

Exploring the implementation of blended learning approaches in a selected university in the Western Cape province

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Psalm 9: *"I will give thanks to you, LORD, with all my heart; I will tell of all your wonderful deeds".*

This academic journey has been rooted in faith, gratitude and perseverance. Thank You Heavenly Father, for granting me the wisdom and guidance throughout this process.

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ABSTRACT

The central phenomenon of this study is the institutional planning and implementation of blended learning. The broader debates underpinning the research centre on the relationship between institutional support structures and individual adoption processes, the benefits and challenges of integrating blended learning, and the categorisation of blended learning approaches into low, medium, and high impact. The theoretical framework guiding the analysis of the adoption and implementation process draws on the following theories: Diffusion of Innovations, the Concerns-Based Adoption Model, and the Technology Acceptance Model. To anchor the research empirically, a case study was conducted at a university of technology, where purposive sampling was employed. The key findings highlight the interrelationships among the university of technology's blended learning practices, decision-making processes, implementation strategies, and pedagogical outcomes. The central argument of the study is that robust institutional support is essential for the successful implementation of blended learning. Strong institutional backing facilitates ease of adoption, builds confidence among academic stakeholders, and enables the sustainable integration of digital transformation initiatives. The findings further reveal that within the educational ecosystem, a significant gap persists between structural adoption, such as deploying platforms, uploading materials, and completing training, and genuine pedagogical transformation, which involves redesigning curricula, rethinking assessment strategies, and fostering student-centred digital learning experiences. This gap represents a critical area identified and documented by the study.

Keywords: blended learning, flipped classroom, hybrid learning, ICT, implementation transformation.

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LIST OF ACRONYMS

CBAM	Concern-Based-Adoption Model
CHE	Council of Higher Education
CILT	Centre of Innovation in Learning and Teaching
CTS	Computer and Telecommunications Services
DHET	Department of Higher Education and Training
DOI	Diffusion of Innovation
ECSA	Engineering Council of South Africa
ERT	Emergency Remote Teaching
HEPS	Higher Education Practice Standard
ICT	Information Communication Technology
LMS	Learning Management System
LoU	Levels of Use
NATED	National Accredited Technical Education Diploma
NSFAS	National Student Financial Aid Scheme
QCTO	Quality Council for Trades and Occupations
TAM	Technology Acceptance Model
TVET	Technical and Vocational Education and Training
UCT	University of Cape Town
UFS	University of Free State
UoT	University of Technology
ZPD	Zones of Proximal Development

“Change is inevitable, but transformation is a choice.” –

Ash Amara

CHAPTER 1:
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

South African higher education is a vast and diverse landscape encompassing 26 public universities serving approximately one million students, 700 000 students registered across more than 50 Technical and Vocational Education and Training (TVET) colleges, and 90 000 students enrolled in private institutions (Tjønneland, 2017). Amidst ongoing structural challenges, higher education institutions strive for equality, inclusion, digital transformation, and adaptation to rapidly evolving educational demands. These demands have fundamentally reshaped institutional approaches to teaching, learning and curriculum delivery. This study examines the strategies and factors that influence the adoption and integration of blended learning approaches at a selected university of technology (UoT) in the Western Cape province of South Africa.

The global restructuring of technology in education, dramatically accelerated by the COVID19 pandemic, placed the South African Department of Higher Education and Training (DHET) under significant pressure as it sought to keep pace with rapid educational change. This new reality exposed and deepened existing inequalities within higher education institutions, compelling the DHET to formulate policies and plans to integrate information and communication technologies (ICTs) and establish platforms for blended learning across curriculum delivery (DHET, 2021). To mitigate the effects of prolonged institutional closures and academic disruptions, the DHET advocated remote learning as a temporary solution (Mhlanga & Moloi, 2020), which catalysed the broader adoption of blended learning, a model that combines traditional in-person instruction with online teaching and learning activities (Picciano, 2006). Although this transition was initially implemented as an emergency response, many higher education institutions subsequently embedded blended learning within their long-term institutional strategies, thereby shifting the focus from crisis management to sustainable pedagogical transformation.

The institution under study is one of the largest universities of technology in South Africa, with multiple campuses spanning urban and peri-urban areas in the Western Cape province. The shift towards blended learning at this institution was initially a reactive response to pandemic related disruptions. However, this study argues that the transition has evolved from a state of

emergency into a strategic institutional necessity, requiring coordinated institutional leadership, curriculum redesign, staff development, technological infrastructure, and sustained organisational support to ensure effective implementation. aligned with the DHET's mandates for digital literacy and the institution's long-term strategic vision for digital transformation *(DHET, 2021).* This study focuses on the institution's specific experience of implementing blended learning, recognising its unique institutional context, infrastructure, and pedagogical challenges.

This introductory chapter provides a foundational overview of the research. It establishes the context of higher education in South Africa and the imperative for blended learning, presents the background to the problem, outlines the research questions and objectives, introduces the theoretical framework, and details the methodology. It concludes with key term clarifications, the dissertation's demarcation, and a chapter summary.

1.2 Background of the Study

Despite significant transformational strides in South African higher education and training, the COVID-19 pandemic exposed persistent inequalities across institutions. According to Kwatubana (2023), the lack of infrastructure, limited access to technology, and insufficient institutional preparedness constrained the potential for meaningful change. Kwatubana (2023) identifies the urgent need to increase ICT usage in post-COVID-19 teaching and learning, noting the toll on developing countries that struggled to engage with virtual learning because of infrastructure deficits, poor connectivity, and limited ICT knowledge. Mhlanga and Moloi (2020) similarly observe that the pandemic triggered the most substantial digital transformation in education in recent memory, disrupting traditional teaching and learning methods across all areas of institutional life. Collectively, these developments demonstrated that sustainable digital transformation requires more than technological investment; it also depends on institutional readiness, leadership, pedagogical innovation, and ongoing professional support.

The rapid shift to digital education has fundamentally altered teaching and learning methods in South African higher education. The researcher's personal motivation for this study stems from direct engagement with blended learning as a lecturer at Northlink College in South Africa between 2021 and 2022, where the successful implementation of blended learning through a partnership with the UoT under study was observed. This two-year experience introduced the researcher to a range of digital teaching methods and software tools that enriched pedagogical practice. Subsequent experience in a National Accredited Technical Education Diploma

(NATED) marketing department, operating within the Northlink College environment, generated questions about how institutions with traditional delivery models can bridge the gap between conventional approaches and blended learning curricula. These professional experiences informed the researcher's interest in understanding the institutional conditions, leadership practices, and implementation strategies that enable the successful adoption of blended learning beyond emergency remote teaching.

Although the researcher's background is rooted in the TVET sector, this study focuses on the selected UoT as the primary research site. This institution was selected as a benchmark for its shared vocational and professional education mandate with the TVET sector and its successful blended learning model. By investigating how this UoT navigated the complexities of technology adoption, the study aims to provide a critical framework that TVET colleges and similar institutions can draw upon when planning their own digital transitions. The study therefore has both institutional specificities, in its focus on one UoT, and broader transferability, in its potential application to comparable contexts. While the findings are not intended to be statistically generalisable, they may offer analytical and contextual insights that are transferable to institutions facing similar organisational and pedagogical challenges.

While the initial phase of technology adoption (2020–2022) was defined by Emergency Remote Teaching (ERT), the landscape has since shifted. By 2025, the UoT under study had entered a consolidation phase. This study provides a necessary retrospective and current evaluation of the digital practices that survived the return to campus and the institutional structures that were permanently altered in the three years following the official end of the global health crisis. Consequently, the study extends beyond documenting emergency responses to critically examining the long-term institutionalisation and sustainability of blended learning within a post-pandemic higher education environment.

1.3 Statement of the Problem

Despite the rapid shift towards digital education driven by the COVID-19 pandemic, institutions of higher learning in South Africa have struggled to implement blended learning effectively (Uchenna, 2021). These institutions face significant challenges, including rigid curricula, insufficient knowledge, inadequate technological infrastructure, institutional resistance, and limited digital pedagogical training (Odera et al., 2022). Even where digital infrastructure is available, implementation has remained fragmented across faculties and

uneven among staff (Uchenna, 2021).

The core of the problem lies not solely in technological availability but in the diffusion of the innovation itself, specifically the gap between institutional mandates at the macro level, support mechanisms at the meso level, and individual teaching methodologies at the micro level. This misalignment creates barriers to coherent and sustainable adoption, resulting in inconsistent implementation practices and limiting the institutionalisation of blended learning across higher education institutions.

While the COVID-19 pandemic served as the initial catalyst for the digital shift in 2020, this study, conducted in 2025, is situated in the normalisation phase of educational technology. The research problem lies in the disconnect between the emergency measures adopted during the crisis and the sustained institutionalisation of blended learning in the post-pandemic period. It seeks to investigate whether the digital transformation initiated during the pandemic has evolved into a sustainable pedagogical model or whether institutions are reverting to traditional teaching approaches following the removal of emergency conditions.

There is, therefore, a pressing need for well-planned, intentionally designed blended learning pedagogy that addresses these challenges while meeting the diverse needs of learners. Golden (2020) and Weller (2020) argue that blended learning can bridge the gap between traditional and digital education by providing flexible, personalised learning experiences while enhancing accessibility and inclusivity, thereby contributing to the reduction of educational inequalities. While some institutions have demonstrated successful strategies for integrating blended learning, existing South African research has largely been descriptive, documenting challenges rather than detailing institutional implementation processes (Graham, 2006; López-Pérez et al., 2011; Ngimwa & Wilson, 2012). Consequently, there is limited empirical understanding of how successful institutional implementation is planned, supported, monitored and sustained over time. There remains limited research on how successful implementation strategies can be documented, understood, and applied more broadly across other institutions.

This study addresses this gap by investigating the specific challenges and strategies adopted by the selected UoT in implementing blended learning. By adopting a multi-level analytical perspective, the researcher examines the institution's model and interrogates the roles of various stakeholders, aiming to uncover the practical processes used to select and implement a blended learning approach. The research aims to produce documented implementation

practices and practical recommendations to assist other higher education institutions, particularly TVET colleges, in successfully navigating their own digital transformations. In doing so, the study seeks to contribute both to the scholarly understanding of institutional technology adoption and to the development of contextually relevant implementation practices for vocationally oriented higher education institutions.

1.4 Rationale and Significance of the Study

In an era of rapid technological change, education systems worldwide are under pressure to evolve in ways that equip learners with the skills required for contemporary employment and civic life (Sethy, 2008). The COVID-19 pandemic significantly accelerated this pressure, compelling higher education institutions to shift abruptly from traditional face-to-face instruction to online and blended delivery. The researcher's personal experience as a lecturer at Northlink College between 2021 and 2022, working in a blended learning programme developed in partnership with the UoT under study, provided direct insight into both the benefits and the challenges of this transition. The anxiety, uncertainty, and pedagogical disruption encountered during this period motivated a desire to understand how institutions that successfully implemented blended learning did so and what lessons could be drawn for similar contexts. This professional experience therefore served as the catalyst for a broader scholarly inquiry into the institutional conditions that enable the sustainable implementation of blended learning.

Theoretically, this study contributes to the growing body of knowledge on technology adoption in higher education by integrating three complementary theoretical frameworks: the Diffusion of Innovations (DOI) theory (Rogers, 2003), the Technology Acceptance Model (TAM) (Davis, 1989), and the Concern-Based Adoption Model (CBAM) (Hall & Hord, 2015). Together, these frameworks provide a multi-level analytical lens that bridges institutional governance and individual pedagogical practice. In doing so, they address a gap in the literature, where studies have tended to focus on either institutional or individual dimensions of adoption, but rarely on both simultaneously. The study thus contributes to the theoretical understanding of how systemic and individual variables interact in the adoption of blended learning, thereby extending current conceptualisations of technology adoption beyond single-level explanations.

In practice, this study seeks to provide actionable insights for institutions of higher learning

struggling to implement blended learning owing to rigid curricula, limited infrastructure, and/or inadequate support. Research has focused disproportionately on student receptiveness to blended learning rather than on the institutional reform and implementation process (Ali & Georgiou, 2024). By focusing on the institutional perspective and specifically on how one UoT selected its model, supported its staff, and transformed its pedagogical practices, this study produces a framework that other institutions can critically examine and contextually adapt. The primary aim is to document key implementation practices and offer practical recommendations that assist other institutions, and particularly TVET colleges with similar contextual mandates, in pursuing successful blended learning adoption. Accordingly, the study has the potential to inform institutional policy development, leadership decision-making, professional development initiatives and future research on blended learning implementation.

1.5 Research Objectives and Questions

This study aims to explore, document, and critically analyse the processes, strategies, and outcomes associated with blended learning implementation at a selected UoT in South Africa, with the intention of producing transferable insights for similar institutional contexts. The aim aligns with the study's interpretivist orientation by seeking an in-depth understanding of institutional experiences and implementation processes rather than statistical generalisation.

The objectives of the study are:

1. To explore the processes by which the UoT selected and identified suitable blended learning models for institutional implementation.
2. To ascertain the institutional strategies employed by the UoT to adopt and implement blended learning approaches that enhanced teaching and learning delivery.
3. To investigate how the integration of blended learning models has influenced lecturers' teaching methodologies at the UoT.

The research questions are:

1. How did the UoT select and identify suitable blended learning models for implementation?
2. What institutional strategies did the UoT employ to adopt and implement blended learning approaches to enhance teaching and learning?
3. In what ways has the integration of blended learning models influenced lecturers'

teaching methodologies at the UoT?

1.6 Overview of the Theoretical Framework

This study employs an integrated, multidimensional theoretical framework that accounts for the complexity of institutional change, individual adoption, and pedagogical transformation. Three complementary frameworks are used, each addressing a distinct level of analysis and a specific research question, as detailed below. The integration of these frameworks provides a holistic analytical perspective that enables the study to examine blended learning implementation as a dynamic process occurring simultaneously at institutional, organisational and individual levels.

The DOI theory, developed by Everett Rogers (2003), is employed at the macro level to address Research Question 1, which concerns the institution's selection and identification of blended learning models. DOI provides constructs such as relative advantage, compatibility, complexity, trialability, and observability to understand how institutional leaders evaluated and selected specific digital innovations for adoption. The theory also explains the role of communication channels, change agents, and social systems in driving or inhibiting the spread of an innovation within an institutional context. Accordingly, DOI provides the conceptual foundation for examining institutional decision-making processes and the diffusion of blended learning across the university.

The CBAM, developed by Hall et al. (1977) and further elaborated by Hall and Hord (2015), is employed at the meso level to address Research Question 2, concerning the institutional strategies used to implement blended learning. CBAM's Stages of Concern and Levels of Use frameworks enable the researcher to trace how individual lecturers and support staff progressed through awareness, informational concern, personal concern, management, and eventual refocusing as the institution progressively implemented its blended learning strategy. CBAM provides a diagnostic lens for evaluating the human dimensions of implementation and the appropriateness of institutional support responses. The framework therefore enables an assessment of whether institutional support mechanisms were responsive to the evolving needs and concerns of academic staff throughout the implementation process.

The TAM, proposed by Davis (1989), is employed at the micro level to address Research Question 3, regarding the influence of blended learning on individual teaching methodologies.

TAM's two core constructs, Perceived Usefulness and Perceived Ease of Use, provide a granular lens for exploring why individual lecturers adopted or resisted specific digital tools and how their perceptions of technology influenced the redesign of their classroom practices. This framework therefore facilitates an understanding of how individual beliefs and attitudes towards technology shape pedagogical decision-making and sustained technology use.

Together, these three frameworks form an integrated analytical architecture that ensures a coherent thread between macro-level institutional decision-making, meso-level implementation support, and micro-level pedagogical transformation. The complementary application of DOI, CBAM and TAM enables the study to generate a comprehensive explanation of blended learning implementation that would not have been achievable through the application of a single theoretical perspective. A comprehensive discussion of the theoretical frameworks and their application to the research questions is provided in Chapter Three.

1.7 Overview of the Methodology

A qualitative research design, guided by the interpretivist paradigm, was adopted for this study. The interpretivist approach is appropriate for exploring participants' lived experiences and subjective perspectives as they navigated the institutional adoption of blended l earning (Creswell, 2013a). The paradigm acknowledges that reality is socially constructed and that participants assign meaning to their experiences within specific institutional contexts, making it well suited to investigating complex educational change. The study employs an instrumental case study design, using the selected UoT as the bounded case through which the broader phenomenon of blended learning adoption is examined.

Data were generated through two primary methods. First, semi-structured interviews were conducted with seven purposively selected participants, comprising lecturers, a curriculum officer, and a support staff member, drawn from three campuses (Fairview, Centerville and Middleton) and three faculties (Education, Informatics and Design, and Engineering). Purposive sampling enabled the selection of information-rich participants who possessed direct experience of the institutional implementation of blended learning. Second, a document review was conducted to triangulate the interview data and provide institutional contextual grounding. Documents reviewed included the institution's *Multimodal and Remote Teaching Guidelines* (UoT, 2020), DHET policy directives, and Council on Higher Education (CHE) frameworks

relevant to the implementation of blended learning. The combination of interview and documentary data strengthens the credibility and confirmability of the study's findings.

Data were analysed using a dual analytical approach, as detailed in Chapter Four: inductively through the six-phase thematic analysis process (Braun & Clarke, 2023) and deductively through the three theoretical frameworks (DOI, CBAM, and TAM). The integration of inductive and deductive analytical strategies enabled the researcher to remain open to themes emerging from the data while simultaneously interpreting the findings through established theoretical lenses. A comprehensive discussion of the research methodology is provided in Chapter Four.

1.8 Clarification of Key Terms

1.8.1 Blended Learning

Blended learning is defined as a process of combining different instructional methods by integrating face-to-face interactions with ICTs (Graham, 2006). Osguthorpe et al. (2003, p. 3) describe it as a "convergence of two learning environments: virtual and real". In this study, blended learning is defined as the deliberate and systematic integration of traditional face-to face classroom instruction with technology-mediated online learning experiences (Garrison & Kanuka, 2004). Unlike the ERT seen during the 2020–2022 period, contemporary blended learning represents a permanent pedagogical design in which the online and physical components are planned to complement one another rather than serve as a temporary substitute.

This definition underpins the study's analysis of institutional implementation and pedagogical transformation throughout the dissertation.

1.8.2 Hybrid Learning

Graham (2013) defines hybrid learning as a process that facilitates individualised learning by enabling students to work at their own pace while benefiting from direct interactions with peers and instructors. Hybrid learning expands the classroom experience, allowing learners to engage from any location and at any time. In this study, hybrid learning is understood as a practical expression of blended learning within the institutional context, in line with the UoT's multimodal delivery policy. The term is therefore used interchangeably only where it reflects the institutional terminology adopted by the UoT.

1.8.3 Key Success Factors

According to Harris (2010), key success factors are methods or techniques that consistently deliver effective results compared to alternative approaches and that serve as benchmark standards. In this study, key success factors refer to the observable implementation strategies and institutional practices that facilitated the successful adoption of blended learning at the UoT. These factors are identified inductively through the data and may serve as transferable templates for institutions with comparable contexts. They are not predetermined variables but emerge from participants' experiences and documentary evidence analysed during the study.

1.8.4 Learning Management System (LMS)

A Learning Management System (LMS) is a digital platform used by educational institutions to host course materials, administer assessments, facilitate communication, and track student engagement and academic progress (Chapman, 2005). At the UoT under study, Blackboard served as the primary institutional LMS, operating alongside Microsoft Teams. The LMS is a central technological tool in the institution's blended learning model and features prominently in the findings of Chapter Five. While learning management systems have become indispensable components of contemporary higher education, their educational value depends less on their technological capabilities than on how effectively lecturers integrate them into pedagogically meaningful learning activities. Consequently, successful implementation requires institutional support, lecturer competence, and alignment between technology and curriculum design.

The DOI theory, as developed by Everett Rogers (2003), refers to the process by which an innovation is communicated through specific channels over time among members of a social system. The theory identifies key attributes of innovations, including relative advantage, compatibility, complexity, trialability, and observability, that influence the rate at which they are adopted. In this study, DOI provides the macro-level theoretical lens for understanding how blended learning was institutionally selected and diffused at the UoT. Within this study, DOI provides the conceptual basis for interpreting institutional decisions relating to the selection and diffusion of blended learning innovations.

1.8.5 Technology Acceptance Model (TAM)

The TAM, developed by Davis (1989), is a theoretical framework that explains the factors

influencing an individual's decision to accept and use a new technology. The two core constructs of the TAM are Perceived Usefulness (the degree to which a person believes that using a technology will enhance their performance) and Perceived Ease of Use (the degree to which a person believes that using the technology will be effort-free). In this study, the TAM provides the micro-level lens for understanding individual lecturer adoption of blended learning tools. The framework therefore assists in interpreting lecturers' acceptance, adoption and continued use of blended learning technologies.

1.8.6 Concern-Based Adoption Model (CBAM)

The CBAM, developed by Hall et al. (1977) and elaborated by Hall and Hord (2015), is a framework for understanding how individuals experience and respond to educational change and innovation. CBAM identifies seven Stages of Concern – from awareness to informational, personal, management, consequence, collaboration, and refocusing – and the corresponding Levels of Use that describe how individuals progress from non-use to sophisticated integration of an innovation. In this study, CBAM provides the meso-level lens for examining how the UoT's implementation strategies addressed the evolving concerns of academic staff. *CBAM* therefore enables the study to evaluate the responsiveness of institutional implementation strategies to the changing concerns and levels of use demonstrated by academic staff.

1.9 Demarcation of the Dissertation

This dissertation is organised into six chapters, each designed to contribute progressively to addressing the research problem and achieving the stated research objectives, structured as follows:

Chapter One provides an introduction and background to the study; establishes the research problem, objectives, and questions; presents the rationale and significance; and introduces the theoretical framework and methodology. Key terms are clarified, and the dissertation's structure is outlined, thereby providing the conceptual and methodological foundation for the study.

Chapter Two presents a comprehensive review of the relevant literature, examining historical and contemporary debates on technology in education, ICT integration, ERT, constructivist approaches, e-learning, the flipped classroom, and the concept and practice of blended learning in South African and global higher education contexts. The chapter also identifies the empirical

and conceptual gaps that provide the justification for the present study.

Chapter Three presents the integrated theoretical framework that underpins the study. The chapter develops the DOI theory, the TAM, and the CBAM in detail, explaining the appropriateness of each framework to the study and demonstrating how all three are aligned to the research questions and the three analytical levels (macro, meso, and micro). The chapter further demonstrates the conceptual alignment between the theoretical framework, research questions and analytical approach.

