaR22L7-11] [TheresaR25L1-5] [TheresaR33L2-9] [TheresaR48L1-6] [TheresaR49L1-5] [TheresaR50L4-6] [TheresaR53L3-6] [TheresaR58L1-6]		[KayR9L20-28] [KayR9L46-51] [KayR16L21-25]	[StacyR12L13-16] [StacyR12L19-24] [StacyR13L5-8] [StacyR31L12-15] [StacyR44L34-35] [StacyR45L8-11] [StacyR45L22-29]
Leadership and management (LM) (FROM LITERATURE)	[BenR2L10-17] [BenR25L11-15] [BenR28L17-21] [BenR32L19-24] [BenR33L20-26] [BenR35L54-63]	[MikeR13L1-5] [MikeR15L4-6] [MikeR16L1-3] [MikeR17L12-21]	[TheresaR19L1-2] [TheresaR23L10-14] [TheresaR52L208]	[JoR17L2-6] [JoR17L43-46] [JoR18L12-16] [JoR18L18-20] [JoR18L28] [JoR19L12-25] [JoR19L35-42]	[KayR16L2-10]	[StacyR33L2-3] [StacyR41L8-10] [StacyR43L4-9] [StacyR44L8-15] [StacyR44L36-37] [StacyR45L22-29]

Code	Ben	Mike	Theresa	Jo	Kay	Stacy
				[JoR19L62-63] [JoR20L15-21] [JoR20L22-25] [JoR20L39-42] [JoR20L48-49]		
Multi-profession teamwork and process (MPTP) (FROM LITERATURE)		[MikeR5L17-19] [MikeR7L5-11] [MikeR11L11-13]	[TheresaR23L22-23] [TheresaR24L2-4] [TheresaR47L1-4]			
Identity (NEW CATEGORY)			[TheresaR33L10-18] [TheresaR34L1-5 [TheresaR42L1-7] [TheresaR43L13-20] [TheresaR44L3-11] [TheresaR46L4-7]			

Code Book Learning Designers

Code	Hannah	Freya	Beth	Alice	Penny
9. Need (A1)	HannahR5L12-14 HannahRL19-25	FreyaR6L33-38 FreyaR27L17-21			
10. Clarity (A2)	HannahR14L3-7		BethR9L28-30		
11. Complexity (A3)	HannahR6L1-9 HannahR6L10-19 HannahR10L21-34	FreyaR7L13-17 FreyaR28L5-7 FreyaR28L18-23 FreyaR32L5-12			
12. Quality/practicality (A4)			BethR34L2-3	AliceR8L31-36 AliceR14L9-10	PennyR17L8-10
13. District (B5)	HannahR10L20	FreyaR31L2-13	BethR9L7-20 BethR13L14-16		PennyR8L13-16 PennyR8L31-35 PennyR9L5 PennyR10L20-24
14. Community (B6)	HannahR17L7-12 HannahR18L3-6				
15. Principal (B7)		FreyaR18L1-3 FreyaR18L22-24			
16. Teacher (B8)		FreyaR11L27-29 FreyaR24L5-9			

Code	Hannah	Freya	Beth	Alice	Penny
Directional vision (LSU1)			BethR20L7-10		
Focused innovation (LSU2)		PennyR9L26-29 PennyR3L9-14	BethR20L7-10		
Reining in or consolidation (LSU3)	HannahR13L29-39 HannahR14L3-7			AliceR12L3-8 AliceR12L10-13	
Capacity building (CB) (FROM LITERATURE)	HannahR7L19-21 HannahR8L4-19 HannahR10L1-3 HannahR10L8-L12 HannahR15L2-L9 HannahR15L30-34 HannahR17L7-12 HannahR18L3-6 HannahR19L1-4 HannahR19L19-26 HannahR20L1-5 HannahR20L11-14 HannahR20L16-18	FreyaR7L5-12 FreyaR12L8-12 FreyaR12L24-27 FreyaR13L5-9 FreyaR13L15-21 FreyaR23L2-7	BethR13L25-27 BethR27L2-8 BethR28L6-8 BethR33L7-12	AliceR12L25-30 AliceR18L24-28 AliceR21L6-13 AliceR22L11-13 AliceR22L24-31 AliceR22L36-45 AliceR5L2-8	PennyR8L13-16 PennyR8L24-28 PennyR28L5-8 PennyR30L6-9 PennyR31L6-8
Institutional infrastructure (II) (FROM LITERATURE)	HannahR7L7-10 HannahR9L17-27 HannahR10L43-49 HannahR13L2-L6	FreyaR11L9-13 FreyaR11L16-20 FreyaR11L6-16 FreyaR15L15-17	BethR9L21-23 BethR9L31-35 BethR15L2-6 BethR16L12-14	AliceR8L20-24 AliceR12L36-38 AliceR12L47-52 AliceR13L5-9	PennyR10L2-3 PennyR10L8-9 PennyR11L4-13 PennyR11L8-13