Chapter Four outlines the research methodology, including the interpretivist paradigm, qualitative approach, instrumental case study design, purposive sampling strategy, data generation methods (semi-structured interviews and document review), dual inductive and deductive analytical approaches, trustworthiness measures, ethical considerations, and the study's limitations and delimitations. The methodological decisions are justified in relation to the study's philosophical assumptions and research objectives.

Chapter Five combines findings, discussion, and theoretical integration. It presents and analyses the themes inductively constructed from the data, interprets them deductively through the DOI, CBAM, and TAM frameworks, and synthesises the findings into a meta-finding. The chapter addresses each research question, presents the conceptual and integrated thematic models, and provides implications for practice, limitations, and recommendations for further research. The discussion integrates the empirical findings with the theoretical framework and existing literature to generate new insights into blended learning implementation.

Chapter Six concludes the dissertation by summarising the study's main findings, reflecting on its practical contributions, discussing the implications for institutional practice, and offering recommendations for future research in the field of blended learning in the South African TVET sector. The chapter concludes by reflecting on the study's theoretical, methodological and practical contributions while acknowledging its limitations.

1.10 Chapter Summary

This chapter established the study's foundational orientation. It opened by situating the investigation in the context of South African higher education and the accelerated adoption of blended learning driven by the COVID-19 pandemic. The background of the study presented the researcher's personal motivation, grounded in direct experience of blended learning

implementation, and articulated the rationale for selecting the UoT as the primary case study site. It also demonstrated the continued relevance of examining blended learning implementation within the post-pandemic higher education landscape.

The statement of the problem identified a critical gap in South African literature: the absence of integrated, multi-level documentation of blended learning implementation processes from an institutional perspective. The rationale and significance demonstrated the study's theoretical contribution through the integration of DOI, TAM, and CBAM, as well as its practical contribution in offering actionable implementation insights for higher education institutions and TVET colleges.

The research objectives and questions were clearly articulated, establishing three aligned research questions that address the macro (model selection), meso (implementation strategies), and micro (pedagogical transformation) levels of analysis. The methodology overview outlined how data would be generated through semi-structured interviews with seven purposively selected participants and through a document review. It further explained how inductive thematic coding and deductive theoretical interpretation would be employed for data analysis.

The review also identifies the knowledge gaps that the present study seeks to address, thereby providing the intellectual justification for the research. The theoretical framework overview introduced DOI, CBAM, and TAM as the three integrated lenses of the study, each mapped to a specific research question and analytical level. Key terms were defined to ensure conceptual precision throughout the dissertation, including blended learning, hybrid learning, key success factors, LMS, DOI, TAM, and CBAM. The chapter concluded with a demarcation of the dissertation's six chapters.

Chapter Two presents the literature review, which critically examines existing scholarship on technology integration, blended learning approaches, and the institutional and pedagogical dimensions of digital transformation in higher education, providing the contextual and empirical foundation for the theoretical and analytical work that follows.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter One established the foundational orientation of this study, contextualising the problem within the South African higher education landscape, articulating the research questions and objectives, and introducing the three theoretical frameworks-Diffusion of Innovation (DOI), the Technology Acceptance Model (TAM), and the Concerns-Based Adoption Model (CBAM) that guide the analysis.

The review of literature serves not only to summarise existing scholarship but also to critically examine the extent to which previous studies have addressed the implementation of blended learning in higher education. Through this process, areas of consensus, scholarly debate, and unresolved knowledge gaps become evident, thereby providing a clear rationale for the present study. Consequently, the literature reviewed in this chapter establishes the conceptual and empirical foundation upon which the research is based.

The purpose of this literature review is threefold. First, it traces the historical and contemporary trajectory of technology integration in education, establishing the broader context within which the UoT's blended learning adoption occurred. Second, it examines the key concepts, approaches, benefits, and challenges of blended learning in higher education, providing the empirical and conceptual foundation for the thematic analysis in Chapter Five. Third, the review situates the study's three-level analytical framework within the existing body of scholarship. Specifically, it examines the macro level (institutional governance and policy), the meso level (implementation and support structures), and the micro level (individual pedagogical practice). In doing so, it demonstrates how the literature informed the integrated theoretical approach adopted in this study.

The chapter is structured as follows: Section 2.2 examines technology as a transformational tool in education, tracing both global trends and persistent challenges. Section 2.3 reviews key approaches to technology-enhanced learning, including ERT, constructivism, e-learning, and the flipped classroom. Section 2.4 defines blended learning and traces the scholarly debate around the concept. Section 2.5 explores the significance, approaches, benefits, and challenges of blended learning in higher education, including South African contextual challenges, progressive policy developments, and institutional examples. Section 2.6 reviews change

management literature relevant to blended learning adoption, while Section 2.7 concludes the chapter. Section 2.8 concludes the chapter. Collectively, the reviewed literature demonstrates that although blended learning has become firmly established within higher education, considerable uncertainty remains regarding the institutional conditions that enable its successful implementation. Addressing these uncertainties provides the central rationale for the present study and establishes the basis for the discussions that follow.

2.2 Technology as a Transformational Tool in Education: Past Struggles and 21st Century Shifts

The transformation of the South African higher education landscape has shifted progressively from focusing on structural equity to digital equity. In this historical trajectory, the adoption of blended learning represents a macro-level response to the need for a more flexible and inclusive curriculum, as mandated by the *White Paper on e-Education* (Department of Education, 2004) and the subsequent Department of Basic Education's (2019) Professional Development Framework for Digital Learning. Educational institutions thrive when leadership commits to innovations that enhance the learning experience; the role of education is fundamentally transformational, because it shifts individuals' worldviews and equips them to participate actively in society (Ainscow et al., *2012)*. Globally, the education sector has consistently served as an epicentre of change, and the adoption of digital tools has become a defining characteristic of 21st-century institutional identity. Nevertheless, international scholarship cautions that the mere availability of digital technologies does not automatically improve teaching and learning. Rather, meaningful educational transformation depends on the extent to which technology is integrated into sound pedagogical practice, supported by institutional policy, and accompanied by continuous professional development for academic staff.

In the South African context, the pursuit of digital equity is a natural extension of the broader educational reforms that began in 1994. The principles of inclusivity and transformation that characterised the post-apartheid democratic transition now drive the move towards digital integration. The radical repositioning from a teacher-led, authoritative curriculum to a learner centric, constructivist educational model reflects the imperative of continuous paradigm shifts within the sector (Naicker, 2006). This shift from structural to digital equity thus represents not a departure from South Africa's educational values but a continuation of them, a point of connection between the historical mission of the education system and its contemporary

demands. Despite these policy advances, achieving digital equity remains uneven across South African higher education institutions. Persistent disparities in infrastructure, internet connectivity, digital literacy, and socio-economic conditions continue to influence both lecturers' and students' ability to participate effectively in blended learning. These contextual realities reinforce the need to investigate how blended learning is implemented within specific institutional environments.

2.2.1 Global Trends in Technology Integration

Zou et al. (2025) emphasise the pervasive integration of technology into 21st-century life, noting its transformative impact across multiple sectors, including education. Within higher education, this technological shift has facilitated pedagogical approaches that promote learner-centric and constructivist learning environments (Mthembu et al., 2023). Raja and Nagasubramani (2018) argue that technology has become an important instrument for curriculum delivery by creating opportunities for more interactive and student-centred learning experiences. Similarly, Wang et al. (2013) contend that technology-integrated classrooms enable lecturers to engage digitally oriented learners through more active teaching approaches. Collectively, these studies suggest that technology has shifted teaching away from predominantly teacher-centred practices towards more collaborative and participatory forms of learning. These global developments demonstrate that technology integration has become a strategic priority across higher education systems. Nevertheless, the literature also indicates that the successful implementation of technology-enhanced learning varies considerably across institutional contexts because of differences in infrastructure, leadership, organisational readiness, and staff capability. These international experiences therefore provide an important macro-level context for understanding the institutional adoption of blended learning at the UoT.

2.2.2 Challenges and Gaps in Technology Integration

Although technology has been widely recognised for its potential to enhance student learning, numerous studies indicate that successful technology integration depends not only on access to digital resources but also on lecturers' knowledge, confidence, and pedagogical competence. A persistent challenge identified in the literature is the limited quality and availability of professional development opportunities that adequately prepare lecturers to implement technology-enhanced learning effectively (Wang et al., 2013). Bridging this gap through robust

professional development programmes is crucial to ensuring widespread success in technology integration. These observations are particularly relevant to the present study because they highlight the importance of institutional support mechanisms, lecturer preparedness, and continuous professional development in the successful implementation of blended learning at the selected University of Technology. The literature consistently demonstrates a disconnect between institutional investment in technological infrastructure and lecturers' readiness to integrate these technologies into meaningful teaching and learning practices. This disconnect provides an important conceptual foundation for understanding the implementation challenges explored in the present study and is further examined through the theoretical frameworks discussed in Chapter Three.

2.3 Integration of ICT in Education and Key Approaches in Technology-enhanced Learning

According to Dean (2020), ICT has become the backbone of global economic and educational development, particularly in a world that prioritises digital communication and knowledge access. Dean (2020) describes ICT as a technology that provides information to the right user at the right time and place, noting that its availability has had a profound influence on the field of education. The continual development of smart technology has afforded institutions boundless access to information across geographic and temporal distances, transforming the parameters of what is possible in a learning environment.

The selection process for blended learning cannot exist independently of ICT infrastructure. To extend learning beyond the physical limitations of the classroom and to establish a learning community that transcends physical space, ICT becomes an essential enabler (Nkhoma et al., 2012). Harris (2010) describes the concept of the Zone of Proximal Development (ZPD), noting that learning communities create enhanced learning environments in which peers can interrogate and share knowledge and thereby learn more effectively through collaborative interaction. Wang et al. (2009) explain that ICT not only supports the delivery of high-quality content but also enables the exploration of instructional tools suited to distance and online learning, going beyond the four corners of the classroom to increase learners' access to online course materials and broaden their perspectives. Within the landscape of technology-enhanced learning, several key approaches and concepts are particularly relevant to this study.

Collectively, the reviewed literature suggests that ICT integration has evolved from a focus on

technological access towards a greater emphasis on pedagogical effectiveness and institutional readiness. This evolution provides the conceptual foundation for understanding blended learning as a deliberate educational strategy rather than merely the use of digital technologies within teaching.

2.3.1 Emergency Remote Teaching (ERT)

During the COVID-19 pandemic, a rapid and widespread shift occurred in the education sector, compelling institutions to adopt ERT. This transition served as an emergency measure to ensure educational continuity by halting face-to-face learning and moving curriculum delivery online (Hodges et al., 2020). This abrupt shift significantly accelerated the necessity and use of ICT in teaching and learning, and according to Hodges et al. (2020) and Mpungose (2020), it not only facilitated ongoing education but also helped expose underlying inequalities in the traditional educational system.

Numerous challenges accompanied ERT. Hartshorne et al. (2020) identify these as including a lack of resources, teachers' unpreparedness for online teaching, difficulties in creating online content, challenges in mastering new instructional tools, unfamiliarity with online pedagogy, and limited faculty and institutional support. Rapanta et al. (2020) concur that the unfamiliarity of this new teaching approach meant that faculties struggled with delivery because of technical inexperience.

ERT is fundamentally distinct from sustainable blended learning because it represents a reactive, short-term response to an emergency, whereas blended learning is intentionally designed, pedagogically structured, adequately resourced, and implemented as a long-term educational strategy (Hodges et al., 2020*).* This distinction is significant for this study, as it frames the UoT's trajectory from pandemic-driven ERT towards the institutionalisation of blended learning as a strategic, long-term educational model, a transition that required deliberate macro-level governance decisions, meso-level support structures, and micro-level pedagogical transformation.

Collectively, the literature demonstrates that ERT should be understood as a temporary emergency intervention rather than a sustainable pedagogical model. Although the pandemic accelerated digital technology adoption within higher education, it also exposed weaknesses in institutional preparedness, lecturer readiness, and digital infrastructure. These experiences subsequently informed universities' transition towards more deliberate and sustainable blended

learning implementation.

2.3.2 Constructivism Learning Approach

The paradigm shift in teaching and learning driven by digital transformation is underpinned by constructivist learning theory, which places the learner at the centre of the educational experience. According to Bada and Olusegun (2015), constructivism is grounded in cognitive construction, which holds that students mentally construct new knowledge by integrating it with existing knowledge. It is an inquiry-based approach in which students actively construct knowledge through lived experiences and societal interactions. Hmelo-Silver et al. (2013) argue that constructivism actively engages learners while helping them expand and alter their knowledge construction, thereby fostering effective learning outcomes.

In the context of blended learning, constructivism provides the pedagogical rationale for the shift from passive content delivery to active, participatory learning. Hiltz and Turoff (2002) highlight that increased interactive collaboration and participation are needed in online classes to achieve meaningful learning, motivating participation through social online interactions. This theoretical alignment between constructivism and blended learning is relevant to the micro-level analysis in this study: the TAM construct of Perceived Usefulness (Davis, 1989) is most strongly activated when lecturers perceive those blended tools actively enhance student knowledge construction rather than merely replacing face-to-face teaching.

2.3.3 E-learning and Virtual Learning

E-learning is broadly defined as learning that occurs electronically, empowered by digital technologies (Abbad et al., 2009). Maltz and Deblois (2005) note that e-learning can be applied to online distance and hybrid learning, serving as a system that enables diversity in educational delivery. Algahtani (2011) observes that e-learning can function as an adjunct to blended learning by delivering materials and explanations that supplement traditional classroom instruction. Mahanta and Ahmed (2012) suggest that a well-designed e-learning process transcends distance and organisational gaps, providing a consistent virtual learning environment.

Although e-learning and virtual learning have expanded access to higher education, the literature indicates that fully online learning environments may also present challenges relating to learner engagement, social interaction, student motivation, and feelings of isolation. These

limitations have contributed to increasing interest in blended learning as an approach that combines the flexibility of online learning with the interactive benefits of face-to-face instruction.

Lalima and Dangwal (2017) demonstrate the breadth of e-learning's impact on the curriculum: students are exposed to a range of digital platforms and global perspectives, from educational discussion boards to expert lectures and multimedia resources, catering to diverse learning intelligences. For the UoT, Blackboard and Microsoft Teams served as the primary e-learning platforms, and the extent to which lecturers leveraged their full capabilities beyond basic content uploading became a key measure of the depth of blended learning adoption. This directly connects to the CBAM's Levels of Use (Hall & Hord, 2015), which distinguish between mechanical, routine, and refined integration of educational innovations.

Collectively, the reviewed literature demonstrates that e-learning and virtual learning have significantly expanded educational access and flexibility. Nevertheless, their limitations in promoting sustained learner engagement and meaningful interaction have encouraged higher education institutions to adopt blended learning approaches that integrate the strengths of both online and face-to-face teaching. This evolution provides the conceptual bridge to the discussion of blended learning that follows.

2.3.4 Flipped Classroom Approach

The flipped classroom is a specific model of technology-enhanced learning in which the traditional delivery of new content shifts from the classroom to the home or independent online environment, while face-to-face contact time is repurposed for application, discussion, and collaborative problem-solving. Bergmann and Sams (2012) describe the flipped classroom as a model that shifts instruction from the lecturer to the individual learner, typically through prerecorded lectures. Hamdan et al. (2013) argue that this approach provides students with exposure to new materials outside the classroom, enhancing active learning while helping them apply knowledge in face-to-face problem-solving and critical-thinking discussions. Mazur (1997) characterises the approach as turning the traditional information–transfer model of education upside-down, creating a student-centric educational landscape that leverages technology and collaboration.

In the context of this study, the flipped classroom approach is significant because it represents one of the most explicit expressions of the medium and high-impact blended learning designs

described in Section 2.5.1. It is also directly relevant to the UoT's experience: several participants in Chapter Five describe reorganising their teaching along flipped lines, using online sessions for theory delivery and face-to-face time for practical application. The relative advantage of the flipped model (Rogers, 2003) is evident in the improved quality of face-to face sessions; however, its complexity (Rogers, 2003) and the associated increase in preparation workload represent adoption barriers that the institution's support structures need to address.

2.4 Defining the Concept of Blended Learning

The term blended learning has been defined in numerous ways across the scholarly literature, reflecting the diversity of contexts in which it has been applied. Graham et al. (2003) define it as a combination of instructional methods that integrates face-to-face interactions with ICTs. Osguthorpe et al. (2003, p. 3) describe it as "a convergence of two archetypal learning environments, virtual and real." Graham (2006, p. 5) offers a closely aligned definition: "blended learning systems combine face-to-face instruction with computer-mediated instruction." Picciano (2006) expands on this by emphasising that blended learning draws on both conventional and unconventional teaching methods to create a seamless educational experience that considers multiple perspectives.

Garrison and Vaughan (2008) characterise blended learning as the thoughtful integration of face-to-face and online learning experiences, combining the strengths of each to create a uniquely powerful learning encounter. Although these definitions differ in emphasis, they converge on the understanding that blended learning intentionally combines face-to-face and online learning experiences to improve flexibility, learner engagement, and teaching effectiveness. The variation among definitions reflects differences in educational context rather than disagreement about the fundamental nature of blended learning.

Some scholars offer a more critical perspective. Powell et al. (2014) argues that blended learning is fundamentally about mindset and pedagogy rather than the mere infusion of technology, and that embracing a blended learning ecosystem is essential for fostering a culture of quality education. Daniel (2016) takes a design-centred view, suggesting that blended learning is primarily about course design and delivery rather than the learning process itself.

He proposes that "blended teaching" may be a more accurate descriptor of institutional implementation strategies, emphasising the importance of designing the right course with the necessary resources for effective delivery. This distinction between blended learning and

blended teaching is analytically significant for the present study, which foregrounds the institution's role as a designer and deliverer of educational experiences rather than the learner's role as a recipient.

The term blended learning is often used interchangeably with hybrid learning, a learner-centric approach that combines classroom presence with online study (Ossiannilsson, 2017). Lalima and Dangwal (2017) similarly describe blended learning as an innovative concept that integrates traditional teaching with computer technology to achieve collaborative, constructive, computer-assisted learning. While the specific terminology varies throughout the literature, a consistent thread across all definitions is the central role of ICT and the importance of intentional pedagogical design. For the purposes of this study, the definition proposed by Daniel (2016) is adopted, as it aligns with the study's focus on institutional implementation and strategy, foregrounding design and delivery decisions as the primary unit of analysis.

Overall, the reviewed literature demonstrates broad agreement that blended learning represents a pedagogical approach rather than merely technological innovation. Although scholars differ in how they define and operationalise blended learning, they consistently identify institutional readiness, lecturer competence, pedagogical design, and organisational support as critical determinants of successful implementation. These themes provide the conceptual foundation for the subsequent discussion of institutional implementation within higher education.

2.5 The Significance of Blended Learning in Educational Institutions

The philosophy of blended teaching is underpinned by the desire to extend the classroom beyond the physical and temporal limitations of traditional instruction. While blended learning is not a new concept, its evolution has accelerated as the global higher education sector transitions into a digital age. Alammary et al. (2014) provide empirical evidence that blended instructional methods effectively bridge the gap between online and face-to-face limitations, offering a more flexible and resilient educational model. The adoption of blended learning by higher educational institutions is progressively redefining it as the standard model for course delivery. The critical question for institutional leadership is no longer whether to blend; it is how to design a practical and sustainable blended learning approach. These institutional experiences demonstrate that successful blended learning implementation depends not only on institutional policy but also on lecturer preparedness, organisational leadership, technological infrastructure, and sustained academic support. The South African literature therefore

reinforces the view that blended learning is an institutional change process rather than simply a technological innovation.

The distinction between ERT) and sustainable blended learning is particularly significant for this study. While ERT was a reactive, short-term response to the COVID-19 crisis, blended learning requires an intentional and well-resourced meso-level implementation strategy. This transition corresponds to the progression described by CBAM (Hall & Hord, 2015): institutions must move lecturers from simple awareness of digital tools toward a sophisticated refocusing of their teaching strategies, ensuring that the technology serves the pedagogy rather than merely replacing traditional delivery.

2.5.1 Approaches for Blended Learning

Blended learning approaches vary in how they integrate face-to-face and online learning, representing different levels of institutional and individual commitment to innovation. Alammary et al. (2014) identify three design approaches, ranging from incremental supplementation to full systemic redesign. These approaches map onto the macro-meso-micro analytical framework of this study and are anchored, respectively, in the DOI, CBAM, and TAM theoretical lenses.

2.5.1.1 Low-Impact Blend

The low-impact blend involves adding supplementary online activities to an existing course without removing or replacing any existing components. This approach primarily appeals to lecturers who are hesitant to fully redesign their courses. Katel (2024) notes that this typically occurs when less experienced lecturers build their first online activities. From a TAM perspective, this represents a micro-level entry point in which Perceived Ease of Use is the primary driver: the low risk of failure and the familiarity of the existing course structure reduce the burden of adoption (Davis, 1989). However, Alammary et al. (2014) caution that while the low-impact route carries minimal risk of failure, it increases the teacher's workload because existing activities remain while new ones are added. From a CBAM perspective, this level typically reflects the early Stages of Concern – the Personal and Management stages – where the lecturer's focus is on managing the additional demands rather than on the pedagogical impact on students (Hall & Hord, 2015).

2.5.1.2 Medium-Impact Blend

The medium-impact blend involves replacing existing course activities with online alternatives,

based on the premise that certain content or activities are more effective when delivered digitally. This approach requires redesigning and reconfiguring curriculum components and demands a higher level of technological confidence and pedagogical understanding. This level typically requires meso-level institutional support, as lecturers must move beyond simple tool use towards a more sophisticated integration of technology and content. At this level, the relative advantage of the blended model (Rogers, 2003) becomes more apparent, as lecturers begin to observe improved student engagement or more efficient delivery. Stein and Graham (2020) emphasise that the medium-impact design requires significant time and continuous assessment of course material to be effective.

2.5.1.3 High-Impact Blend

The high-impact blend involves designing a blended course from the ground up, building the entire learning architecture around the integrated deployment of face-to-face and online learning. This approach is aligned with constructivist curriculum design. Harriman (2024) and Hofmann (2006) recommend that instructors examine each course outcome individually rather than viewing the course as a whole and determine the most effective delivery method for each outcome. This design approach represents the macro-level of institutional transformation, where the organisation's strategic vision for digital learning is fully realised. It aligns with the DOI's compatibility construct (Rogers, 2003), as the digital model is woven into the curriculum's very fabric. While the high-impact blend offers the richest learning experience, it requires the most substantial investment in planning, expertise, and knowledge of both tools and pedagogy.

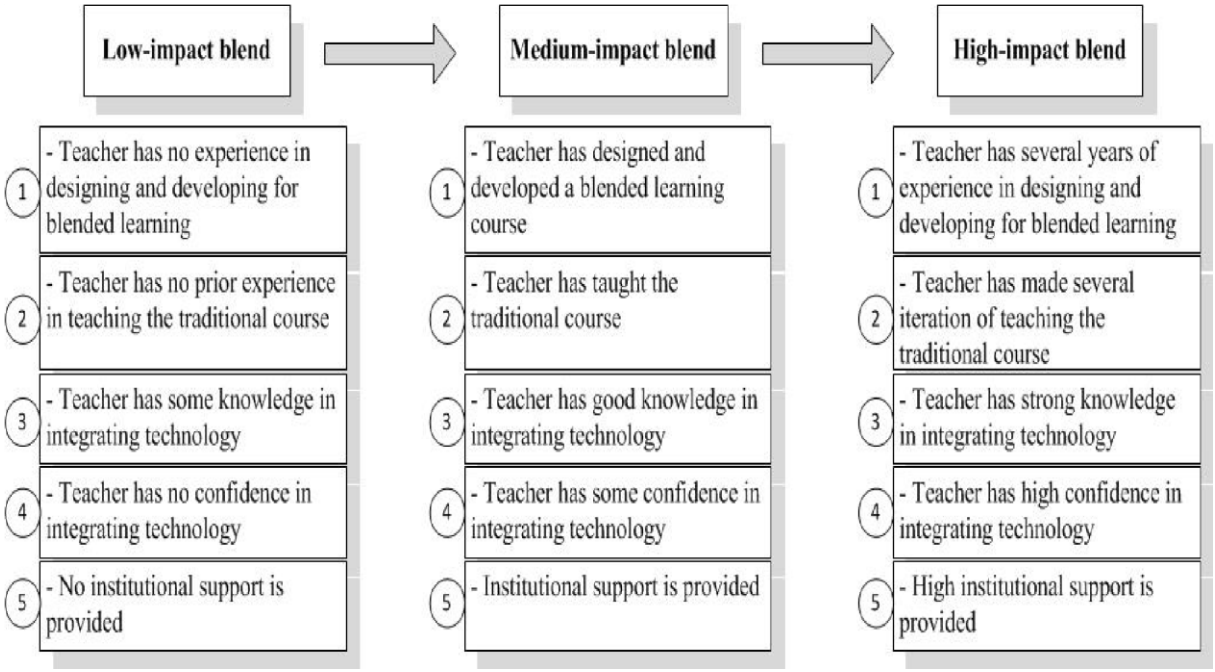


Figure 2.1: Factors Influencing the Selection of Blended Learning Design Approaches

Source: Alammary et al., 2014

Figure 2.1 illustrates the key factors that influence an institution's selection of a blended learning design approach. These include institutional infrastructure, lecturer readiness, student access, curriculum requirements, and the level of institutional support available. This selection process is a key indicator of the compatibility and relative advantage constructs within DOI, as the chosen model must fit both the institutional culture and the pedagogical goals of the curriculum (Rogers, 2003). The figure demonstrates that model selection is not a neutral or purely technical decision; it is shaped by the interplay of institutional governance (macro), support capacity (meso), and individual lecturer readiness (micro).

2.5.2 Benefits and Challenges of Blended Learning in Higher Education

The integration of blended learning in higher education offers considerable potential benefits, including enhanced flexibility, personalised learning pathways, increased accessibility, and the development of digital literacies that prepare students for the contemporary world of work (Golden, 2020; Weller, 2020). However, its implementation consistently encounters significant challenges at institutional, pedagogical, and individual levels. Garrison and Vaughan (2008) note that the adoption of blended learning often faces resistance driven by the inherent fear of change and the unknown. Sappey and Relf (2010) emphasise the crucial role of institutional

support, arguing that educational change affects workload, job design, motivation, and professional identity, necessitating comprehensive support structures for affected staff.

2.5.2.1 South African Contextual Challenges

In the South African context, these challenges are intensified by deep-rooted socio-economic inequalities and the structural legacies of an unequal education system Dlamini, (2022). The country's educational institutions struggle with inadequate professional development, insufficient digital literacy training, and the compounding effects of limited infrastructure on students from disadvantaged backgrounds. Kwatubana(2023) identifies the persistent gap between institutional ambitions for digital transformation and the material conditions of students who lack devices, data, and reliable connectivity. Smerdon et al. (2000) identifies limited access to computers and inadequate Wi-Fi networks as significant barriers, particularly affecting students from disadvantaged socio-economic backgrounds, leading to frustration and hindering educational progress. Namulondo et al. (2023) further suggest that infrastructure limitations and the complexities of load-shedding compound the challenges of blended learning adoption in the South African higher education context.

2.5.2.2 Progressive Policies and Guidelines for Blended Learning in South Africa

In response to these challenges, the DHET has actively developed quality assurance frameworks to guide the implementation of blended learning. The Higher Education Practice Standard (HEPS) for modes of learning and teaching provision, created and approved in February 2025, serves as a quality assurance template for all institutions using multimodal delivery (CHE, 2025). The HEPS guidelines review institutional support and administrative policies, structures, plans, processes, and resource allocation to ensure effective implementation, evaluation, and improvement of blended learning. Table 2.1 below outlines the five core criteria of the HEPS evaluation framework.

Table 2.1: HEPS Criteria for Multimodal Learning and Teaching Provision

Criterion	Explanation
Intentional design of time, pace and space	Focuses on institutional mission, vision, and pedagogical objectives, as well as strategic planning in relation to staff and students.
Policies supporting the intentional design of time, pace and space	Institutional policies and procedures governing operational domains such as programme design, material design, learning, teaching and assessment, student administration and support, and ICT and LMS operations. These should support the pedagogical offering and include quality assurance mechanisms.
Staff preparedness	Continuous improvement of staff digital literacy within institutions of higher learning, alongside the provision of professional development opportunities. Encourages innovation and experimentation with new technology in both physical and virtual spaces.
Student preparedness	Creating a flexible learning ecosystem that improves students' digital literacy, enabling them to monitor and manage their own learning.
Staff digital competence	Staff digital competencies should be continuously improved through sustained innovation and experimentation with new technology and pedagogical approaches.

Note. ICT = Information Communication Technology, LMS = Learning Management System. *Source: CHE (2025)*

The HEPS framework is directly relevant to this study: its five criteria map closely onto the study's analytical structure, addressing macro-level governance (intentional design), meso level support systems (policies, staff preparedness), and micro-level individual readiness (student and staff digital competence). This convergence confirms that the study's research questions are empirically grounded in the UoT's experience and aligned with the national policy agenda for quality blended learning in South African higher education.

2.5.2.3 Institutional Examples of Successful Blended Learning Integration

Several South African institutions provide instructive examples of deliberate, policy-driven blended learning adoption. The University of the Free State (UFS) established a blended learning and teaching policy in response to the changing demands of 21st-century education (UFS, 2022). The institution's commitment to designing a flexible approach to curriculum and course delivery aims to accommodate the diverse needs of its student population by integrating face-to-face and online delivery. Critically, UFS is committed to empowering teaching staff to use evidence-based, technology-enhanced pedagogies while ensuring that students have access to on-campus digital infrastructure as a foundational support system (UFS, 2022).

Similarly, the University of Cape Town (UCT) strategically redesigned its blended learning courses in response to the COVID-19 pandemic, with the Centre for Innovation in Learning and Teaching (CILT) established to guide staff and students towards flexible, multi-path learning. According to Nseibo et al. (2023), this framework enables academic staff to design courses that cater to diverse student needs while aligning with long-term digital skills mandates for the contemporary workplace (CILT, 2021).

At the macro level of governance, the UoT under study developed its own set of quality assurance guidelines for blended and remote multimodal learning in response to the pandemic (UoT, 2020). These guidelines were designed to facilitate rapid digital transformation and enhance learning approaches across the curriculum. Three meso-level concerns were identified in the implementation process regarding the student experience: poor quality of non-interactive materials, ineffective communication with students, and increased student workload (Azizi et al., 2020). These findings indicate that the institution's challenges extended beyond connectivity issues into the heart of pedagogical design, precisely the gap that the present study seeks to investigate. The institution nevertheless remained committed to developing processes and systems aligned with high-level performance indicators to ensure that the new blended learning model adhered to national CHE standards (UoT, 2020).

A comparison of these institutional experiences reveals several common features associated with successful blended learning implementation. First, each institution demonstrated strong institutional leadership and policy commitment towards digital transformation. Second, sustained investment in academic staff development emerged as a critical determinant of successful implementation. Third, institutional support structures, including technological infrastructure and dedicated educational development units, enabled lecturers to integrate blended learning more effectively into curriculum delivery. These recurring themes suggest that successful implementation depends less on the availability of technology than on organisational capacity to support pedagogical innovation.

2.5.2.4 Global Challenges in Blended Learning Implementation

Beyond South Africa, blended learning implementation faces a range of global challenges that are relevant to this study's findings. Student engagement in online environments presents persistent difficulties. Youssef and Dahmani (2008) note that social media distractions and academic integrity concerns, such as cheating facilitated by unrestricted browser access during online assessments, pose significant risks to the integrity and quality of assessment. These challenges necessitate careful design of blended learning assessment systems; a concern reflected directly in participants' experiences in Chapter Five.

At the micro level, the final and often most intractable barrier to implementation is individual faculty acceptance. Even with strong macro-level institutional backing and comprehensive meso-level support structures, individual perceptions of technology's usefulness (TAM) and personal pedagogical beliefs ultimately determine the extent to which blended learning genuinely influences teaching practice (Davis, 1989). This aligns with the Perceived Usefulness construct of TAM: if a lecturer does not perceive a direct benefit for their specific subject matter and students, adoption will remain superficial and compliance-driven. Furthermore, individual resistance is frequently linked to a lack of self-efficacy and a perception of the complexity of new systems, a key DOI attribute that Rogers (2003) identifies as inversely related to adoption rates. As lecturers navigate these challenges, their Stages of Concern (CBAM) progress from personal anxieties about their own ability to use the technology to more advanced concerns about its impact on student learning outcomes. Understanding these micro-level dynamics is critical for any institution aiming to move beyond emergency adoption towards sustainable, digitally integrated curriculum delivery.

The literature further suggests that many implementation challenges are interconnected rather

than independent. For example, limited student access to digital resources may reduce engagement, while inadequate lecturer preparation may diminish the quality of online learning experiences. Consequently, successful blended learning implementation requires comprehensive institutional strategies that address technological, pedagogical, organisational, and socio-economic factors simultaneously.

Overall, the reviewed international literature demonstrates remarkable consistency regarding the principal challenges associated with blended learning implementation. Regardless of national context, successful implementation depends on institutional leadership, technological infrastructure, lecturer readiness, student support, and sustained professional development. These recurring themes reinforce the relevance of investigating blended learning implementation within the selected University of Technology, where similar organisational and pedagogical issues may influence institutional practice.

2.6 Change Management Models and Blended Learning Adoption

The implementation of blended learning is, at its core, a change management process. Understanding how institutions and individuals respond to educational change is therefore essential to understanding the dynamics of blended learning adoption. The literature on change management in education offers several relevant frameworks, of which three are particularly pertinent to this study. The use of multiple theoretical frameworks recognises that blended learning implementation is a complex organisational process that cannot be adequately explained through a single theoretical lens. While DOI explains how educational innovations spread within institutions, TAM provides insight into lecturers' acceptance of technology, and CBAM focuses on the concerns and experiences of individuals during educational change. Collectively, these frameworks provide a comprehensive analytical lens for understanding blended learning implementation within the selected University of Technology.

Rogers' (2003) DOI theory, examined in detail in Chapter Three, provides a macro-level framework for understanding how innovations spread within social systems. Central to DOI is the recognition that the rate of adoption is shaped not only by the characteristics of the innovation itself, its relative advantage, compatibility, complexity, trialability, and observability, but also by the communication channels through which it is diffused and the characteristics of the adopters within the social system. In the context of blended learning implementation, DOI explains why some institutions, faculties, and individual lecturers adopt

the innovation rapidly, while others remain resistant or delay adoption.

At the meso level, Hall and Hord's (2015) CBAM provides a developmental framework for understanding how individuals experience educational change. CBAM identifies seven Stages of Concern from Awareness through Informational, Personal, Management, Consequence, Collaboration, and Refocusing. Each level represents a qualitatively different orientation towards the innovation. The model also describes Levels of Use, which trace the behavioural progression from non-use through mechanical and routine use to refined, integrated practice. For institutions implementing blended learning, CBAM provides a diagnostic tool to identify where individual staff members are in their adoption journey and to design targeted support interventions that address their specific concerns at each stage.

At the micro level, Davis's (1989) TAM provides a cognitive framework for understanding the individual decision to accept and use a new technology. TAM's two core constructs, Perceived Usefulness and Perceived Ease of Use, have been extensively validated in the educational technology literature as predictors of actual technology use. In the context of blended learning, TAM explains the critical role of the individual lecturer's subjective assessment of the technology's pedagogical value: lecturers who perceive blended tools as genuinely useful for their specific students and subjects are far more likely to integrate them meaningfully into their teaching practice than those who perceive adoption as a compliance requirement.

Fullan's (2007) framework for educational change management, while not a theoretical framework of this study, provides complementary insights into the systemic nature of institutional change. Fullan argues that sustainable educational change requires attention to three interconnected dimensions: the moral purpose of the change, the change knowledge and capacity of those involved, and the quality of relationships among key stakeholders. These dimensions map closely onto the macro-meso-micro analytical architecture of this study and reinforce the central argument that the success of blended learning implementation depends on the coherence of institutional support across all three levels simultaneously.

2.7 Chapter Summary

This chapter has critically reviewed the literature relevant to the implementation of blended learning in higher education, providing the empirical and conceptual foundation for the thematic analysis in Chapter Five. It began by tracing the historical trajectory of technology in South African education, establishing the macro-level context of digital equity as a

continuation of the post-1994 transformation agenda. It then reviewed the key approaches to technology-enhanced learning, ERT, constructivism, e-learning, and the flipped classroom, demonstrating how each concept is implicated in the blended learning adoption process at different analytical levels. The chapter examined multiple scholarly definitions of blended learning and adopted Daniel's (2016) design-centred definition as most appropriate for this study's institutional focus. It explored the significance of blended learning in higher education, including the three design approaches (low, medium, and high impact) and their theoretical anchoring in DOI, CBAM, and TAM. It reviewed the benefits and challenges of blended learning, with particular attention to the South African context's challenges of inequality, infrastructure, and insufficient professional development – challenges that are reflected directly in participants' experiences at the UoT. Institutional examples from UFS, UCT, and the UoT itself demonstrated the variety of approaches institutions have taken, and the HEPS framework (CHE, 2025) provided a national policy anchor for quality assurance in blended learning provision.

The chapter further examined the literature on institutional curriculum planning and change management models, establishing that the implementation of blended learning is fundamentally a multi-level change management challenge. The three theoretical frameworks, DOI, CBAM, and TAM, were foreshadowed throughout the chapter as analytical tools that address the macro, meso, and micro dimensions of this challenge, respectively. These frameworks are fully developed in Chapter Three, which presents the theoretical architecture of the study and demonstrates how DOI, CBAM, and TAM align with the three research questions and three levels of analysis.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Introduction

The preceding chapters established the research context and reviewed the relevant literature on blended learning in South African higher education. Chapter Two introduced the three theoretical frameworks – the DOI theory, the TAM, and the CBAM – as the analytical lenses through which the macro, meso, and micro dimensions of blended learning adoption are understood. This chapter develops these frameworks in full, providing a detailed conceptual exposition of each theory, explaining its appropriateness to the study, and demonstrating how the three frameworks are integrated into a unified, multi-level analytical architecture.

A theoretical framework is the conceptual thread that ties all the variables of a research study together, frames the problem, guides the investigation, and provides the interpretive lens through which findings are understood (Creswell, 2013b). Connelly (2014) adds that a framework takes shape through exploratory work aimed at expanding theoretical concepts into analytical tools. In this study, the theoretical framework serves four functions: it guides the design of interview questions and the document review protocol; it informs the data analysis approach; it provides the interpretive lens for the findings; and it enables the synthesis of the three analytical levels into a coherent meta-finding.

While many studies on technology adoption in education rely on a single theoretical model, this study employs an integrated, multidimensional approach. DOI addresses the macro-level institutional selection and diffusion of blended learning models; CBAM examines the meso level transition and support structures that bridge policy and practice; and TAM explores the micro-level of individual lecturer acceptance and pedagogical transformation. Together, these three frameworks provide a holistic analytical architecture that bridges top-down institutional mandates and the bottom-up realities of classroom instruction. This chapter is structured as follows: Sections 3.2 through 3.8 develop the DOI framework; Sections 3.9 and 3.10 develop TAM; Section 3.11 develops CBAM; and Section 3.12 synthesises all three frameworks in relation to the research questions.

3.2 Understanding the Diffusion of Innovation (DOI) Theory

Developed by Everett Rogers and first published in 1962, with its most widely cited iteration appearing in 2003, the DOI theory explains how, why, and at what rate new ideas and

technologies spread through a social system. In the context of this study, DOI serves as the macro-level lens for answering Research Question 1: how the institution selected and identified its blended learning models. The constructs of relative advantage, compatibility, and complexity are used specifically to examine the institutional decision-making process and its alignment with strategic mandates.

Early research in the diffusion of educational innovations, conducted primarily during the 1920s to 1930s at Columbia Teachers' College under Dr Paul Mort, identified institutional wealth as a prerequisite for innovation, raising concerns about the exclusion of under-resourced public schools from modernisation processes (Rogers, 2003). The theory has since evolved considerably, expanding its application to diverse contexts, including developing nations and complex public education systems. Rogers (2003) positions technology as synonymous with innovation, describing their relationship as one of cause and effect in which one cannot exist without the other. Straub (2009) focuses specifically on the adoption of new technology, including the spread of new ideas and individuals' decisions to integrate and adapt to innovations. The strength of DOI lies in its emphasis on choice: examining the decisions individuals and organisations make about an innovation ultimately provides the basis for understanding adoption patterns.

3.3 Appropriateness of the DOI Theory to the Study

The DOI theory is particularly suited to this study for three reasons. First, DOI directly addresses how innovations such as blended learning are adopted within institutions (Rogers, 2003), making it the most appropriate lens for examining the UoT's macro-level model selection process. The theory's constructs of relative advantage, compatibility, complexity, trialability, and observability provide a useful lens through which to analyse the institutional decision-making factors identified by participants in Chapter Five can be analysed.

Second, DOI identifies the factors that influence adoption and non-adoption, including both facilitators (such as compatibility with existing systems) and barriers (such as complexity and resource constraints). This directly informs Research Question 2 by illuminating why some institutional strategies accelerated adoption while others created resistance. In the South African context, where socio-economic disparities and digital divides are pronounced, the DOI theory's attention to systemic and structural factors provides a nuanced analytical lens (Straub, 2009).

Third, DOI's emphasis on social systems and communication channels is particularly relevant to a study of institutional change. The theory recognises that adoption does not happen in isolation but is shaped by the networks, norms, and communication structures within which individuals operate (Rogers, 2003). At the UoT, the role of ICT practitioners, academic heads, and peer mentoring networks in facilitating adoption reflects precisely the kind of social system dynamics that DOI illuminates.

3.4 Key Concepts of DOI

Rogers (2003) identifies four main elements of DOI theory: innovation, time, communication, and social system. Each is examined below in relation to the study.

3.4.1 Innovation and Its Attributes

Rogers (2003) identifies five attributes of an innovation that influence its rate of adoption. Three are prioritised in this study, as they most directly inform the macro-level institutional decision-making process at the UoT.

Relative advantage is the degree to which an innovation is perceived as superior to what it replaces (Rogers, 2003). In this study, relative advantage is used to evaluate why the UoT selected blended learning over traditional face-to-face methods. The institution's decision hinged on whether the digital model was perceived as offering better outcomes for student access, academic continuity, and administrative efficiency during and after the pandemic.

Compatibility is the degree to which an innovation is perceived as consistent with existing values, past experiences, and the needs of potential adopters (Rogers, 2003). If a blended learning mandate is incompatible with the UoT's vocational and professional educational mandate, transition is likely to face institutional resistance. The pre-existing adoption of Blackboard as the institutional LMS provided a significant compatibility advantage, as discussed in Chapter Five.

Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use (Rogers, 2003). Innovations that are simpler to understand are adopted more rapidly than those requiring the development of new skills. Critically, this attribute serves as a bridge between the macro and micro levels of analysis: high perceived complexity at the institutional level directly translates into low Perceived Ease of Use among individual lecturers, a construct central to TAM (Davis, 1989).

The remaining two attributes, trialability (the degree to which an innovation can be experimented with before full commitment) and observability (the degree to which results are visible to others), are also relevant to the study's findings and are engaged where appropriate in Chapter Five.

3.4.2 Time

Time is a fundamental dimension of the diffusion process. The DOI framework recognises that adoption does not occur instantaneously but unfolds over time, with different categories of adopters engaging with an innovation at different points in the adoption curve (Rogers, 2003). Straub (2009) stresses the functional role that Rogers' theory plays in the comprehension and prediction of change while acknowledging that the framework cannot always be applied uniformly across all contexts.

The concept of time is particularly significant in this study. The COVID-19 pandemic fundamentally disrupted the temporal dimension of blended learning adoption at the UoT: the institution was compelled to compress what would ordinarily have been a multi-year diffusion process into a matter of weeks. Rogers (1962) and Rouse and Serban (2011) identify uncertainty as a central driver of adoption decisions, noting that uncertainty about the permanence or consequences of a change can both accelerate and impede adoption. In the pandemic context, the removal of the traditional deliberation time meant that lecturers were unable to progress through the adoption curve at a natural pace, a constraint that had direct consequences for the depth of pedagogical integration, as explored in Chapter Five.

3.4.3 Social System

A social system is a network of interrelated units engaged in joint problem-solving to accomplish a common goal (Rogers, 2003). DOI adopts a microscopic perspective on change, emphasising that the focus should not be on the whole but on its components (Straub, 2009). Change is a collegial process embedded in complex, interdependent systems. Introducing a blended learning model into an institution does not affect only one dimension of institutional life; it ripples across technology and infrastructure, curriculum design, teaching methods, policies, student behaviour, and staff adaptation. This interdependence underscores why institutional decision-making cannot occur in a vacuum and must integrate diverse stakeholder perspectives.