Code	Hannah	Freya	Beth	Alice	Penny
		FreyaR30L7-17	BethR21L2-3 BethR24L4-11 BethR30L5-7	AliceR13L17-24 AliceR14L1-7 AliceR16L4-7 AliceR16L29-33 AliceR16L38-42	PennyR12L9-16 PennyR13L1-4 PennyRR18L2-6 PennyR38L3-7
Leadership and management (LM) (FROM LITERATURE)	HannahR9L1-3 HannahR9L8-13 HannahR9L38-46 HannahR13L15-22 HannahR13L29-39 HannahR14L3-L7 HannahR19L11-13 HannahR21L38-43 HannahR21L41-48	FreyaR9L23 FreyaR9L7-21 FreyaR11L1 FreyaR18L1-3 FreyaR18L28-30 FreyaR22L1-5 FreyaR32L1-2	BethR11L2-5 BethR12L2-12 BethR3L1-3 BethR13L1-3 BethR13L11-14 BethR14L10-16 BethR17L5-18 BethR19L2-5 BethR21L3-8 BethR21L10-15 BethR22L3-4 BethR23L6 BethR25L13	AliceR8L25-28 AliceR12L3-8 AliceR13L13-17 AliceR19L8-13	PennyR10L5-9 PennyR10L14-17 PennyR14L2-10 PennyR14L17-19 PennyR14L28-30 PennyR16L8-14 PennyR22L14-18 PennyR23L1-6 PennyR23L11-15 PennyR34L9-14
Multi-profession teamwork and process (MPTP) (FROM LITERATURE)	HannahR15L14-16 HannahrR21L33-36		BethR15L7-11 BethR15L16-17	AliceR8L1-7 AliceR8L45-46 AliceR8L55-61 AliceR11L5-12 AliceR18L3-10	PennyR20L7-11

Code	Hannah	Freya	Beth	Alice	Penny
				AliceR18L14-20	

Code Book Local Leaders

Code	Harry	Lucy	Hilary	John
17. Need (A1)			HilaryR7L88-89	
18. Clarity (A2)	HarryR36L1-9 HarryR37L11-12			JohnR10L28-39 JohnR10L33-39
19. Complexity (A3)	HarryR15L7 HarryR19L3-6 HarryR26L4-15 HarryR27L10-16			JohnR8L36-40 JohnR8L118-122 JohnR8L125-135
20. Quality/practicality (A4)	HarryR35L11-13 HarryR38L4-12		HilaryR6L40-43	JohnR8L54-60
21. District (B5)	HarryR13L23-24 HarryR13L92-103 HarryR28L35-36 HarryR29L6-9 HarryR31L32-46 HarryR39L4-9	LucyR7L3-4 LucyR8L4-5 LucyR22L2-3 LucyR30L12-16 LucyR39L1		JohnR10L10-16 JohnR10L22-26 JohnR10L33-39
22. Community (B6)			HilaryR6L90-92 HilaryR7L25-26 HilaryR7L30-35	JohnR10L40-43 JohnR10L45-49
23. Principal (B7)	HarryR13L80-88		HilaryR6L1-6	JohnR10L17-19 JohnR10L40-43

Code	Harry	Lucy	Hilary	John
24. Teacher (B8)	HarryR21L2-10 HarryR28L18-22 HarryR28L26-27 HarryR31L5-8 HarryR46L39-41 HarryR48L7-10			
Directional vision (LSU1)			HilaryR11L37-42	
Focused innovation (LSU2)			HilaryR9L14-23	
Reining in or consolidation (LSU3)				
Capacity building (CB) (FROM LITERATURE)	HarryR13L47-50 HarryR13L55-62 HarryR20L8-10 HarryR23L6-12 HarryR26L18-22 HarryR27L10-16 HarryR27L31-34 HarryR28L29-34 HarryR29L33-44 HarryR29L49-51 HarryR35L18-21 HarryR30L27-29 HarryR31L49-55	LucyR19L1-4 LucyR26L20-26 LucyR27L10-13 LucyR30L5-12 LucyR31L10-13 LucyR48L3-7 LucyR50L5-8 LucyR80L3-9 LucyR85L1-2 LucyR85L23-27 LucyR86L3-7 LucyR87L4-6 LucyR89L3-6	HilaryR14L7-14 HilaryR14L48-52 HilaryR15L14-18	JohnR8L79-92 JohnR8L97-99 JohnR8L102-109 JohnR10L53-57 JohnR10L70-73 JohnR10L102-108 JohnR11L11-16 JohnR13L7-9 JohnR13L20-25 JohnR13L28-30 JohnR13L39-42 JohnR13L48-56 JohnR14L10-18