In the context of this study, the social system encompasses the UoT's multiple campuses, faculties, administrative structures, student bodies, and external policy bodies such as the DHET and CHE. Rogers (1995) argues that the broad social group structures within a social system shape how an innovation permeates the population. Bandura's (1986) social cognitive theory provides a complementary perspective, highlighting that learning and adoption occur not only through individual experience but also through social observation and modelling. In institutional terms, this means that the visible adoption behaviour of early adopters, such as lecturers who enthusiastically embraced blended learning, can influence their peers' attitudes and decisions. Self-efficacy, as Bandura (1986) argues, is a key mediating factor: individuals' beliefs about their own capacity to adopt a new technology shape their willingness to engage with it.

3.4.4 Communication

Communication is the process by which an innovation is transmitted through specific channels over time among members of a social system (Rogers, 1995). Rogers (2003, p. 16) states: "If an idea does not spread from one person to another, it will not circulate in the population." Effective communication is, therefore, foundational to diffusion. In the institutional context, the choice of communication channels, whether top-down policy announcements, peer-to-peer knowledge sharing, or facilitated workshops, shapes both the speed and quality of adoption.

At the UoT, communication strategies took multiple forms: formal institutional directives, ICT practitioner-facilitated training, peer mentoring arrangements, and ongoing departmental meetings. Straub (2009) proposes that when information dissemination goals are not achieved, adoption fails, leading to process failure and non-diffusion. Aggarwal et al. (2015) add that certain personality traits predispose individuals to adopt innovations more rapidly, reinforcing the role of early adopters as communication conduits within the social system. The selection of appropriate communication tools is, therefore, a strategic institutional decision that directly shapes the success of blended learning integration.

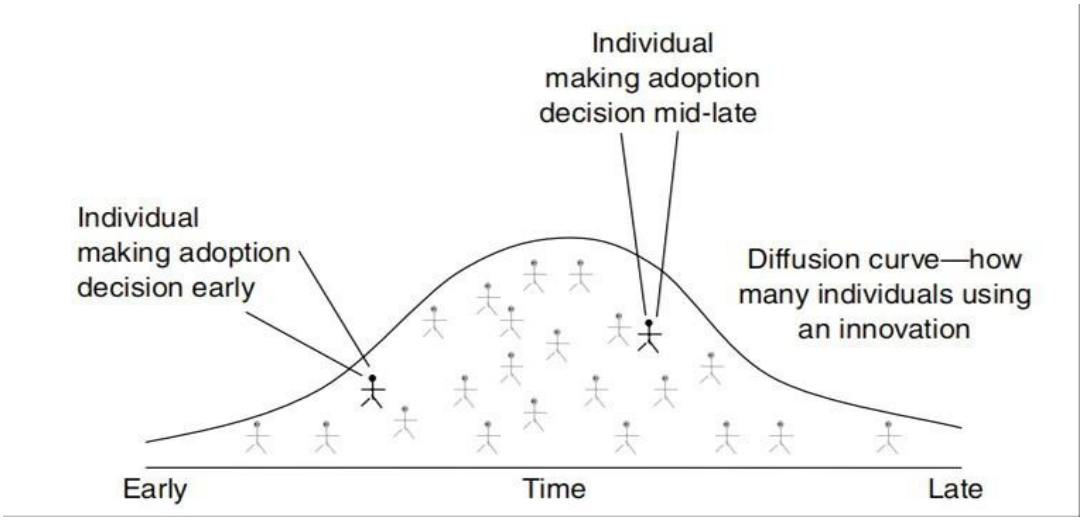


Figure 3.1: How Individual Adoptions Compose Diffusion

Source: Adapted from Straub (2009)

Figure 3.1 illustrates the cumulative process through which individual adoption decisions aggregate into institutional-level diffusion. The S-curve of diffusion demonstrates that adoption begins slowly with innovators and early adopters, accelerates through the early and late majority, and tapers with laggards. This model is directly relevant to the UoT context, where the pandemic disrupted this natural S-curve, forcing a simultaneous, non-voluntary adoption across all adopter categories rather than the gradual spread the model assumes.

3.5 Characteristics of Adopters

Rogers (2003) proposes that innovation adoption occurs across five adopter categories, each with distinct value systems, social positions, and orientations towards change. These categories are not rigid classifications but useful heuristic tools for understanding the diversity of responses to innovation within an institution. In the context of this study, mapping participants' accounts onto these categories provides a framework for understanding patterns of adoption, resistance, and adaptation among academic staff at the UoT.

3.5.1 Innovators: Venturesome

Innovators are the first to adopt an innovation. They are characterised by their appetite for new ideas, cosmopolitan social networks, capacity to absorb financial risk, and ability to navigate uncertainty (Rogers, 2003). In the UoT context, innovators may include lecturers, departmental

heads, or support staff who were already experimenting with digital tools and online content before any institutional policy mandated blended learning. Their early adoption serves as proof-of-concept for others in the social system.

3.5.2 Early Adopters: Respectable

Early adopters are embedded in the local social system and are typically opinion leaders whom others look to for guidance on whether to adopt an innovation. A change agent typically leads the effort to persuade early adopters to embrace an innovation, and their primary mission is to expedite and broaden diffusion (Rogers, 1983). In the UoT context, early adopters are likely to be lecturers who were receptive to the shift and actively promoted blended learning to their peers through good practice sharing and peer mentoring, the kind of collaborative behaviour described in the CBAM Collaboration stage.

3.5.3 Early Majority: Deliberate

Members of the early majority adopt an innovation somewhat ahead of the average member of the social system but require more time and evidence than innovators or early adopters (Rogers, 2003). They are interconnected with peers and tend to follow meaningful examples set by opinion leaders. In this study, the early majority are likely to be lecturers who adopted blended learning once it became clear that the model was viable and that institutional support was in place, having observed the positive experiences of early adopters.

3.5.4 Late Majority: Sceptical

The late majority adopt an innovation only after most members of the social system have done so. They typically approach adoption with caution, require encouragement from others, and often face resource or confidence constraints (Rogers, 2003). In the UoT context, the late majority are likely to be lecturers who resisted the transition to blended learning and only adopted it because institutional mandates made non-adoption untenable. The risk here, as TAM suggests, is that compliance-driven adoption may not translate into genuine pedagogical transformation.

3.5.5 Laggards: Traditional

Laggards are the last to adopt an innovation, often holding traditional values that make them resistant to change (Rogers, 2003). They may lack resources, self-efficacy, or motivation to engage with the innovation. In the UoT context, laggards may include staff who prefer

exclusively traditional face-to-face instruction and perceive blended learning as a threat to their professional identity and pedagogical practice. Understanding the concerns of this group is particularly important from a CBAM perspective, as their concerns are likely to remain at the lower stages (Awareness, Informational, Personal) and may require targeted, individualised institutional support.

Mapping participants onto these adopter categories provides valuable insight into the UoT's institutional culture and the support mechanisms required for effective adoption. It informs the deductive analysis in Chapter Five by connecting individual lecturer behaviour to institutional dynamics and clarifying why adoption may be uneven across faculties and disciplines.

3.6 Stages in the Innovation Process

Rogers (2003) identifies five sequential stages in the innovation process within organisations. These stages describe the actions, decisions, and events that must occur for an innovation to be successfully adopted and institutionalised. The five stages are divided into two phases: initiation (comprising agenda setting and matching) and implementation (comprising redefining/restructuring, clarifying, and routinising).

Stage in the innovation process:	*Major activities at each stage in the innovation process*
I *Initiation*:	All of the information gathering, conceptualising, and planning for the adoption of innovation, leading up to, the decision of adoption.
↓	
Agenda setting	General organisational problems, which may create the need for innovation is defined. The environment is scanned for the potential innovation value for the organisation.
↓	
Matching	A problem from the organisation's agenda is considered together with an innovation, and the fit between them is planned and designed.
……**The Decision to Adopt**……	
II *Implementation:*	All of the events, actions, and decisions involved in implementing an innovation.
Redefining/ Restructuring	The innovation is modified and re-invented to fit the situation of a particular organisation and its perceived problem. Organisational structures directly relevant to the innovations are altered to accommodate the innovation.
↓	
Clarifying	The relationship between innovation and the organisation is defined more clearly as the innovation is put to full and regular use.
↓	
Routinising	The innovation eventually loses its separate identity and becomes an element in the organisation's ongoing activities.

Figure 3.2: Stages in the Innovation Process

Source: Rogers (2003)

Figure 3.2 depicts the two phases and five stages of the organisational innovation process. The initiation phase encompasses the information-gathering, conceptualising, and planning activities that culminate in the decision to adopt. The implementation phase includes all events, actions, and decisions involved in putting the innovation into practice until it becomes part of the organisation's ongoing activities.

3.6.1 Agenda Setting

Agenda setting is the stage at which the initial motivation for an innovation emerges. Typically, this occurs when one or more individuals identify a problem and seek an innovative solution (Rogers, 2003). Eveland (1986) argues that once awareness of an innovation is established, the subsequent drive toward implementation follows. In the UoT context, agenda setting can be traced to the institutional recognition, accelerated by COVID-19, that blended learning was necessary for academic continuity. The process of scanning the environment for viable solutions and identifying blended learning as a strategic response constitutes the agenda-setting phase of the institution's innovation process.

3.6.2 Matching

Matching involves assessing the fit between the identified innovation and the organisation's specific problem. This stage weighs the factors that could affect implementation and determines whether the innovation can address the institutional need (Rogers, 2003). In this study, the matching process is illuminated through document analysis, examining how the UoT aligned blended learning with its existing curriculum goals, LMS infrastructure, and digital transformation strategy. The DOI compatibility construct is particularly operative at this stage.

3.6.3 Redefining and Restructuring

At this stage, the innovation is modified and re-invented to fit the specific context and needs of the organisation (Rogers, 2003). Blended learning cannot be implemented as a one-size-fits all model; rather, modifications are necessary to suit different faculties, disciplines, and student profiles. At the UoT, this stage is reflected in how academic departments and policies were adjusted to accommodate blended learning, for example, in the development of digital training programmes for academic staff, the revision of assessment policies, and the creation of faculty specific multimodal guidelines.

3.6.4 Clarifying

Clarification involves ensuring that the relationship between the innovation and the organisation becomes clear as the innovation moves into full and regular use (Rogers, 2003). Misunderstandings are identified and addressed, and corrective action is implemented. In this study, the clarifying stage is reflected in participant accounts of how individual lecturers gradually interpreted, reshaped, and personalised blended learning practices to meet the

specific needs of their subjects and students, moving from compliance-level use towards more intentional pedagogical integration.

3.6.5 Routinising

At the routinising stage, the innovation loses its identity as a separate, novel element and becomes an integral part of the organisation's ongoing activities (Rogers, 2003). Two outcomes are possible at this stage: the innovation is discontinued or de-implemented, or it becomes the permanent default mode of operation. In the research context, routinising is reflected in institutional documents that frame blended learning as the standard mode of delivery, as well as in participant accounts that present blended learning as "just how we teach now" rather than as an exceptional or emergency measure. The routinising stage is directly relevant to Research Question 2 and provides the standard against which the depth of institutional transformation is measured.

3.7 The Diffusion of Innovation in Education

While DOI was originally developed for applications in agriculture and medicine, its explanatory power has been widely demonstrated in the educational sector. Rogers (1983) documents how DOI became a leading framework for challenging and changing educational practice globally. On a global scale, DOI has been closely linked to the study of technology adoption in K-12 and higher education settings. Sahin (2006) applied DOI among pre-service teachers in the United States, finding that early adopters engaged more actively in professional learning and adapted their teaching practices accordingly. Similarly, Keesee and Shepard (2011) found that institutional support and compatibility were decisive factors in faculty adoption at a university in the United States.

In developing country contexts, the DOI framework has highlighted specific structural barriers. Mwawasi (2014) applied DOI in a Kenyan secondary school context, finding that a lack of infrastructure, insufficient training, and misalignment between the innovation and institutional needs slowed the transformation process. In South Africa, Mpungose (2020) noted that the COVID-19 pandemic dramatically accelerated the shift towards online learning, and university staff experiences demonstrated DOI's power to illuminate institutional responsiveness to rapid digital disruption. Alenezi et al. (2010) examined DOI and e-learning adoption in Saudi universities, finding that while some instructors were innovators or early adopters, many were laggards due to scepticism and low technological confidence, reinforcing the need for

institutional support systems to facilitate adoption across all adopter categories.

3.8 Criticisms of Diffusion Research

Despite its foundational contribution to the study of change and adoption, DOI theory has attracted substantive criticism. Rogers (2003) himself acknowledged a pro-innovation bias in the diffusion research tradition: an implicit assumption that the spread of innovations is inherently positive and desirable, which overlooks the conditions under which adoption may be harmful, inequitable, or misaligned with contextual needs. This bias is particularly relevant in the South African higher education context, where the rapid, mandated diffusion of blended learning during the pandemic produced swift adoption but uneven depth.

A further criticism concerns the theory's limited attention to cultural factors and structural inequalities (Straub, 2009). DOI was developed primarily within a Western, well-resourced research tradition and does not adequately account for the socio-economic disparities that characterise adoption in under-resourced educational ecosystems. In the South African context, the digital divide – unequal access to devices, data, and reliable connectivity – is a structural determinant of adoption that DOI's individual-level attributes do not fully capture. This limitation is addressed in this study through the complementary application of TAM and CBAM, which provide additional analytical traction at the individual and developmental levels.

Additionally, the temporal assumptions embedded in DOI, particularly the S-curve of gradual diffusion, are challenged by the pandemic context, in which adoption was neither voluntary nor gradual. Rogers' (2003) framework assumes that adopters move along the adoption curve at different speeds based on their own deliberate choices; however, the COVID-19 crisis collapsed this deliberative process, compelling simultaneous adoption across all adopter categories. This contextual challenge to the DOI is examined further in the synthesis in Section 3.12 and in the theoretical discussion in Chapter Five.

3.9 The Technology Acceptance Model (TAM)

The TAM, proposed by Davis (1989) and further developed by Davis et al. (1989) and Venkatesh and Davis (2000), is a theoretical framework that explains the factors influencing an individual's decision to accept and use a new technology. The TAM investigates the cognitive acceptance of an innovation, exploring the specific attitudinal and behavioural factors that lead to the initial decision to use or reject it (Kim & Shin, 2015). In the structure of this

study, the TAM serves as the micro-level lens through which Research Question 3 is addressed by exploring why individual lecturers chose to engage with or resist specific digital tools and how these perceptions shaped the transformation of their teaching methodologies.

The TAM is grounded in two primary constructs. Perceived Usefulness refers to the degree to which a person believes that using a particular system will enhance their job performance (Davis, 1989). In the UoT context, if a lecturer perceives that blended learning makes teaching more effective, simplifies student assessment, or improves student engagement, the likelihood of deep pedagogical integration increases. Perceived Ease of Use refers to the degree to which a person believes that using a particular system will be free of effort (Davis, 1989). If digital tools are perceived as technically burdensome or cognitively overwhelming, adoption rates remain low regardless of institutional mandates. Together, Perceived Usefulness and Perceived Ease of Use shape an individual's attitude towards use, which in turn influences their behavioural intention to adopt the technology and their actual usage behaviour.

3.10 Rationale for Using the Technology Acceptance Model (TAM)

The TAM is particularly appropriate for this study for three reasons. First, while DOI provides a broad institutional view of how innovations spread across a social system, the TAM focuses on the individual's decision-making process, providing the micro-level granularity necessary to understand why adoption varied so significantly across individual lecturers at the UoT. TAM's constructs directly address the psychological and attitudinal dimensions of adoption that DOI's structural focus does not capture.

Second, TAM is widely validated in the educational technology literature. Its constructs of PU and PEOU have been consistently shown to predict technology adoption behaviour in higher education contexts across diverse cultural settings (Alenezi et al.,2010; Algahtani, 2011). This empirical robustness makes the TAM a reliable analytical tool for interpreting the variation in adoption behaviour observed among participants in this study.

Third, TAM complements DOI and CBAM in analytically important ways. While DOI explains the macro-level spread of blended learning and the institutional decisions that drive it, and CBAM traces the developmental stages through which individual lecturers progress, the TAM explains the cognitive mechanisms behind the cost-benefit assessments of usefulness and ease of use that determine whether lecturers move from passive compliance to active, meaningful integration. Where DOI and CBAM identify what happens in the adoption process, the TAM

illuminates the reasons for individual lecturers' responses. The integration of all three frameworks, therefore, provides an analytical architecture that is simultaneously systemic, developmental, and cognitive.

3.11 Understanding the Concern-Based Adoption Model (CBAM)

The CBAM, developed by Hall et al. (1977) and further elaborated by Hall and Hord (2015), is a framework for understanding and managing educational change, particularly the human dimensions of innovation adoption. The CBAM is premised on the recognition that educational change is experienced as a personal, developmental process in which individuals progress through identifiable Stages of Concern as they become familiar with and eventually skilled in a new practice. In the architecture of this study, the CBAM serves as the meso-level lens, used to answer Research Question 2 by examining the implementation strategies and support mechanisms that the UoT employed to facilitate the transition of academic staff from crisis driven remote teaching to sustainable blended learning.

3.11.1 Appropriateness of the CBAM to the Study

CBAM is highly relevant to this study because it directly addresses the human element of blended learning implementation. It provides a systematic diagnostic approach to understanding how academic staff at the UoT experienced the transition, enabling the researcher to identify where lecturers were in their adoption journey and which institutional supports were most needed at each stage. Four specific aspects of the CBAM's relevance to the study are identified below.

Understanding the lecturer's concerns. The CBAM's Stages of Concern component enables the identification and categorisation of lecturers' feelings and perceptions as they encountered, learnt about, and began implementing blended learning. This directly addresses the gap identified in the literature: the absence of detailed accounts of how individual educators experienced the institutional transformation process (Davis, 2019).

Assessing Levels of Use. The Levels of Use (LoU) component of the CBAM describes the observable behaviours of individuals as they progressively integrate an innovation into their practice. This moves beyond the attitudinal focus of the TAM to capture actual behavioural adoption, enabling an assessment of the extent to which blended learning has been genuinely integrated into teaching practice rather than merely accepted in principle.

Guiding support mechanisms. By identifying where lecturers were in their concern stages and use levels, the CBAM enables the evaluation of the UoT's meso-level support structures, assessing whether institutional interventions were appropriately targeted to the developmental needs of staff at each stage.

Complementing DOI and the TAM. The CBAM bridges the gap between the macro-level diffusion process (DOI) and the individual's cognitive acceptance of technology (TAM). While DOI explains how the innovation was institutionally adopted and the TAM explains why individuals accepted or resisted it, the CBAM traces how individuals' concerns and usage behaviours evolved over time, providing the developmental dimension that the other two frameworks do not capture.

3.11.2 Key Concepts of CBAM

The CBAM comprises three key diagnostic dimensions that, together, provide a comprehensive picture of the change process from the perspective of the individual adopter. These are depicted in Figure 3.3.

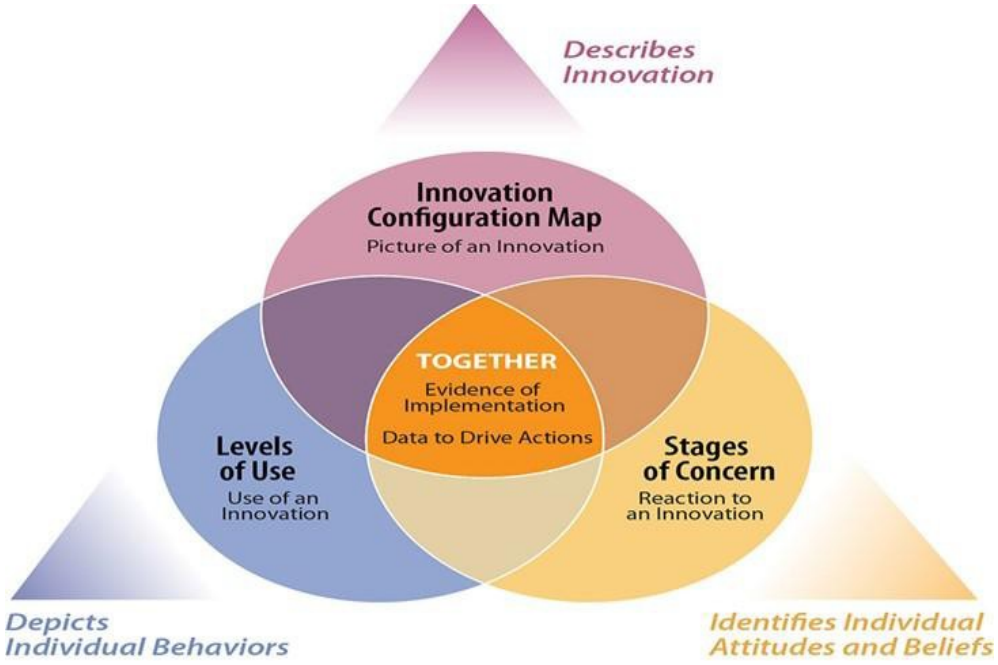


Figure 3.3: The CBAM Framework Components Source:

Adapted from Hall et al. (1977)

Figure 3.3 illustrates the three dimensions of the CBAM: Stages of Concern, LoU, and Innovation Configuration. Together, these dimensions provide a multi-faceted diagnostic portrait of an individual's adoption journey, encompassing their feelings and attitudes (Stages of Concern), their observable behaviour (LoU), and the form in which they implement the innovation (Innovation Configuration).

3.11.2.1 Stages of Concern

The Stages of Concern dimension describes the feelings, attitudes, and perceptions that individuals experience as they encounter and respond to an innovation. Hall and Hord (2015) emphasise that these stages are not strictly linear; individuals can cycle through them, experience multiple stages simultaneously, and regress to earlier stages under conditions of increased pressure or institutional change. The seven stages are shown in Table 3.1, as follows:

Table 3.1: Concern-Based-Adoption Model (CBAM): Stages of Concern

Stage	Label	Description
0	Awareness	Little concern or involvement with the innovation; may not be fully aware of its implications.
1	Informational	General interest in the innovation; seeking more information about what it involves and how it works.
2	Personal	Concerns about how the innovation will personally affect the individual, including workload, competence, and role identity.
3	Management	Concerns about the practical implementation of the innovation: scheduling, resource management, and operational logistics.
4	Consequence	Concerns about the impact of the innovation on students and the broader organisation; focus shifts outward.
5	Collaboration	Concerns about coordinating with colleagues in using the innovation; interest in sharing and peer learning.
6	Refocusing	Concerns about making improvements, finding better ways to use the innovation, or exploring alternatives.

Source: Hall & Hord (2015)

In the context of this study, the Stages of Concern framework enables the researcher to trace the developmental progression of academic staff at the UoT from initial awareness of the blended learning mandate through to refocusing and refinement of their practice. The distribution of participants across these stages at the time of the study provides a diagnostic portrait of the state of adoption at the institution, as discussed in Chapter Five.

3.11.2.2 Levels of Use (LoU)

The LoU dimension describes the observable behaviours of individuals as they become progressively more familiar and skilled in using an innovation (Hall & Hord, 2015). Unlike the Stages of Concern dimension, which captures internal attitudes and feelings, LoU captures external, visible behaviour, which individuals exhibit with the innovation. The eight levels are summarised in Table 3.2.

Table 3.2: Concern-Based-Adoption Model (CBAM): Levels of Use

Level	Behavioural Description
Non-Use	No action is being taken regarding the innovation.
Orientation	The individual is seeking information about the innovation.
Preparation	The individual is preparing for the first use of the innovation.
Mechanical Use	The innovation is used in a routine, often rigid manner, with a focus on logistics rather than outcomes.
Routine	The innovation is integrated into daily practice without further thought or adjustment.
Refinement	The individual modifies the use of the innovation to increase its impact on students or colleagues.
Integration	Coordinated use of the innovation with colleagues in deliberate, planned collaboration.
Renewal	The individual seeks significant improvements to the innovation or explores more powerful alternatives.

Source: Hall & Hord (2015)

The LoU dimension is particularly powerful in this study because it moves beyond the question of whether lecturers accepted blended learning (TAM) to ask how deeply and skilfully they

integrated it into their teaching practice. The distinction between Mechanical Use (compliance driven, unreflective adoption) and Refinement/Integration (pedagogically intentional, creative adoption) is central to the study's argument that institutional support quality determines not just the rate of adoption but also the depth of pedagogical transformation.

3.11.2.3 Innovation Configuration

The Innovation Configuration dimension acknowledges that innovations are rarely implemented exactly as originally designed or intended. Different users implement the same innovation in different forms, adapting it to their specific contexts, resources, and pedagogical beliefs (Hall & Hord, 2015). Innovation Configuration mapping involves identifying the range of forms in which the innovation appears in practice, from the most faithful implementation of the intended model to significant adaptations and departures. In this study, the Innovation Configuration dimension is reflected in the variation across faculties in how blended learning was implemented: from fully integrated multimodal delivery in some departments to basic content uploading with minimal pedagogical redesign in others. This variation is examined in Chapter Five through participant accounts of their specific blended learning practices.

Together, the three CBAM dimensions provide a rich, multi-faceted diagnostic portrait of the blended learning adoption process at the UoT. They enable the identification of specific support needs for individual lecturers, the tracing of developmental adoption trajectories, and the complementary integration with the broader institutional perspective of DOI and the cognitive acceptance focus of the TAM.

3.12 Synthesis of DOI, the TAM, and the CBAM in Relation to the Research Questions

The integration of DOI, the TAM, and the CBAM provides a comprehensive, multi-level analytical architecture that addresses the full range of factors influencing blended learning adoption at the UoT. Rather than applying each framework in isolation, the study employs them as mutually reinforcing lenses: DOI explains the macro-level spread of the innovation; the CBAM traces the meso-level developmental change process; and the TAM illuminates the micro-level cognitive acceptance dynamics. The resulting framework bridges top-down institutional mandates and the bottom-up realities of individual classroom practice. Table 3.3 summarises the alignment between the three frameworks and the three research questions.

Table 3.3: Alignment of DOI, the TAM, and the CBAM with the Three Research Questions and Analytical Levels

Research Question	Level	Primary Framework	Supporting Frameworks	Key Constructs Applied
RQ1: How did the UoT select and identify suitable blended learning models for implementation?	Macro	DOI (Rogers, 2003)	TAM (external variables); CBAM (early SoC)	Relative advantage, compatibility, complexity, communication channels, and adopter characteristics
RQ2: What institutional strategies did the UoT employ to adopt and implement blended learning?	Meso	CBAM (Hall & Hord, 2015)	DOI (time, social system); TAM (PEOU)	SoC (Management, Consequence, Collaboration), LoU, professional development, support structures
RQ3: In what ways has the integration of blended learning influenced teaching methodologies?	Micro	TAM (Davis, 1989)	CBAM (Refinement, Refocusing); DOI (observability, routinising)	PU, PEOU, behavioural intention, pedagogical redesign, classroom transformation

Note. CBAM = Concern-Based-Adoption Model, DOI = Diffusion of Innovation, PEOU = Perceived Ease of Use, SoC = Stages of Concern, RQ = Research Question, TAM = Technology Acceptance Model, UoT = University of Technology.

Research Question 1 is addressed primarily through DOI, which identifies the institutional level of awareness, the communication channels used to introduce the innovation, and the compatibility and relative advantage constructs that shaped model selection. The TAM provides a complementary perspective on the external factors that influenced initial acceptance, such as infrastructure readiness and institutional support, while the CBAM identifies the early Informational and Personal concern stages that characterised staff's first encounter with the blended learning mandate. The primary sources of data for this question are academic leadership, departmental heads, and institutional documents.

Research Question 2 is addressed primarily through the CBAM, which enables a diagnostic assessment of staff concerns and behavioural use levels throughout the implementation

process. The CBAM's Stages of Concern map directly aligns with the institutional support responses the UoT deployed at each stage, while the LoU framework traces the developmental progression from mechanical compliance to refined, integrated practice. DOI contributes the concepts of time, social system dynamics, and organisational stages of innovation, while the TAM provides the Perceived Ease of Use construct as a measure of how effectively the institution's support structures reduced the technical burden of adoption. The primary sources of data for this question are lecturers, support staff, and institutional policy documents.

Research Question 3 is addressed primarily through the TAM, which analyses individual lecturers' attitudinal and cognitive responses to blended learning technologies and their impact on teaching methodologies. The shift in attitude from compliance-driven adoption to Perceived Usefulness is the central TAM construct for this question. The CBAM's higher stages, Consequence, Collaboration, Refocusing, and Renewal and its Refinement and Integration use levels provide the developmental framework for understanding the deepest forms of pedagogical transformation. DOI contributes the constructs of observability and routinising, which describe the conditions under which blended learning becomes a visible, sustainable element of teaching practice. The primary data sources for this question are lecturers.

DOI explains how practices spread over time, focusing on institutional readiness, strategic planning, and resource allocation. However, for innovation to be pedagogically meaningful rather than merely organisationally diffused, it must be accepted and internalised at the individual level. The TAM explains this individual readiness, focusing on digital literacy, Perceived Ease of Use, and the curriculum fit between technology and pedagogical practice. The CBAM captures the human developmental dimension of implementation: the evolving feelings, concerns, and observable behaviours of lecturers as they move from awareness to sophisticated, refocused integration. By employing this integrated framework, the study ensures a nuanced, multi-level analysis of the technological, institutional, and human factors involved in implementing blended learning at the UoT.

3.13 Chapter Summary

This chapter developed the three theoretical frameworks that guide the study, providing a detailed conceptual exposition of each and demonstrating how they are integrated into a unified, multi-level analytical architecture. The DOI theory (Rogers, 2003) was developed as the macro-level lens, with particular attention to the key concepts of relative advantage,

compatibility, complexity, time, social system, and communication, as well as the five adopter categories and five stages of the organisational innovation process. The appropriateness of DOI to the study was established, and the theory's limitations in crisis-driven, involuntary adoption contexts were acknowledged.

The TAM (Davis, 1989) was developed as the micro-level lens, grounded in the core constructs of Perceived Usefulness and Perceived Ease of Use. The rationale for the TAM's inclusion was articulated, specifically its capacity to provide the individual cognitive granularity that DOI lacks and its empirical validation in educational technology contexts.

The CBAM (Hall et al., 1977; Hall & Hord, 2015) was developed as a meso-level lens encompassing the three diagnostic dimensions: Stages of Concern, LoU, and Innovation Configuration. The appropriateness of the CBAM to the study was established through its direct applicability to the human dimensions of blended learning adoption, its capacity to diagnose individual developmental trajectories, and its bridging function between the macrolevel DOI and the micro-level TAM.

The chapter concluded with a synthesis table (Table 3.3) that maps the three frameworks to the three research questions and their corresponding analytical levels, demonstrating the coherence and complementarity of the integrated theoretical architecture. This architecture is operationalised in the methodology described in Chapter Four, which explains how the frameworks guided the design of the data collection instrument, informed the dual inductive and deductive analytical approach, and shaped the analytical categories applied to the data in Chapter Five.

CHAPTER 4: METHODOLOGY

4.1 Introduction

The preceding chapters established the conceptual and theoretical foundations of this study. Chapter One contextualised the research problem within the South African higher education landscape and introduced the three theoretical frameworks that guide the analysis, the DOI theory, the TAM, and the CBAM. Chapter Two reviewed the relevant literature on blended learning, and Chapter Three developed the theoretical framework in full. This chapter presents and justifies the methodological decisions that were made to address the three research questions.

The chapter is structured as follows: Section 4.2 presents and justifies the research paradigm; Section 4.3 describes the research approach; Section 4.4 explains the research design; Section 4.5 provides the location of the study; Section 4.6 details the population, sampling strategy, and participant profiles; Section 4.7 describes the data generation methods; Section 4.8 explains the data analysis approach; Section 4.9 addresses trustworthiness and rigour; Section 4.10 discusses ethical considerations; and Section 4.11 presents the study's assumptions, limitations, and delimitations.

The selection of a qualitative research approach was driven by the nature of the research questions, which require an in-depth understanding of the lived experiences of individuals navigating institutional change. As Creswell and Creswell (2018) notes, a research methodology is the overall strategy for conducting research, which encompasses the selection of the research approach, the design of the study, the collection and analysis of data, the management of ethical concerns, and an assurance of the accuracy and consistency of findings. Each of these dimensions is addressed in the sections that follow.

4.2 Research Paradigm

A research paradigm is a set of shared beliefs and assumptions that guides how researchers understand the world and approach knowledge production (Ebohon et al., 2021). Schwandt (2001) describes a paradigm as a holistic worldview shaped by various belief systems and values that determine how problems are understood and addressed. The research paradigm adopted for this study was interpretivism. The interpretivist paradigm holds that reality is socially constructed and subjectively experienced and that truth cannot be separated from the

context and perspectives of the individuals who construct it (Rehman & Alharthi, 2016; Creswell, 2003; Merriam, 2009). In interpretivism, the researcher acknowledges that their own values and theoretical commitments inevitably shape the processes of data collection, analysis, and interpretation, and that this subjectivity is a productive dimension of qualitative inquiry rather than a methodological weakness (Welman et al., 2005). Trustworthiness in interpretivist research is assessed through the criteria of credibility, dependability, transferability, and confirmability (Guba & Lincoln, 1994).

The interpretivist paradigm was the most appropriate choice for this study for three interconnected reasons. First, the research questions focus on the subjective experiences, perceptions, and concerns of individual lecturers and support staff as they navigated the institutional adoption of blended learning phenomena that require an interpretive, contextually sensitive approach rather than a positivist attempt at objective measurement. Second, interpretivism aligns directly with the study's theoretical frameworks: the Perceived Usefulness and Perceived Ease of Use constructs of the TAM (Davis, 1989) and the Stages of Concern in the CBAM (Hall & Hord, 2015) are inherently subjective, internal experiences that can only be accessed through qualitative, meaning-oriented inquiry. Third, interpretivism provided the paradigmatic foundation for semi-structured interviews as the primary method for generating data, enabling the researcher to explore the depth and nuance of participants' institutional experiences. Accordingly, the interpretivist paradigm enabled the study to explore how lecturers constructed meaning from their experiences of blended learning implementation within their institutional context. This philosophical orientation also complemented the integrated theoretical framework by supporting the interpretation of institutional innovation (DOI), technology acceptance (TAM), and lecturers' experiences of educational change (CBAM).

Overall, the interpretivist paradigm provided the philosophical foundation upon which all subsequent methodological decisions were based. It informed the selection of a qualitative research approach, guided the use of semi-structured interviews, and shaped the thematic interpretation of participants' experiences within the institutional context of blended learning implementation.

4.3 Research Approach

A qualitative research approach was adopted for this study. Qualitative research is grounded in

understanding societal events and the meanings individuals attach to their experiences (Holstein & Gubrium, 2011; McDermott, 2024). Within an interpretivist framework, the researcher functions as the primary instrument of data collection, deeply immersed in the context and attuned to the depth and nuance of the information gathered (Welman et al., 2005). Hiatt (1986) identifies the key characteristics of qualitative research as the exploration of meaning, the understanding of purpose and lived reality, and the contextual situatedness of the inquiry. Patton (1985) characterises qualitative research as an effort to understand unique situations in a particular context, a description that precisely fits the aim of this study. The qualitative approach was ideal for this study for three reasons. First, it enabled in-depth exploration of participants' experiences, perceptions, and feelings regarding the implementation of blended learning, the micro-level phenomena that the TAM is designed to illuminate. Second, it was particularly suited for examining the complex macro-level processes of model selection (DOI) and the meso-level institutional strategies for adoption and support (CBAM), where numerical measurement would be inadequate to capture the institutional dynamics at play. Third, by gathering diverse perspectives from lecturers, curriculum officers, and support staff, the qualitative approach ensured a holistic understanding of the technological and human factors, including motivation, resistance, and adaptation, that shaped the digital transformation at the UoT.

4.4 Research Design: Instrumental Case Study

Zikmund (2003) defines a research design as a master plan specifying the methods and procedures for collecting and analysing the needed information. An instrumental case study design was adopted for this research. Stake (2005) defines a case study as an in-depth approach to investigating a bounded event or system specific to lived experience. Hamilton and Corbett Whittier (2013) elaborate that a case study incorporates a bounded unit into its decision-making framework: a person, event, or institution investigated through multiple methods and data sources, each exploration associated with particular or complex circumstances (Stake, 1995).

Stake (1995) identifies three types of case studies: intrinsic, instrumental, and collective. An instrumental case study was employed in this research because it provides broader insights beyond the specific site, using the institution as a vehicle for understanding processes and phenomena with wider relevance. Accordingly, the instrumental case study design enabled the researcher to use the selected University of Technology as a means of generating a deeper understanding of the broader phenomenon of blended learning implementation in higher

education. The focus therefore extended beyond the institution itself to the processes, experiences, and contextual factors that shape institutional implementation.

The case study was bounded by the following parameters: the UoT in the Western Cape province of South Africa, post-COVID-19, focusing exclusively on academic and support staff involved in the implementation of blended learning. This bounding ensured that the research remained focused and manageable while still enabling the study to systematically trace the golden thread of implementation from macro-level policy decisions (DOI) through meso-level support strategies (CBAM) to micro-level pedagogical shifts (TAM). A case study design was particularly suited to this research because it allowed the selection of multiple data collection methods, specifically semi-structured interviews and document review, enabling the capture of different perspectives and enhancing the legitimacy of the conclusions (Saracho, 2015).

4.5 Location of the Study

After obtaining ethical clearance from the University of KwaZulu-Natal (Appendix A) and the selected UoT (Appendix B), the researcher sought and obtained permission to conduct the study on-site a prominent UoT in the Western Cape province of South Africa (Appendix C). The institution operates across multiple campuses and service points, offering a wide range of career-focused programmes. Its annual enrolment exceeds 30 000 students, and it provides inclusive resources to support students with diverse needs. The institution's long-term strategic plan positions digital transformation and blended learning as core pillars of its educational mission, making it a particularly appropriate site for a study of blended learning implementation.

Data were collected across three campuses, selected to ensure geographical and socioeconomic diversity. The first campus is situated in a semi-rural environment and emphasises applied sciences, education, and teacher training. The second campus is centrally located in an urban environment and houses several faculties, including Informatics and Design, Engineering, and Education. It also has advanced technological infrastructure and places a strong emphasis on research and innovation. The third campus, also based in an urban environment, is situated in an industrial area and primarily serves the Faculty of Engineering, with specific face-to-face contact requirements mandated by the Engineering Council of South Africa (ECSA). This three-campus design allowed the researcher to interrogate how macrolevel institutional policies (DOI) were filtered through different meso-level support realities (CBAM), ensuring that

micro-level lecturer acceptance findings (TAM) were understood as contextually situated rather than universal.

Conducting the study at these sites in 2025 is particularly significant. The Fairview campus allows for an assessment of whether digital infrastructure has been sustained in a semi-rural setting post-crisis. The Centerville campus provides insight into how urban, high-tech environments have integrated blended models into their standard daily operations, moving beyond the temporary emergency lab setups of 2020.

Access to the institution was secured through the appropriate institutional approval processes, thereby ensuring that data generation was conducted ethically and in accordance with university research governance requirements. These procedures also enhanced the credibility and trustworthiness of the research process.

4.6 Population, Sampling, and Participant Profiles

Mouton (1998) explains that a research sample is a group of individuals, objects, or events selected from a broader population that shares characteristics relevant to the study. The population for this study comprised academic staff, curriculum officers, and support personnel at the UoT who were directly involved in implementing blended learning during and after the COVID-19 pandemic.

4.6.1 Sampling and Recruitment Strategy

Purposive sampling was employed to select participants. Purposive sampling, as defined by Etikan et al. (2016), is a judgemental or selective approach in which the researcher intentionally selects participants based on their specific experiences, characteristics, and knowledge relevant to the research inquiry. Merriam (2009) describes this as selecting participants based on criteria that are specific to the research questions. Palinkas et al. (2015) argue that purposive sampling provides rich depth of information and contributes meaningfully to the study's analytical aims.

The following inclusion criteria guided the purposive selection of participants: direct involvement in the implementation of blended learning at the UoT during and after the pandemic; active engagement with institutional LMS tools and digital platforms in teaching and learning; and representation across at least two faculties and two campuses to ensure a multi-perspectival dataset. Exclusion criteria included staff who were not involved in blended learning during the study period and campuses with no active blended learning programme.

Participants were recruited through formal written invitation letters that outlined the research objectives, the nature of participation, and the ethical safeguards in place (see Appendix D).

4.6.2 Sample Size and Composition

A final sample of seven participants was purposively selected. Although the initial research design anticipated a larger sample, participant availability during the data collection period was constrained by institutional schedules, including the examination period. Creswell and Creswell (2018) notes that in qualitative research, the goal is not numerical representation but depth and richness of data; a smaller, carefully selected sample engaged through in-depth semi structured interviews can yield more analytically valuable data than a larger, superficially engaged sample. The seven participants provided sufficiently rich and varied accounts to address all three research questions across the macro, meso, and micro analytical levels.

The sample comprised five lecturers, one curriculum officer, and one support staff member (who also functioned as a part-time lecturer). The five lecturers were drawn predominantly from the Faculty of Informatics and Design, with one from the Faculty of Education. The curriculum officer was drawn from the Faculty of Education and the support staff member from the Faculty of Engineering. This disciplinary spread, while weighted toward Informatics and Design, provided meaningful variation in faculty context, campus environment, and pedagogical approach. The limitation of this sample composition, specifically the dominance of one faculty, is acknowledged in Section 4.11.1.

4.6.3 Participant Profiles

To protect the identities and ensure the confidentiality of all participants, pseudonyms in the form of participant codes (P1–P7) were used throughout data collection, analysis, and reporting. These codes are maintained consistently in Chapter Five, where participant quotations are presented and analysed. Table 4.1 below summarises the key demographic and professional characteristics of all seven participants.

Table 4.1: Participant Profiles

Code	Role	Campus	Faculty / Department	Experience	Highest Qualification
P1	Lecturer	Fairview	Education	5 years	Not disclosed
P2	Lecturer	Centerville	Informatics and Design	8 years	Not disclosed
P3	Lecturer	Centerville	Informatics and Design	3 years	Not disclosed
P4	Lecturer	Centerville	Informatics and Design	13 years	PhD candidate
P5	Lecturer	Centerville	Informatics and Design	3 years	Master's degree
P6	Support Staff / Part-time Lecturer	Middleton	Engineering	5 years	PhD candidate
P7	Curriculum Officer and Lecturer	Fairview	Education	8 years	PhD

Table 4.1 demonstrates that the sample captured a range of institutional roles, campus environments, disciplinary contexts, and levels of professional experience, enabling a multi perspectival analysis that addressed all three research questions. Lecturers comprised the majority of the sample, reflecting their direct role in implementing blended learning in their teaching practices and their relevance to Research Question 3 (pedagogical transformation). The inclusion of a support staff member and a curriculum officer ensured that both operational (meso-level) and administrative perspectives were represented, supporting the analysis of Research Question 2 (institutional strategies). The variation in qualifications and experience across participants provided a natural range of adopter profiles consistent with Rogers' (2003) DOI categories, from early adopters with advanced qualifications and established digital

practices to more cautious adopters with limited prior ICT experience. These profiles are referenced throughout the thematic analysis in Chapter Five.

Overall, the population and sampling strategy were carefully aligned with the interpretivist paradigm, qualitative research approach, and instrumental case study design. By selecting information-rich participants with direct experience of blended learning implementation, the study maximised its ability to generate credible, contextually grounded insights capable of addressing the research questions.

4.7 Data Generation Methods

Two complementary data generation methods were employed to ensure triangulation and address the full range of research questions: semi-structured interviews and document review. Birley and Moreland (1998, p. 40) describe data generation as "fieldwork where new information is acquired and the assessment of its significance begins". The use of two methods ensured that the document analysis provided evidence of intended policy at the macro and meso levels, while the interviews revealed the enacted realities of teaching and learning at the micro level.

4.7.1 Semi-Structured Interviews

Semi-structured interviews were the primary method for data collection (see Appendix E). Kvale (1996) defines an interview as a verbal interaction between the researcher and participants discussing a topic of mutual interest. Creswell (2013a) explains that interviews may be structured, semi-structured, or unstructured. In contrast to structured interviews, which follow a rigid script, semi-structured interviews use an interview guide with core questions while allowing the researcher to probe deeper into responses as the conversation unfolds (Bryman, 2016). Semi-structured interviews were therefore considered the most appropriate data generation method because they enabled participants to describe their experiences of blended learning implementation in their own words while allowing the researcher to probe emerging issues relevant to the research questions and the integrated theoretical framework.