Code	Harry	Lucy	Hilary	John
		LucyR18L13-18 LucyR18L22-25		JohnR14L19-23 JohnR14L31-36 JohnR14L50-56
Institutional infrastructure (II) (FROM LITERATURE)	HarryR13L65-66	LucyR20L3 LucyR21L1-2 LucyR46L6-16 LucyR47L1-6 LucyR51L2-6 LucyR52L1-4 LucyR58L3-5 LucyR61L1-4 LucyR23L6-8	HilaryR6L57-63 HilaryR8L6-9 HilaryR9L1-8	JohnR10L22-26 JohnR10L64-67 JohnR10L74-88 JohnRR13L54-62
Leadership and management (LM) (FROM LITERATURE)	HarryR9L1-6 HarryR13L30-40 HarryR13L80-88 HarryR24L3-8 HarryR24L3-8 HarryR24L10-11 HarryR28L5-9 HarryR28L29-34 HarryR31L49-55 HarryR32L2-5 HarryR35L2-5	LucyR4L2-5 LucyR2L10-14 LucyR31L7 LucyR44L1-5	HilaryR7L11-13 HilaryR7L39-42 HilaryR7L60-69 HilaryR7L70-77 HilaryR10L27-34 HilaryR15L3-13	JohnR8L36-40 JohnR10L22-26 JohnR10L28-39 JohnR10L102-108 JohnR11L1-6

Code	Harry	Lucy	Hilary	John
	HarryR38L4-12			
Multi-profession teamwork and process (MPTP) (FROM LITERATURE)	HarryR5L35-40 HarryR5L43-44 HarryR6L6-7 HarryR6L8-13 HarryR11L1-3 HarryR18L8-13 HarryR24L3-8 HarryR24L10-11 HarryR24L46-55 HarryR28L1-2 HarryR29L21-30 HarryR48L23-28	LucyR9L3-6 LucyR25L4-8 LucyR32L6 LucyR36L1-3	HilaryR11L52-59	
Digital narrative (NEW CATEGORY)	HarryR24L24-40 HarryR46L1-4 HarryR48L1-5 HarryR49L1-2	LucyR18L13-18 LucyR18L22-25		JohnR16L10-13

Code Book Students

Code	Melanie	Ben	Nick
25. Need (A1)			
26. Clarity (A2)			
27. Complexity (A3)		BenR12L43-46 BenR28L2-8 BenR41L3-18	NickR35L10-11 NickR58L25-29 NickR58L25-29
28. Quality/practicality (A4)			
29. District (B5)			
30. Community (B6)			
31. Principal (B7)			
32. Teacher (B8) [SELF-EFFICACY]	MelanieR20L4-9 MelanieR23L8-10		NickR22L7-10 NickR24L1-4
Directional vision (LSU1)			
Focused innovation (LSU2)			
Reining in or consolidation (LSU3)			
Capability building (CB) (FROM LITERATURE)	MelanieR23L11-14 MelanieR35L2-9 MelanieR41L5-7 MelanieR43L2-8	BenR22L4-13 BenR23L1-3 BenR23L7-15 BenR33L18-20	NickR26L4-9 NickR29L3-7 NickR30L4-8 NickR31L6-9 NickR32L1-4

Code	Melanie	Ben	Nick
	MelanieR44L2-4 MelanieR44L2-4 MelanieR51L10-13 MelanieR55L2-8 MelanieR60L10-17		NickR32L10-16 NickR49L1-3 NickR50L4-13 NickR54L3-11
Institutional infrastructure (II) (FROM LITERATURE)	MelanieR25L1-2	BenR13L9-13 BenR13L16-18	
Leadership and management (LM) (FROM LITERATURE)			
Multi-profession teamwork and process (MPTP) (FROM LITERATURE)			
Currency (NEW CATEGORY)	MelanieR25L6-14 MelanieR25L10-11 MelanieR26L7-8 MelanieR31L1-9 MelanieR32L16-19 MelanieR54L2-4	BenR16L12-13 BenR16L21-22 BenR19L16-18	NickR42L11-18 NickR42L51-57 NickR61L9-17