Seven individual semi-structured interviews were conducted with the participants described in Table 4.1. Each interview lasted between 45 and 75 minutes. Interviews were conducted in a setting chosen by the participant, either face-to-face at their campus or online via Microsoft Teams, to minimise logistical barriers and ensure participant comfort. All interviews were

audio-recorded with participants' explicit prior consent (see Appendix D) and subsequently transcribed verbatim by the researcher. The open-ended nature of the interview questions encouraged in-depth responses, capturing rich insights into participants' personal experiences of blended learning (micro-level), their accounts of institutional support and training (meso level), and their understanding of the institution's strategic decisions (macro-level). Participant codes were applied from the point of transcription onwards to ensure anonymity throughout data management and analysis.

4.7.2 Document Review

Document review served as the second data generation method (see Appendix F), providing the institutional and policy context within which participant accounts were interpreted. Bowen (2009) explains that document analysis is instrumental in qualitative research, as it provides contextual and historical information that helps researchers understand the broader study setting. The method involves the systematic collection, reading, and interpretation of written, visual, and electronic documents to generate research data, triangulating and corroborating findings from interviews (Corbin & Strauss, 2008).

The following categories of documents were reviewed and analysed:

- Institutional strategic plans: Examined to understand how the institution positioned digital transformation within its macro-level pedagogical objectives.
- *Multimodal and Remote Teaching Guidelines* (UoT, 2020): Reviewed to assess the quality assurance frameworks and policy guidelines developed by the institution in response to the COVID-19 pandemic.
- Teaching and learning policies: Evaluated to assess the guidelines governing blended and remote learning delivery at the institution.
- ICT infrastructure and staff development policies: Examined to investigate the availability of technical support systems and digital literacy training programmes at the meso level.
- Council on Higher Education (CHE) *Higher Education Practice Standard* (HEPS) (2025): Reviewed to situate the institution's practices within the national quality assurance framework for multimodal learning.
- National documents, including the *White Paper for Post-School Education and Training* (DHET, 2013), the *White Paper on e-Education* (Department of Education, 2004), and COVID-19 guidelines for higher education: Examined for the macro-level policy context for the institution's decisions.

The integration of interview data and documentary evidence was central to the study's triangulation strategy. Where interview accounts described institutional decisions or support structures, the corresponding policy documents were examined to determine whether the described practices were formally mandated or informally developed. This cross-verification strengthened the confirmability of the findings.

Overall, the selected data collection methods were consistent with the interpretivist paradigm, qualitative research approach, and instrumental case study design. The use of semi-structured interviews enabled the generation of rich, contextually grounded data that were directly aligned with the research questions and the integrated theoretical framework, thereby strengthening the credibility and relevance of the study.

4.8 Data Analysis

A dual analytical approach combining inductive thematic analysis and deductive theoretical interpretation was employed to analyse the data. Braun and Clarke (2023) argue that thematic analysis is best suited to qualitative research, providing an excellent method for systematically aligning, organising, and identifying themes across a dataset while linking broad concepts to theoretical issues. Thematic analysis intersects three components of qualitative analysis: inductive, deductive, and theory-driven coding (Braun & Clarke, 2023). In this study, both the inductive and deductive dimensions were applied simultaneously and iteratively: the inductive process constructed themes from the data, and the deductive process interpreted those themes through the DOI, CBAM, and TAM frameworks.

4.8.1 Inductive Data Analysis: The Six-Phase Approach

The inductive component of the analysis followed the six-phase thematic analysis process developed by Braun and Clarke (2006). The six phases were applied as follows.

Phase 1: Familiarisation with the Data. The researcher immersed themselves in the data by reading all seven interview transcripts multiple times and reviewing the documentary sources in their entirety. Audio recordings were listened to alongside transcripts to capture nuance and tone. Initial observations and impressions were recorded in a reflexive journal.

Phase 2: Generating Initial Codes. The transcripts and documents were systematically coded

line by line. Labels were applied to data features pertinent to the research questions, capturing both semantic (surface-level) and latent (underlying) content. Codes were descriptive, data-driven, and grounded in the participants' own language and meaning (Braun & Clarke, 2006). Initial coding was conducted inductively by assigning descriptive labels to meaningful segments of text. As analysis progressed, related codes were compared, refined, and grouped into broader categories before being synthesised into overarching themes that addressed the research questions.

Phase 3: Searching for Themes. Initial codes were grouped and sorted into potential themes. This was an active, constructive process: themes were not pre-existing categories discovered in the data, but rather patterns of meaning constructed through the analytical process (Braun & Clarke, 2006). The research questions provided the orienting framework for this stage, guiding the construction of themes at the macro, meso, and micro levels.

Phase 4: Reviewing Potential Themes. The candidate themes were checked against the full data set to assess their internal coherence and external distinctiveness. Codes that did not relate clearly to a theme were either reassigned or set aside. Themes were refined, merged, or separated as necessary to ensure that they captured meaningful patterns without overlap (Braun & Clarke, 2006).

Phase 5: Defining and Naming Themes. Each theme was defined precisely, with its scope, boundaries, and analytical focus articulated in a single sentence. Theme names were selected to be conceptually clear, analytically relevant, and reflective of the data they represented. The themes were singular in focus, non-repetitive, and collectively coherent with the scope and purpose of the study.

Phase 6: Producing the Report. The final stage involved producing the written analysis presented in Chapter Five. The analytical narrative connects the themes logically and meaningfully, building a coherent account of the implementation of blended learning at the UoT. Each theme is supported by participant quotations, interpreted through the theoretical frameworks, and connected to the relevant literature (Braun & Clarke, 2006, 2023).

4.8.2 Deductive Analysis Using DOI, the TAM, and the CBAM

In addition to the inductive thematic process, a deductive analytical layer was applied, following Fereday and Muir-Cochrane's (2006) template analysis approach, which applies

theoretical constructs to the data to identify patterns in a structured manner. The three theoretical frameworks guided the deductive analysis as follows.

DOI (Rogers, 2003): Applied at the macro level to interpret the institutional adoption process. Constructs of relative advantage, compatibility, complexity, and the innovation process stages were used to analyse how the institution selected and diffused its blended learning models and how the pandemic disrupted the natural S-curve of diffusion.

CBAM (Hall & Hord, 2015): Applied at the meso level to assess the human element of institutional implementation. The Stages of Concern and LoU frameworks were used to identify where individual staff members were in their adoption journey and to evaluate the appropriateness of institutional support structures in addressing their developmental needs.

TAM (Davis, 1989): Applied at the micro level to analyse individual lecturers' cognitive acceptance of blended learning tools. Perceived Usefulness and Perceived Ease of Use were used to explain variations in adoption depth across participants and to examine the relationship between attitudinal acceptance and actual pedagogical transformation.

Although DOI, TAM, and CBAM informed the interpretation of the findings, the analysis remained grounded in participants' narratives rather than forcing the data into predetermined theoretical categories. The theories therefore functioned as interpretive lenses that assisted in explaining the findings after themes had emerged from the data.

Overall, the thematic analysis provided a systematic yet flexible analytical framework for interpreting lecturers' experiences of blended learning implementation. By integrating inductive theme development with theory-informed interpretation, the analytical process remained faithful to participants' perspectives while generating findings that addressed the research questions and the conceptual framework guiding the study.

4.9 Trustworthiness and Rigour

The criteria for evaluating qualitative research are grounded in trustworthiness, quality, and the believability of findings. Guba and Lincoln (1994) define trustworthiness as an overarching construct encompassing credibility, transferability, dependability, and confirmability. Rich, contextually grounded findings reflect a design executed with rigour and transparency. The following strategies were employed to ensure the study's trustworthiness.

4.9.1 Credibility

Credibility in qualitative research is analogous to internal validity, referring to the accuracy and truth-value of the findings (Guba & Lincoln, 1994). Credibility was ensured through three primary strategies. First, triangulation: interview data were systematically compared with documentary evidence throughout the analysis to corroborate findings and identify inconsistencies (Shenton, 2004; Carter et al., 2014). Second, prolonged engagement: the researcher engaged with the institutional context over an extended period, deepening contextual understanding and reducing the likelihood of surface-level interpretation (Guba & Lincoln, 1994). Third, member checking: preliminary transcriptions were shared with participants to verify that their perspectives were accurately represented, and participants had the opportunity to clarify, add to, or withdraw any portions of their accounts (Creswell & Miller, 2000).

4.9.2 Transferability

Transferability refers to the degree to which study findings can resonate or be applied across different contexts (Guba & Lincoln, 1994). While qualitative research does not seek statistical generalisation, it provides a thick description of the phenomenon under investigation, enabling other researchers to assess the applicability of findings to their own settings (Geertz, 1973). Transferability was ensured through detailed contextual description of the UoT's campuses, the participant sample, the institutional policy environment, and the specific challenges posed by the COVID-19 pandemic. Rather than seeking statistical generalisation, the study provided sufficiently rich contextual descriptions of the institutional setting, participants, and research processes to enable readers to determine the applicability of the findings to similar higher education contexts.

4.9.3 Dependability

Dependability is the qualitative counterpart of reliability, ensuring that the research process is logical, consistent, and thoroughly documented (Shenton, 2004). Dependability was ensured through the maintenance of a detailed audit trail that archived all research decisions, coding iterations, reflexive journal entries, and analytical changes made throughout the study (Guba & Lincoln, 1994). Code-recode procedures were also employed: the interview data were coded, set aside for a period, and then recoded independently to assess the consistency of thematic development across analytical iterations.

4.9.4 Confirmability

Confirmability ensures that the study's findings are the product of participants' ideas and experiences rather than the researcher's assumptions or biases (Guba & Lincoln, 1994). Confirmability was achieved through triangulation of data sources and through the explicit linking of all thematic findings in Chapter Five to raw data extracts from interview transcripts and institutional documents. This chain of evidence ensures that the analytical conclusions are traceable to the original data and that any reader can evaluate the interpretive logic applied. Confirmability was promoted through continuous reflexive awareness of the researcher's role during data generation and analysis. Interpretations were grounded in participants' accounts and supported by verbatim quotations, thereby ensuring that the findings reflected the data rather than the researcher's personal assumptions.

4.10 Ethical Considerations

The ethical dimensions of the study were addressed in accordance with the principles of dignity, respect, and the protection of participant well-being throughout the research process (Creswell, 2013b). Ethical approval was obtained from the researcher's supervising institution prior to data collection. The following ethical safeguards were observed.

Informed consent was obtained from all seven participants prior to data collection. Participants received a written explanation of the study's purpose, the nature of their involvement, the measures in place to protect their confidentiality, and their right to withdraw from the study at any point without penalty or consequence (Orb et al., 2001). Written consent forms were signed and retained as part of the study's audit trail.

Confidentiality was maintained throughout the study through the consistent use of participant codes (P1–P7) in all data management, analysis, and reporting processes. Institutional anonymity was similarly maintained: the institution is referred to throughout as the "University of Technology" or "UoT", and no campus-specific identifying details that could reveal the institution's identity are disclosed.

Audio recordings and transcripts were stored securely in password-protected digital files accessible only to the researcher and supervisors. Participants were informed that recordings would be used solely for transcription and analysis purposes and would not be shared with third parties.

Power dynamics were actively managed throughout the data collection process. Some participants expressed initial concern about institutional surveillance or the professional implications of their responses. To address this, the researcher emphasised the study's academic independence, the confidentiality safeguards in place, and the voluntary nature of participation (Orb et al., 2001). The option for virtual interviews via Teams was offered to all participants to reduce any perceived institutional surveillance associated with on-site recording.

Overall, ethical considerations informed every stage of the research process, from participant recruitment and data generation to analysis, interpretation, and reporting. Adherence to established ethical principles not only protected participants' rights and wellbeing but also strengthened the credibility, integrity, and trustworthiness of the study.

4.11 Assumptions, Limitations, and Delimitations

4.11.1 Limitations of the Study

Several limitations must be acknowledged. First, the sample was smaller than initially planned, with seven participants rather than ten, because of scheduling constraints during the examination period. While the seven participants provided rich and varied data, a larger sample would have enabled a more comprehensive mapping of adoption patterns across a wider range of faculties and disciplines.

Second, five of the seven participants were drawn from the Faculty of Informatics and Design at the District Six campus. While this concentration reflects the purposive selection criteria, Informatics and Design was among the most actively engaged faculties in blended learning, which limits the representativeness of the findings across other disciplinary contexts, particularly those with different face-to-face contact requirements, such as Health Sciences or the Performing Arts.

Third, all performance-related data, including pass rates and student improvement claims cited by participants, were based on self-reporting and were not independently triangulated with institutional academic records. These accounts are therefore interpreted as subjective perceptions rather than verified empirical evidence, consistent with the interpretivist paradigm of the study.

Fourth, a temporal limitation of this study is the recall gap since the transition began in 2020; participants interviewed in 2025 may experience memory bias regarding the initial challenges.

To mitigate this, the researcher uses document analysis of 2020–2022 policy records to triangulate and verify participants' recollections against the recorded institutional facts of that time. In addition, the study was conducted in the immediate aftermath of the COVID-19 pandemic, meaning that the findings may reflect crisis-specific adoption dynamics that differ from blended learning adoption processes under normalised post-pandemic conditions. These temporal specificities are contextual limitations that must be considered when applying the findings to other settings or time periods.

4.11.2 Theoretical and Methodological Assumptions

The primary theoretical assumption of the study is that the integrated application of DOI, the TAM, and the CBAM provides a sufficiently comprehensive analytical framework for understanding the multi-level dynamics of blended learning adoption. This assumption acknowledges that other theoretical lenses, such as Activity Theory or Communities of Practice, could yield complementary insights but were excluded from this study to maintain analytical focus.

A key methodological assumption is that participants' accounts of their experiences were sufficiently candid and reflective to support the depth of interpretation required. Triangulation with documentary evidence was employed to mitigate the risk that self-reported accounts might not accurately represent institutional realities.

4.11.3 Delimitations

Delimitations define the boundaries set by the researcher to keep the study manageable and focused. This research was deliberately delimited to the UoT in the Western Cape province in South Africa, engaging only academic staff, curriculum officers, and support personnel directly involved in blended learning. Students were excluded to allow for a deeper focus on institutional implementation processes, teaching strategies, and curriculum development, which are the direct subjects of the three research questions. The study was further delimited to the post-COVID-19 context, specifically investigating the transition from ERT to a sustainable, long-term blended learning model. These boundaries ensured that the research remained aligned with the objectives and questions established in Chapter One.

4.12 Chapter Summary

This chapter presented and justified the study's methodological design. The interpretivist

paradigm was adopted to honour the subjective, contextually situated nature of the research questions and to align with the theoretical frameworks of the TAM and the CBAM, both of which engage with internal, attitudinal phenomena. A qualitative approach was selected to enable in-depth exploration of participants' lived experiences across the macro, meso, and micro levels of analysis. An instrumental case study design was employed, bounding the study to the UoT in the Western Cape and using the institution as a vehicle for understanding broader processes of blended learning adoption.

Seven participants were purposively selected from three campuses and three faculties, representing a range of institutional roles, disciplinary contexts, and levels of professional experience. Their profiles, presented in Table 4.1, demonstrate that the sample was appropriately constituted to address all three research questions. Data were generated through semi-structured interviews and a systematic document review, with triangulation serving as the primary mechanism for corroborating findings across data sources.

The data were analysed using a dual inductive and deductive approach: the six-phase thematic analysis process (Braun & Clarke, 2006, 2023) was applied inductively to construct themes from the data, while DOI, the CBAM, and the TAM were applied deductively to interpret those themes through the theoretical framework. Trustworthiness was ensured through credibility (triangulation, prolonged engagement, member checking), transferability (thick description), dependability (audit trail, code-recode), and confirmability (chain of evidence, reflexive practice). Ethical considerations were addressed through informed consent, participant anonymity, institutional confidentiality, and active management of power dynamics.

Collectively, the methodological decisions presented in this chapter established a coherent and rigorous qualitative research design capable of generating credible, contextually grounded insights into lecturers' experiences of blended learning implementation. The subsequent chapter presents the empirical findings that emerged from this methodological process.

CHAPTER 5:
THEMATIC FINDINGS, DISCUSSION AND THEORETICAL INTEGRATION

5.1 Introduction

This chapter presents, analyses, and critically discusses the findings derived from the semi structured interviews and document analysis conducted at the UoT. It is the culmination of the analytical and conceptual work established in the preceding chapters: the research problem and questions articulated in Chapter One; the empirical and conceptual literature reviewed in Chapter Two; the integrated theoretical framework of DOI, the TAM, and the CBAM developed in Chapter Three; and the dual analytical methodology described in Chapter Four.

The analytical approach adopted in this chapter is simultaneously inductive and deductive, consistent with the dual framework established in Chapter Four (Section 4.8). Inductively, three themes and their associated subthemes were constructed from the data through Braun and Clarke's (2006, 2023) six-phase thematic analysis process. Deductively, the themes and subthemes are interpreted through the integrated theoretical framework: DOI at the macro level (Theme 1), the CBAM at the meso level (Theme 2), and the TAM at the micro level (Theme 3). Throughout the analysis, interview data are triangulated with documentary evidence, including the institution's *Multimodal and Remote Teaching Guidelines* (UoT, 2020), the *White Paper on e-Education* (Department of Education, 2004), and the CHE's HEPS framework (2025), to distinguish between what was institutionally intended and what was enacted. This triangulation is the methodological foundation for the chapter's critical analytical stance.

The findings presented in this chapter represent the state of blended learning in 2025. Unlike earlier studies that captured the panic of the initial shift during the COVID-19 pandemic, these results reflect institutionalised practices. The themes identified here illustrate a mature digital landscape, highlighting the successes that have been sustained and the failures that led to a regression to traditional methods after the emergency mandates were lifted.

The chapter is structured as follows: Section 5.2 provides brief participant context; Section 5.3 describes the institutional digital learning environment; Section 5.4 presents an overview of key findings and a comprehensive table of themes and subthemes; Sections 5.5 through 5.7 present and discuss the three themes; Section 5.8 presents the conceptual model; Section 5.9 synthesises the findings and integrates the theoretical frameworks; Section 5.10 presents the

integrated thematic model; Section 5.11 discusses the findings in relation to each research question; Sections 5.12 through 5.14 address implications, limitations, and recommendations; and Section 5.15 concludes the chapter.

5.2 Participant Context

The profiles of the seven participants who contributed to this study are presented in full in Chapter Four (Table 4.1). The sample comprised five lecturers, one curriculum officer, and one support staff member who also functioned as a part-time lecturer, drawn from three campuses and three faculties: Education, Informatics and Design, and Engineering. Participant codes (P1–P7) are used consistently throughout this chapter to maintain anonymity. Where participant quotations are presented, the participant's role and faculty context are indicated to enable the reader to assess the evidential weight and positional perspective of each account.

5.3 Institutional Context: The Digital Learning Environment at the UoT

A review of the institution's *Multimodal and Remote Teaching Guidelines* (UoT, 2020) confirmed that the UoT had articulated a formal institutional commitment to blended learning as part of its response to the COVID-19 pandemic. The guidelines described an intended shift toward multimodal delivery, emphasising flexibility, student access, and the integration of digital tools across the curriculum. The institution's *Vision 2030 Strategic Plan Learning and Teaching* similarly positioned digital transformation as a long-term institutional priority (UoT, n.d.). However, interview data consistently revealed a gap between the policy's stated intent and the conditions under which implementation was initiated.

Blackboard served as the institution's primary LMS, functioning alongside Microsoft Teams. The integration of these platforms varied considerably across faculties, from advanced multimodal delivery in Informatics and Design to more constrained implementation in Engineering, where the ECSA's mandatory face-to-face contact ratios imposed structural limits on online delivery. This faculty-level variation is directly relevant to the DOI concept of compatibility (Rogers, 2003), discussed in Section 5.5, and to the CBAM concept of Innovation Configuration (Hall & Hord, 2015), which acknowledges that an innovation is never implemented uniformly across an institution. As Ndzinisa and Dlamini (2022) observe, South African higher education institutions are characterised by uneven technological adoption driven by both infrastructure disparities and disciplinary culture, a pattern confirmed by the data collected at the UoT.

5.4 Overview of the Key Findings and Thematic Structure

The research findings are evaluated across three analytical levels: macro (institutional governance and decision-making, interpreted through DOI), meso (implementation and support structures, interpreted through the CBAM), and micro (individual pedagogical practice and acceptance, interpreted through the TAM). Table 5.1 presents a comprehensive overview of the three themes, their associated subthemes, research question alignment, theoretical lens, and primary data sources.

Table 5.1: Themes, Subthemes, and Analytical Framework Alignment

Theme	Subtheme	Description	RQ	Theoretical Lens	Data Source
Theme 1: Institutional Decision-Making and Model Selection (Macro)	5.5.1 The Pandemic as Catalyst	How COVID-19 compressed the diffusion timeline from gradual to crisis-driven	RQ1	DOI – Relative Advantage; Compatibility; S-curve collapse	Interviews; Multimodal guidelines (UoT, 2020); DHET documents
	5.5.2 Governance and Strategic Direction	The gap between Vision 2030's strategic intent and crisis-reactive implementation	RQ1	DOI – Social System; Communication channels; External change agent	Interviews; Vision 2030; DHET White Paper (2004)
	5.5.3 Faculty Inclusion in Decision-Making	Top-down mandate vs. participatory policy intent; emotional buy-in challenges	RQ1	DOI – Adopter categories; TAM – Perceived ownership; CBAM – Stages of Concern: Personal / Management	Interviews; HEPS (CHE, 2025); Multimodal guidelines
	5.5.4 Criteria for Model Selection	Pragmatic survival-driven selection vs. pedagogically optimal fit	RQ1	DOI – Compatibility; Trialability; Complexity	Interviews; LMS policy documents
	5.5.5 Logistical Readiness for Delivery	Infrastructure gaps, digital divide, and impact on access equity	RQ1	TAM – PEOU undermined by access barriers; DOI – Trialability	Interviews; NSFAS records; Institutional IT reports
Theme 2:	5.6.1 Professional	Technical training was provided but lacked	RQ2	CBAM – LoU Mechanical to	Interviews; Staff

Institutional Implementation Strategies (Meso)	Development and Training	pedagogical depth; gap between tool competence and curriculum redesign		Routine; TAM – PEOU; DOI – Communication	development policies; HEPS (CHE, 2025)
	5.6.2 Perceived Usefulness and Teaching Impact	Mixed perceptions of benefit: flexibility vs. increased workload	RQ2	TAM – Perceived Usefulness; DOI – Relative Advantage	Interviews; Multimodal guidelines (UoT, 2020)
	5.6.3 CBAM Stages of Concern	Non-linear progression through all 7 CBAM concern stages; pandemic compressed developmental process	RQ2	CBAM – All 7 Stages of Concern; LoU	Interviews
	5.6.4 Flexibility and the Flipped Classroom	Organic emergence of flipped delivery; symbiosis between multimodal policy and face-to-face redesign	RQ2	DOI – Relative Advantage; Observability; TAM – PU	Interviews; Multimodal guidelines (UoT, 2020)
	5.6.5 Institutional Support Structures	24-hour CTS and CIET support built technical confidence but did not address deeper pedagogical concerns	RQ2	CBAM – Management and Consequence stages; DOI – Observability	Interviews; CIET documentation; DHET White Paper (2004)
Theme 3: Pedagogical Transformation (Micro)	5.7.1 Classroom Redesign	Shift from content delivery to student-centred blended design; range from low to high-impact blend	RQ3	TAM – PU; CBAM – Refinement LoU; DOI – Routinising	Interviews
	5.7.2 Assessment Evolution	Diversification of assessment, including online quizzes, formative feedback, and academic integrity tools	RQ3	TAM – PU; DOI – Observability; CBAM – Consequence stage	Interviews; Assessment policies
	5.7.3 Student Engagement	Uneven engagement: access, isolation, and	RQ3	DOI – Complexity; TAM – PEOU;	Interviews

		self-regulation as structural barriers		CBAM – Consequence	
	5.7.4 Student Performance Outcomes	Self-reported improvements moderated by access inequality; subjective data without institutional triangulation	RQ3	DOI – Compatibility; TAM – PU; CBAM – Refinement	Interviews (self-report)
	5.7.5 Adaptation Challenges	Workload doubling, preparation burden, and limits of operational support in addressing pedagogical redesign	RQ3	CBAM – Management; TAM – PEOU reduced; DOI – Complexity	Interviews

Note. CBAM = Concern-Based-Adoption Model, CIET = Centre for Innovation in Learning and Teaching, CTS = Computer and Telecommunications Services, DOI = Diffusion of Innovation, HEPS = Higher Education Practice Standard, LoU = Levels of Use, NSFAS = National Student Financial Aid Scheme, PEOU = Perceived Ease of Use, PU = Perceived Usefulness, RQ = Research Question, TAM = Technology Acceptance Model.

Figure 5.1 below provides a visual overview of the three-tiered analytical hierarchy and the theoretical frameworks applied at each level.

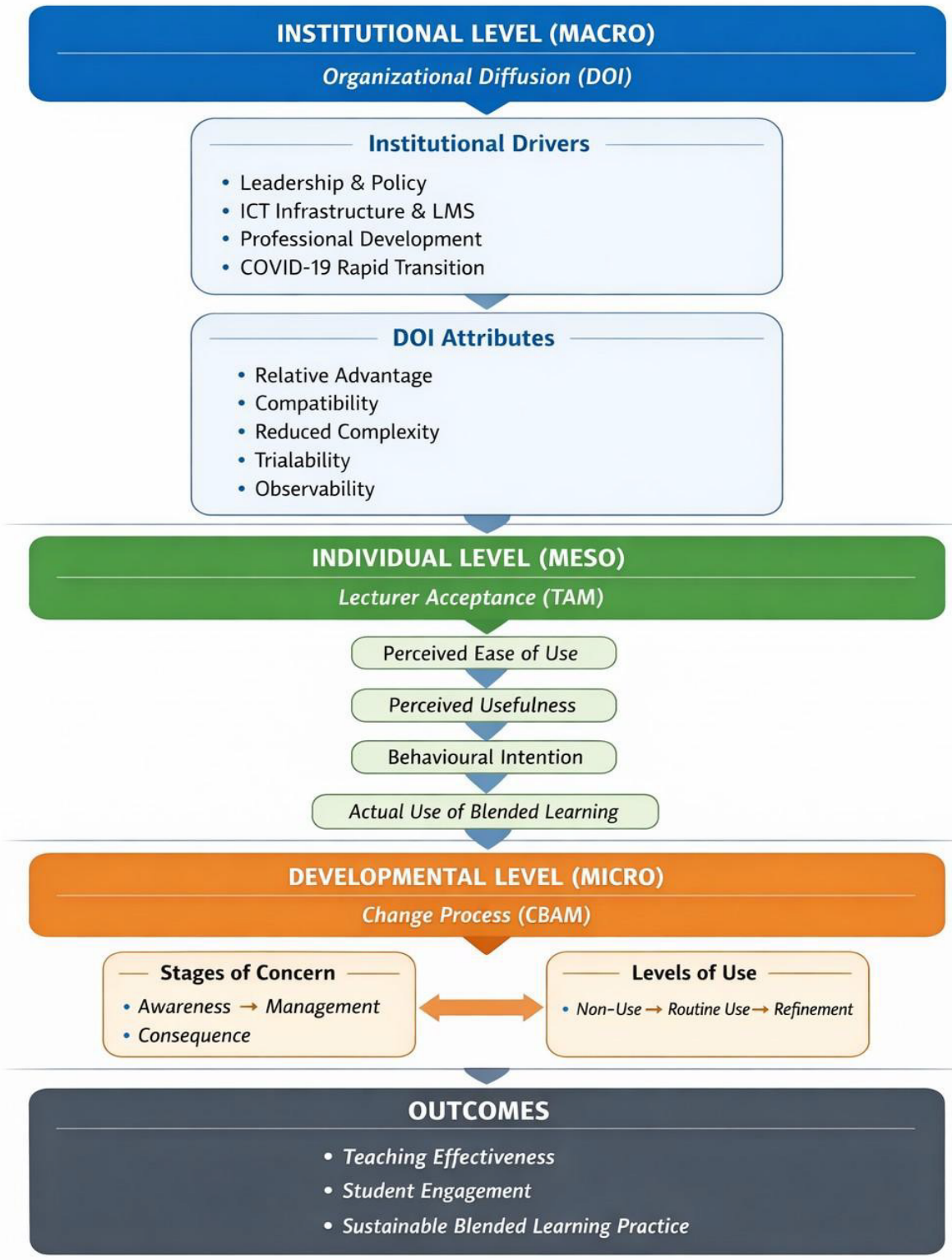


Figure 5.1: Three-Level Analytical Framework – Macro, Meso, and Micro Dimensions of Institutional Transformation

Figure 5.1 illustrates how the three theoretical frameworks operate at distinct but interrelated levels of the institution, with each level informing the next. The macro-level governance decisions of Theme 1 create the conditions and the constraints within which the meso-level implementation strategies of Theme 2 operate. In turn, the quality of meso-level support determines the depth of the micro-level pedagogical transformation captured in Theme 3. This layered architecture is central to the study's meta-finding, discussed in Section 5.9.

5.5 Theme 1: Institutional Decision-Making and Model Selection

Theme 1 addresses Research Question 1 by examining how the UoT selected and identified its blended learning model. The documentary record and interview data tell a coherent but analytically complex story: the institutional documents project a narrative of strategic, deliberate digitalisation, while participant accounts consistently reveal that the selection process was driven not by pedagogical optimisation but by crisis survival. This gap between the intended and the enacted is the defining analytical tension of this theme, and it directly challenges the voluntary, compatibility-driven adoption model assumed by Rogers' (2003) DOI framework.

5.5.1 The Pandemic as Catalyst: Forced Diffusion versus Voluntary Adoption

A review of the institution's *Multimodal and Remote Teaching Guidelines* (UoT, 2020) indicated a formally articulated intended shift towards digitalisation, framed within the institution's Vision 2030 commitment to becoming a technology-integrated, student-centred university. The document states that the multimodal framework was designed to enhance learning approaches across the curriculum, suggesting a deliberate, proactive approach to digital transformation. However, interview data revealed a markedly different reality: the actual model selection was accelerated by external crisis pressures rather than by internal pedagogical deliberation.

P5 (lecturer, Informatics and Design), who had been at the institution for three years at the time of the pandemic, reflected on the decision-making process:

> The institution mandated a multimodal approach to drive blended learning in response to COVID-19. This mandate came from higher-level management. We were not consulted; we were informed.

P7 (curriculum officer and lecturer, Education), who occupied a more senior position and had visibility of institutional deliberations, elaborated:

> Well, we were basically told we'd have to incorporate blended learning into our teaching methods. I don't think it was really thought through, especially given our context, students, and infrastructure.

These accounts, triangulated against the institutional documentation, reveal what can be analytically characterised as forced diffusion: a process that superficially resembles the DOI model but fundamentally departs from its core assumption of voluntary, deliberate adoption based on perceived relative advantage (Rogers, 2003). The multimodal guidelines (UoT, 2020) framed blended learning as a quality-enhancing initiative; participant accounts, by contrast, framed it as a survival mechanism. As the literature review established (Chapter Two, Section 2.3.1), ERT is categorically distinct from sustainable blended learning (Hodges et al., 2020), yet the institutional documentation conflated the two, treating a crisis-driven ERT response as a deliberate blended learning implementation.

From a DOI perspective, Rogers (2003) argues that the relative advantage of an innovation must be perceived as superior to what it replaces for adoption to be meaningful. In this context, the perceived relative advantage was not pedagogical improvement but academic continuity – keeping the semester alive rather than enhancing learning quality. This represents a critical contextual qualification of DOI theory: when adoption is mandated rather than voluntary, the relative advantage construct loses its predictive power, and the temporal assumption of the S-curve that innovations diffuse gradually through a social system is fundamentally undermined. As Mpungose (2020) observed in the South African context, the pandemic collapsed the deliberative dimension of diffusion, compelling institutions to adopt innovations simultaneously across all adopter categories, bypassing the gradual spread from innovators to laggards that Rogers' model assumes.

5.5.2 Governance and Strategic Direction: The Gap Between Policy Intent and Crisis Reality

The *White Paper on e-Education* (Department of Education, 2004) and the institution's *Vision 2030 Strategic Plan* (UoT, n.d.) both articulated a long-term policy commitment to digital integration in higher education. The HEPS framework (CHE, 2025), reviewed as part of the documentary analysis, further specifies that institutional blended learning delivery must be

characterised by intentional design of time, pace and space and guided by institutional mission, vision, and pedagogical objectives. These documents collectively project a picture of carefully governed, strategically planned digital transformation.

Interview data, however, revealed that at the operational level, the governance of blended learning adoption was experienced as reactive rather than intentional. P7 (Curriculum officer, Education) acknowledged the tension between the institutional rhetoric and the lived reality:

> I think the institution has really tried to align it. So, on paper, it probably does. But the way it was rolled out wasn't strategic. It was reactive. The policies came after the fact.

P4 (lecturer, Informatics and Design) offered a more structural observation:

> Institutions often propose a blended learning framework aligned with their teaching and learning strategy. But what we experienced was the institution being driven by DHET mandates, not by its own pedagogical vision.

The triangulation of documentary and interview evidence reveals a structural disjunction between what Fullan (2007) describes as the moral purpose of an educational change initiative, the pedagogical vision articulated in policy, and the operational reality of implementation driven by external regulatory pressure. Rogers (2003) identifies the role of external change agents in accelerating diffusion within social systems. In this case, the DHET functioned as the primary external change agent, with the institution's governance responding to its mandate rather than leading from its own strategic vision. This finding aligns with Kwatubana's (2023) observation that post-COVID-19 ICT integration in South African higher education was largely externally mandated rather than institutionally driven, resulting in adoption that was structurally compliant but not pedagogically coherent.

5.5.3 Faculty Inclusion in the Decision-Making Process: Participation in Policy and Exclusion in Practice

The CHE's HEPS framework (2025) explicitly requires that institutional blended learning policies support staff preparedness through ongoing professional learning opportunities, innovation, and experimentation with new technology. The institution's own guidelines similarly articulate a commitment to staff consultation and collaborative curriculum development. These documents imply a participatory model of faculty engagement in the adoption process.

The interview data, however, consistently pointed to a top-down implementation model that offered limited meaningful faculty participation, particularly in the initial decision-making phase. P2 (Lecturer, Informatics and Design) reflected:

> Some faculty members were not used to online learning systems – you know, the older generation. We were not asked. We were expected to adapt.

P5 (lecturer, Informatics and Design) described the institutional forums that were created as a response to faculty anxiety but noted their limited scope:

> Debates were held and staff meetings conducted to confront the various challenges from the staff and students' perspectives. But these were not really decision-making forums. They were information sessions.

P3 (lecturer, Informatics and Design) identified the effect of exclusion on individual confidence and commitment:

> To empower staff with confidence and a pedagogical understanding of blended learning, training focused on tools and curriculum redesign. But we were told what tools to use. We were not asked what we needed.

This tension between participatory policy intent and directive institutional practice is analytically significant from both the TAM and CBAM perspectives. Davis (1989) establishes that perceived ownership – the sense that one has had meaningful input into an adoption decision – is a critical antecedent of Perceived Usefulness. When lecturers experienced the adoption as imposed rather than chosen, their TAM-based motivation to engage meaningfully with the technology was correspondingly weakened. Sappey and Relf (2010) similarly argue that educational change without genuine staff engagement compromises workload management, professional motivation, and institutional identity, all of which are reflected in the CBAM's Personal Stage of Concern (Hall & Hord, 2015). The institutional decision to pursue a top-down diffusion model, while efficient in terms of speed, created a deficit in perceived ownership, resulting in uneven adoption commitment throughout the implementation process.

5.5.4 Criteria for Model Selection: Compatibility as Survival Rather than Pedagogical Fit

The documentary analysis of the institution's multimodal guidelines (UoT, 2020) confirmed that Blackboard was selected as the primary LMS based on its pre-existing presence within the institution, its zero-rated data access agreement, and its compatibility with existing student administration systems. The document presents this as a considered pedagogical and administrative decision, consistent with the institution's student-access priorities.

The interview data provided a more granular and critically revealing account of how this selection unfolded. P6 (support staff and part-time lecturer, Engineering) described the institutional decision-making from an operational perspective:

> The consideration of student access meant that the institution provided a system that allowed students to browse its website and LMS without using data. The intention was to develop a user-friendly system. But the selection was: what do we already have that we can deploy now?

P7 (curriculum officer, Education) reinforced this reading:

> The institution is still undergoing review by the Council on Higher Education to fully register blended learning. So, what we selected was not a finalised model. It was a working arrangement.

These accounts illuminate a critical dimension of the selection process that the documentary evidence obscures: the choice of Blackboard was driven primarily by the DOI attribute of compatibility (Rogers, 2003) – alignment with the existing institutional infrastructure – rather than by a comparative evaluation of its pedagogical merits against alternative platforms. Alammary et al. (2014) argue that model selection should be preceded by a systematic analysis of curriculum goals and student needs and that an appropriate low-, medium-, or high-impact blend depends on the needs of each programme. The interview data suggest that this level of deliberation did not occur at the UoT; instead, the pre-existing presence of Blackboard made it the only feasible option within the crisis timeline, rendering the selection process a de facto default rather than a deliberate choice. This represents a contextually important qualification of Rogers' (2003) compatibility construct: compatibility drove adoption not because the institution evaluated fit, but because the absence of alternatives made compatibility the only

available rationale.

5.5.5 Logistical Readiness for Delivery: Infrastructure, the Digital Divide, and Access Equity

The institution's multimodal guidelines (UoT, 2020) documented several logistical interventions designed to ensure equitable access, including National Student Financial Aid Scheme (NSFAS)-funded laptop devices, zero-rated LMS access, and a 24-hour computer and telecommunications services (CTS) support line. These measures represent a meaningful institutional effort to address the digital divide documented in the South African higher education literature (Ndzinisa & Dlamini, 2022; Kwatubana, 2023; Smerdon et al., 2000). However, interview data revealed that, despite these interventions, access barriers remained a structural impediment to equitable participation in blended learning.

P2 (lecturer, Informatics and Design) described the composite nature of the access problem:

> When we started with blended learning, the main challenges were access to the Internet, a computer, or even a mobile device. During load-shedding, a lack of motivation was evident, along with various social factors. These are not technical problems; they are structural ones.

P5 (lecturer, Informatics and Design) articulated the equity consequence most directly:

> The gap is basically just widening between those who have access to infrastructure and Wi-Fi to participate in online sessions and those who don't. Blended learning, as implemented, did not close that gap; it widened it.

P6 (support staff, Engineering) noted the structural limitation of device provision:

> Yes, students funded by NSFAS had laptops and could access the LMS without data. But that is not all students. And at home, load-shedding is not something a laptop solves.

These findings are directly consistent with the literature reviewed in Chapter Two (Section 2.5.2.1). Ndzinisa and Dlamini (2022) identify socio-economic inequality as the primary structural barrier to equitable technology adoption in South African higher education, while Kwatubana (2023) specifically notes that pandemic-era digital learning exposed rather than resolved these inequalities. From a TAM perspective (Davis, 1989), the Perceived Ease of Use construct is critically undermined when access to the basic prerequisites of technology use –,

devices, connectivity, and power – cannot be assumed. The institutional interventions described in the multimodal guidelines (UoT, 2020) partially mitigated the access problem but did not resolve it, suggesting that the relative advantage of blended learning (Rogers, 2003) was not experienced uniformly across the student population and that its equity claims require substantial qualification in the South African context.

5.6 Theme 2: Institutional Implementation Strategies (Meso Level)

Theme 2 addresses Research Question 2 by examining the strategies the UoT employed to implement blended learning and support its adoption among academic staff. The CBAM framework (Hall & Hord, 2015) provides the primary analytical lens, enabling a diagnostic mapping of lecturers' developmental progression through the Stages of Concern and LoU. The key analytical tension in this theme is the gap between the technical comprehensiveness of the institution's support provision and its pedagogical shallowness, a gap that the interview data illuminate consistently across all subthemes.

5.6.1 Professional Development and Training: Technical Confidence without Pedagogical Transformation

The CHE's HEPS framework (2025) specifies staff digital competence as a continuous institutional responsibility, requiring not merely tool proficiency but pedagogical competence in the design of technology-enhanced learning experiences. The institution's own staff development policies articulated similar commitments, including ongoing training, peer mentoring, and support for curriculum redesign. These documents set expectations for comprehensive, pedagogically oriented professional development.

The interview data, however, revealed a consistent and analytically significant gap: the professional development provided was technically comprehensive but pedagogically narrow. P4 (lecturer, Informatics and Design) described the training programme:

> Previously, I would have thought this was just a teaching method, but after training, I realised it is a different approach. The training focused mainly on understanding the online environment and navigating it with the student, not redesigning it. The two things are not the same.

P7 (curriculum officer and lecturer, Education) provided the institutional context for this limitation:

> The training we received focused solely on developing staff to keep the institution operational during the pandemic. It was about keeping the lights on, not about becoming better teachers online. Those are fundamentally different goals.

P5 (lecturer, Informatics and Design) identified the effect of self-directed learning as a coping mechanism:

> The online training sessions included tools such as Blackboard. A lot of it was self-study. It was a little overwhelming, but luckily, I had colleagues who were a great support when I had issues.

The triangulation of these accounts with documentary evidence exposes a structural weakness in the institution's professional development strategy. The HEPS framework (CHE, 2025) requires staff development to address pedagogical competence and curriculum redesign, while the multimodal guidelines (UoT, 2020) focus almost entirely on technical platform navigation. This is precisely the gap that Harriman (2024) and Hofmann (2006) – reviewed in Chapter Two (Section 2.6) – identify as the critical failure mode in blended learning implementation: training that produces technical operability without pedagogical redesign capacity.

From a CBAM perspective (Hall & Hord, 2015), this pattern indicates that the institution's professional development strategy was effective at moving lecturers from the Awareness and Informational Stages of Concern to the Management stage, addressing their operational anxieties about using the technology, but was insufficient to support progression to the higher-order stages of Consequence, Collaboration, and Refocusing, where genuine pedagogical transformation occurs. This is evidenced by the LoU data: many lecturers remained at the Mechanical Use and Routine levels (uploading existing materials to Blackboard rather than redesigning for the online environment) instead of progressing to Refinement and Integration. Straub (2009) observes that this kind of superficial adoption, where the form of the innovation is adopted without its pedagogical substance, is a common failure mode in the diffusion of technology within resource-constrained educational systems, a finding directly relevant to the UoT context.

5.6.2 Perceived Usefulness and Teaching and Learning Impact

The institution's multimodal guidelines (UoT, 2020) positioned blended learning as a vehicle for enhancing learning approaches across the curriculum, thereby providing a clear rationale

for adoption. The literature reviewed in Chapter Two (Section 2.5.2) similarly identifies enhanced flexibility, personalised learning, and improved student engagement as the primary benefits of blended learning (Alammary et al., 2014; Golden, 2020; Weller, 2020). Against this backdrop, the interview data revealed a more complex and divided picture of Perceived Usefulness.

P3 (lecturer, Informatics and Design) reported a positive transformation in student agency:

> I've seen a positive impact because the student doesn't solely rely on the lecturer standing in front of them. It encourages self-confidence, self-improvement, self-study, and motivation. That aligns with what blended learning is supposed to do.

P1 (lecturer, Education) similarly acknowledged benefits in terms of flexibility but noted the complexity of balancing modes:

> I think it makes it easier, depending on the programme. All the work is given to students online, and everything is available to them. But then I still have to be there face-to-face. So, it's not less work; it's different work.

In contrast, P7 (curriculum officer and lecturer, Education) raised a structural concern about the alignment between blended tools and professional vocational education:

> The reality is that blended learning does not necessarily align with academic goals. At the coal face of teaching, I don't think it does. You cannot develop a teacher's classroom practice through a screen. There are things that need to be embodied.

P7's critique highlights a dimension of the Perceived Usefulness construct that the TAM (Davis, 1989) does not fully address: curriculum fit. The TAM conceptualises Perceived Usefulness as a function of the individual's assessment of performance enhancement; it does not account for disciplinary or ontological incompatibilities between a technology and the knowledge it is being used to teach. In professional and vocational education contexts, as Garrison and Vaughan (2008) observe, blended learning works best when the digital component serves the development of reflective practice rather than replacing embodied professional formation. The UoT's implementation did not consistently differentiate between disciplines in which blended approaches were genuinely advantageous and those in which they were structurally incompatible with the curriculum's core requirements, a gap between the institution's policy aspirations and the disciplinary realities encountered by individual lecturers.

5.6.3 Six Stages of Concern and Developmental Adoption: A Non-Linear CBAM Trajectory

Hall and Hord (2015) describe the CBAM Stages of Concern as a developmental progression through which individuals move as they encounter, learn about, and integrate an innovation into their practice. While the model acknowledges that this progression is not strictly linear, it assumes a broadly sequential development from Awareness through to Refocusing. The interview data at the UoT revealed a markedly non-linear trajectory, shaped by the pandemic's crisis conditions and the uneven nature of institutional support.

Stage 0 – Awareness. P4 (lecturer, Informatics and Design) described a state of limited initial awareness of the institutional transition:

> I was not part of the selection process. I was formally told that the university was transitioning to an online space and an LMS. That was the first I knew of it.

This response reflects the CBAM Awareness stage precisely (Hall & Hord, 2015): limited concern or involvement with the innovation prior to its institutional mandate. The top-down nature of the implementation process identified in subtheme 5.5.3 meant that many lecturers were moved directly from Awareness to the Management stage without the developmental support typically afforded by the Informational and Personal stages.

Stage 1 – Informational. P1 (lecturer, Education) reflected on the search for adequate information:

> I would have loved proper formal training at the time, especially when we had fully online classes. I did attend an online training session with the institution, but I was already using the system before we even discussed how to use it.

This account, consistent with the Informational Stage of Concern (Hall & Hord, 2015), reveals a temporal mismatch: the institution deployed the system before providing adequate informational orientation, forcing lecturers to seek information reactively rather than proactively. This is a direct consequence of the crisis-compressed implementation timeline, which bypassed the natural developmental pace that the CBAM assumes.

Stage 2 – Personal. P1 (lecturer, Education) reflected on how the shift affected professional identity and workload:

> It made it really easy in some ways; we are not constantly standing in front of a class for hours. But it altered how I understood myself as a teacher. I had to figure out who I was in an online space.

The personal stage concern (Hall & Hord, 2015) about how the innovation would affect the individual, their competence, workload, and professional identity is clearly present in this account. The identity dimension of the personal stage is particularly relevant in professional vocational education contexts, as P7's earlier account (5.6.2) demonstrated.

Stage 3 – Management. P2 (lecturer, Informatics and Design) described the logistical complexity of dual-mode delivery:

> The general challenges were access to the Internet, access to a computer or even a mobile device, and load-shedding. These are management concerns: how do you schedule around load-shedding? How do you manage a class when half the students are offline?

Management stage concerns (Hall & Hord, 2015) are centred on operational logistics: scheduling, resource allocation, and the practical management of innovation use. The South African load-shedding context introduced a management challenge entirely absent from Rogers' (2003) original DOI framework and not anticipated by the HEPS policy (CHE, 2025), reinforcing the need for contextually situated adaptations of change management models.

Stage 4 – Consequence. P5 (lecturer, Informatics and Design) shifted focus from personal concerns to student outcomes:

> Students who consistently engage with online components tend to perform better on formative assessments and show greater preparedness for face-to-face activities. But those who lack access or self-discipline fall further behind. The concern is about equity.

The Consequence stage (Hall & Hord, 2015) marks a developmental shift in which the individual's focus moves outward from personal anxieties towards the impact of the innovation on students. P5's account is analytically significant because it connects the Consequence stage concern to the structural access inequality identified in subtheme 5.5.5: the consequence that most concerned advanced adopters were not pedagogical quality but equity.

Stage 5 – Collaboration. P3 (lecturer, Informatics and Design) described the development of peer learning communities:

> The institution provided training on Blackboard and online assessment tools. Some faculties were encouraged to engage in peer mentoring and share best practices. That peer support was more valuable than the formal training, honestly.

Collaboration stage concerns (Hall & Hord, 2015) involve coordinating with colleagues and building shared practice. The emergence of informal peer mentoring networks at the UoT represents a spontaneous institutional response to the limits of formal training, consistent with Bandura's (1986) social learning theory and with Rogers' (2003) observation that early adopters function as opinion leaders who accelerate adoption within the social system.

Stage 6 – Refocusing. P6 (support staff and part-time lecturer, Engineering) described systemic platform evolution:

> We were just using Blackboard before. Now we have incorporated Teams, plus Blackboard, plus Excel for engineering calculations. There are many other systems you can use with Blackboard. We are always looking for what works better.

Refocusing (Hall & Hord, 2015), the most advanced Stage of Concern, is characterised by a desire to improve the innovation or find better alternatives. P6's account clearly demonstrates this orientation: the concern has shifted from "how do I use this system?" to "how do I make the system work better for my students?" This progression corresponds to the Refinement and Integration LoU in the CBAM framework (Hall & Hord, 2015) and to the DOI's Routinising stage (Rogers, 2003), where the innovation becomes embedded in institutional practice and is continuously improved rather than merely maintained.

Collectively, the CBAM analysis reveals that the UoT's adoption of blended learning did not follow the model's prescribed stage-by-stage developmental progression. The crisis conditions of the pandemic led many lecturers to skip stages, experience multiple stages simultaneously, or regress to earlier stages under increased pressure. This finding directly qualifies the applicability of the CBAM in crisis-driven, involuntary adoption contexts, making a theoretical contribution that is further examined in the synthesis (Section 5.9).

5.6.4 Flexibility in Learning: The Organic Emergence of the Flipped Classroom

The institution's multimodal guidelines (UoT, 2020) did not prescribe any specific pedagogical model for blended delivery, leaving lecturers to determine their own approach to combining online and face-to-face instruction. This absence of prescriptive pedagogical guidance created a space in which some lecturers organically developed approaches that closely resembled the flipped classroom model described in the literature review (Chapter Two, Section 2.3.4). Bergmann and Sams (2012) define the flipped classroom as a model in which content delivery moves outside the classroom while face-to-face time is repurposed for application, discussion, and collaborative problem-solving. Hamdan et al. (2013) further argue that this approach enhances active learning and promotes critical thinking during contact sessions.

P1 (lecturer, Education) described an independently developed flipped approach:

> In my classes, I prefer online classes to focus more on theory, and when we meet face-to-face, we can do the practical's aligned with the theory covered online. That is where I am free to use whatever method I prefer, groups or individual work.

P3 (lecturer, Informatics and Design) described a similar reorganisation driven by disciplinary need:

> My teaching is now more structured. I use Blackboard quizzes and discussion forums for theory and feedback. My face-to-face sessions in IT are designed for practice – coding and working with real IT systems. The platform does the theory; the contact does the practice.

P2 (lecturer, Informatics and Design) reported a student-driven observation that affirmed the relative advantage of this approach:

> A couple of days after teaching about a new IT product, the student comes back and tells you: "Sir, I've read up on this. I did some research." They can sometimes tell you more about the product or service because they engage independently. That is what the flip is supposed to do.

These accounts demonstrate that when lecturers progressed to the CBAM Refinement and Refocusing stages (Hall & Hord, 2015), they leveraged the institutional multimodal framework to develop sophisticated, student-centred pedagogical approaches. The DOI concept of relative

advantage (Rogers, 2003) is most evident here: the lecturers who observed concrete improvements in student engagement and independent learning were also those who reported the highest levels of the TAM construct Perceived Usefulness regarding blended learning tools (Davis, 1989). Stein and Graham (2020) note that medium- and high-impact blended approaches – those involving curriculum redesign rather than simple content supplementation – require continuous assessment and refinement. The organic emergence of flipped classroom practice at the UoT represents precisely this kind of medium- to high-impact redesign, achieved not through institutional prescription but through individual pedagogical initiative.

5.6.5 Institutional Support Structures: Technical Infrastructure and Its Pedagogical Limits

The institution's documentation confirmed the provision of a 24-hour CTS technical support service, the establishment of the Centre for Innovation in Learning and Teaching (CIET), and ongoing ICT practitioner-facilitated staff development programmes (UoT, 2020). The *White Paper on e-Education* (Department of Education, 2004) further positioned ICT support infrastructure as a national educational priority. Uhomoibhi (2006, p. 5) confirms that "the availability of strong institutional support is crucial for e-learning deployment and success" – a claim borne out by the literature reviewed in Chapter Two (Section 2.5.2.3) through the UFS and UCT institutional examples.

The interview data affirmed that institutional support structures effectively built technical confidence. P6 (support staff, Engineering) described the CTS system:

> We had a 24-hour chat where students or facilitators could contact CTS for any technical support. There was also staff development for ICT practitioners, who helped all lecturers get up to speed with technical tools through an ongoing online programme.

P7 (curriculum officer and lecturer, Education) acknowledged the value of differentiated support:

> Lecturers could provide input on their programme needs, and different support structures across faculties had to be considered. Someone teaching in management would need different support than someone teaching in engineering or the sciences. The institution tried to respond to that.

However, the same participant drew a critical distinction between the operational and pedagogical dimensions of support:

> The support was for the system. Not for the teaching. Those are two very different things. I can use Blackboard perfectly and still not know how to teach online. The institution addressed the first problem, not the second. (P7)

This distinction is analytically crucial. The CBAM framework (Hall & Hord, 2015) positions support structures as the institution's primary mechanism for moving lecturers along the Stages of Concern and LoU. The UoT's support infrastructure was well-calibrated to address management-stage concerns about operational logistics and tool competence. It was, however, inadequately designed to support the higher-order developmental needs associated with the Consequence and Refocusing stages: the pedagogical redesign of courses, the development of discipline-specific online assessment strategies, and the cultivation of a reflective teaching practice in digital environments. This gap between the HEPS-prescribed standards (CHE, 2025) and the institutional support as experienced by participants represents the meso-level structural weakness that constrained the depth of pedagogical transformation documented in Theme 3.

5.7 Theme 3: Pedagogical Transformation (Micro Level)

Theme 3 addresses Research Question 3 by examining the ways in which blended learning integration influenced teaching methodologies at the UoT. The theme is interpreted primarily through TAM (Davis, 1989), with complementary reference to CBAM's LoU and Stages of Concern (Hall & Hord, 2015) and DOI's observability and routinising constructs (Rogers, 2003). The key analytical argument of this theme is that pedagogical transformation occurred on a spectrum from superficial compliance at one end to sophisticated redesign at the other, and that the position of each lecturer on this spectrum was determined primarily by the quality of institutional support (Theme 2) and the degree to which their individual adoption was attitudinally driven rather than compliance-driven (TAM).

5.7.1 Classroom Redesign: From Compliance to Constructivist Redesign

The institution's multimodal guidelines (UoT, 2020) called for a shift from teacher-centred to student-centred approaches in blended delivery. The constructivist learning theory reviewed in Chapter Two (Section 2.3.2) provides the pedagogical underpinning for this aspiration:

HmeloSilver et al. (2013) argue that constructivism actively engages learners in knowledge construction through lived experience and social interaction. The Alammary et al. (2014) blended learning design framework, reviewed in Chapter Two (Section 2.5.1), provides a practical taxonomy for assessing the depth of classroom redesign: from low-impact supplementation to high-impact ground-up redesign.

The interview data revealed a range of classroom redesign approaches that map directly onto the taxonomy of Alammary et al. (2014). P1 (lecturer, Education) described an approach consistent with a medium-impact blend:

> In my classes, I now use online for theory and face-to-face for practical's. That is a different structure from what I used to do. I use groups, individual work, whatever suits the session. The face-to-face time has become much richer because the basics are already done online.

P3 (lecturer, Informatics and Design) described a method that approaches the high-impact blend model:

> My teaching is now more structured, with preparation for online activities. I use online quizzes and discussion forums through Blackboard for feedback, but practical's and summative assessments also need to be done in person. Since I'm in IT, my face-to face sessions focus on coding and working with practical IT systems. Each part of my course has a deliberate mode assignment.

P6 (support staff and part-time lecturer, Engineering) described the structural constraints on redesign in a professionally mandated context:

> For me, in the Faculty of Engineering, face-to-face should really be the basis of how I use blended learning. The online should just be a support. But because it's easier to access materials online, I tend to use them more even though ECSA requires contact hours.

Rogers (2003) identifies change agents as individuals who lead the effort to persuade early adopters to embrace an innovation, with a primary mission to expedite and broaden diffusion. In the context of the UoT, the lecturers who achieved genuine classroom redesign, P1, P3, and P5, functioned as change agents within their faculties, demonstrating what high-impact blending looks like in practice and providing models for their colleagues. This corresponds to

the CBAM LoU framework (Hall & Hord, 2015): those who progressed to the Refinement and Integration levels were not merely using the technology but actively redesigning their curriculum around its affordances. The remaining lecturers, those at Mechanical Use and Routine levels, continued to upload existing materials without reconsidering the underlying pedagogical design, a pattern consistent with the literature on superficial technology adoption (Straub, 2009).

5.7.2 Assessment Evolution: Digital Tools, Academic Integrity, and Observability

The institution's assessment policies, cross-referenced with the multimodal guidelines (UoT, 2020), encouraged the development of online assessment tools, including quizzes, discussion forums, and continuous assessment activities, to supplement traditional examinations. The literature reviewed in Chapter Two (Section 2.3.3) identifies a range of assessment affordances across e-learning platforms, including enhanced feedback loops and self-paced learning (Lalima & Dangwal, 2017). At the same time, Youssef and Dahmani (2008) warn of the challenges to academic integrity posed by online assessment, including browser-switching and collaboration during unsupervised online tests.

P7 (curriculum officer and lecturer, Education) described the creative assessment development that blended learning enabled:

> I work on being more creative with the assessments. They have to create something, a bulletin board, a video, a physical artefact, and they upload it. It's not just regurgitating. The assessment demonstrates engagement, not just recall.

P5 (lecturer, Informatics and Design) described how continuous online assessment improved formative feedback:

> I conduct low-stakes online quizzes to monitor student engagement and overall understanding. Blended learning helps me identify learning gaps early and respond more effectively during face-to-face sessions. I can see who is not engaging before the exam, not after.

On the question of academic integrity, P2 (lecturer, Informatics and Design) described the institutional tools deployed:

> The institution has mechanisms to prevent plagiarism or cheating. The invigilator app

> blocks access and monitors activity. The browser locks down the test so a student can only open the assigned assessment. Questions can be randomised for each student so that no two students see the same sequence.

From a TAM perspective (Davis, 1989), digital assessment tools were perceived as useful precisely because of their monitoring and feedback functions, providing lecturers with real-time visibility into student engagement and academic progress. The DOI concept of observability (Rogers, 2003) is directly implicated here: the tangible, visible results of online assessment completion rates, quiz scores, and engagement data provided concrete evidence of the blended learning model's value, strengthening the perceived relative advantage of the system for those who used it. However, Kitahara et al. (2011) note that academic dishonesty in hybrid learning environments continues to grow despite institutional investment in monitoring tools, and the interview data confirm that this concern persisted at the UoT despite the availability of lockdown browsers and randomisation tools. The tension between assessment innovation and academic integrity management represents a genuine unresolved challenge in the institution's implementation, consistent with the global literature (Youssef & Dahmani, 2008).

5.7.3 Student Engagement: The Two-Screen Dilemma and Uneven Participation

The institution's multimodal guidelines (UoT, 2020) positioned blended learning as a mechanism to increase student engagement and participation. The literature reviewed in Chapter Two (Section 2.5.2.4) documents similar aspirations, with Hiltz and Turoff (2002) arguing that increased interactive collaboration is needed in online classes to achieve meaningful learning. Against these aspirations, the interview data presented a consistently complex and, in many respects, sobering picture of student engagement in practice.

P5 (lecturer, Informatics and Design) described positive engagement outcomes among well-resourced students:

> In the online class, students can engage via voice or typing. Blended learning has enabled students to participate through online discussions, quizzes, and reflective tasks. The flexibility has contributed to more consistent engagement for those who have access and the self-regulation skills.

However, P4 (lecturer, Informatics and Design) reported structural challenges that undermined the aspirational engagement narrative:

> The recent complaint from students is that they are struggling in the online class. Sometimes my network breaks, and I don't know until they say, "Sir, we've lost you." So basically, the problem is data and infrastructure. The engagement aspiration assumes a stable connection. That is not a safe assumption in our context.

P7 (curriculum officer and lecturer, Education) identified the psychological dimension of online disengagement:

> On a screen, students feel quite isolated. They don't feel comfortable talking. This is the type of students we have, students from disadvantaged backgrounds who are not used to asserting themselves in formal academic settings. The screen makes that worse, not better.

P3 (lecturer, Informatics and Design) described the operational challenge of monitoring genuine engagement:

> When we were fully online, students had ways of blocking you out. They can mute you, have coffee, and watch TV. You are never really certain they are working or just online to mark the register.

The weight of the interview evidence does not support the institutional aspiration of uniformly enhanced engagement. Rather, it reveals a conditional pattern: students with access, digital literacy, and self-regulatory capacity experienced genuine engagement benefits, while those without these resources experienced amplified exclusion. This is precisely the concern articulated in the Chapter Two review (Section 2.5.2.1): Ndzinisa and Dlamini (2022) argue that blended learning in South African higher education risks reinforcing existing inequalities unless equity of access is systematically addressed. The DOI attribute of complexity (Rogers, 2003), the degree of difficulty in understanding and using an innovation, is directly implicated in the engagement patterns observed: for students from under-resourced backgrounds, the complexity of managing digital participation was a genuine barrier rather than a temporary inconvenience. TAM's Perceived Ease of Use construct (Davis, 1989) similarly explains why students who found the online environment technically and cognitively burdensome were less likely to engage consistently, regardless of the quality of the content provided.

5.7.4 Student Performance Outcomes: Self-Reported Improvements and the Limits of Evidence

The interview data on student performance must be approached with significant methodological caution. As established in Chapter Four (Section 4.11.1), all performance claims in this study are based on participants' self-reports and were not independently triangulated with institutional academic records. This limitation is not unique to this study: the broader literature reviewed in Chapter Two (Section 2.5.2.3) similarly acknowledges that much of the evidence for blended learning's positive impact on student performance is based on lecturer perceptions and institution-level aggregate data rather than rigorously controlled comparisons (Alammary et al., 2014). Within this evidential constraint, the findings are presented as subjective perceptions consistent with the interpretivist paradigm of the study (Chapter Four, Section 4.2).

P3 (lecturer, Informatics and Design) described a conditional improvement in outcomes:

> What I've noticed is that students who consistently use Blackboard and engage with online content perform better. But the challenge remains due to poor access or a lack of self-discipline. Those with a lack of self-discipline tend to struggle more, and you can't always tell from the grades whether that's about the blended approach or about the student's circumstances.

P5 (lecturer, Informatics and Design) described improvements attributable to resource availability:

> Student performance is often positive when online and traditional classes run simultaneously. Assessments and marks have shown a significant change, and I think that is mostly aligned with having the resources at their disposal.

P1 (lecturer, Education) reported striking but unverifiable performance outcomes:

> I have a 90% to 99% pass rate when implementing both practices. Blended learning has personally helped my marks.

The self-reported nature of P1's performance claim requires explicit acknowledgement: without triangulation against institutional grade records, this figure cannot be accepted as empirical evidence of blended learning's effectiveness. It is interpreted here as evidence of

P1's high Perceived Usefulness (TAM; Davis, 1989), a strong, positive subjective evaluation of the model's impact on their specific teaching context, rather than as verified institutional data. This distinction is important for the integrity of the study's conclusions. The broader finding is that lecturers who perceived blended learning as genuinely useful reported positive student outcomes, while those who experienced structural access barriers for their students reported less positive student outcomes. The DOI concept of compatibility (Rogers, 2003) helps explain this pattern: where blended learning was compatible with the curriculum structure and student profile of a specific programme, it produced perceived performance benefits; where it was incompatible, due to access constraints or disciplinary misfit, the perceived benefits were more limited.

5.7.5 Adaptation Challenges: Workload, Creativity, and the Limits of Institutional Support

The multimodal guidelines (UoT, 2020) acknowledged increased preparation demands on lecturers but did not provide concrete mechanisms for relieving workload. The HEPS framework (CHE, 2025) implicitly addresses this through its intentional design of time, pace, and space criteria, which require institutions to plan for the workload implications of blended delivery. The interview data, however, revealed that the workload burden of adapting to blended learning was consistently underestimated at the institutional level, creating a significant challenge for lecturers attempting to sustain quality across both delivery modes.

P7 (curriculum officer and lecturer, Education) articulated the workload paradox:

> It will alter the way I teach when it needs to be online, as compared to what I would do face-to-face. It's a whole change in how I deliver, what I deliver. That is exhausting. And it is doubled because both modes must exist simultaneously and at the same quality.

P3 (lecturer, Informatics and Design) framed the challenge structurally:

> You can look at it as doing double the work because how you structure online and face to-face classes should, in essence, be different. They are not the same lesson in two formats. They are two different pedagogical designs.

P1 (lecturer, Education) identified the risk of losing authentic engagement in the process of over-production:

> There is so much planning involved that, as a facilitator, you can forget to truly engage. You are so busy creating material to reflect the real classroom that you don't get to be present in the actual classroom.

These accounts expose a tension at the heart of the UoT's blended learning model that the multimodal guidelines (UoT, 2020) did not resolve. Sappey and Relf (2010) argue that educational change without meaningful workload support compromises staff motivation and professional identity, a finding that aligns with the CBAM Personal and Management Stages of Concern (Hall & Hord, 2015). When lecturers experience the adaptation demands of blended learning as institutionally unrecognised, the TAM construct of Perceived Usefulness (Davis, 1989) is weakened: the perceived cost of use outweighs the perceived benefit. The institutional response – which included short pre-recordings, modular quizzes, and zero-rated LMS access – addressed the technical dimensions of workload but did not provide the curriculum design support, time allocation, or professional recognition that would transform adaptation challenges into sustainable practice.

The third theme examines the UoT's implementation of blended learning that transcends technological adoption into pedagogical practice. The findings collected suggest that the institution's transformative degree explored classroom design, student engagement and assessment shifts. Consequently, these changes posed challenges, including adaptation and pedagogical integration. The third theme mirrors the connections among innovation diffusion (DOI), lecturer acceptance (TAM), and developmental change (CBAM) as lecturers transitioned from compliance-driven adoption to pedagogical redesign.

5.8 Conceptual Model of Institutional Transformation through Blended Learning

The conceptual model presented in Figure 5.2 synthesises the three-dimensional structure of the UoT's blended learning implementation, mapping the interrelationships between the macro-level decision-making processes identified in Theme 1, the meso-level implementation strategies of Theme 2, and the micro-level pedagogical outcomes of Theme 3. The model captures the cumulative and directional nature of institutional transformation: each dimension is a necessary precondition for the next, and fragmentation at any level produces uneven outcomes across the whole.

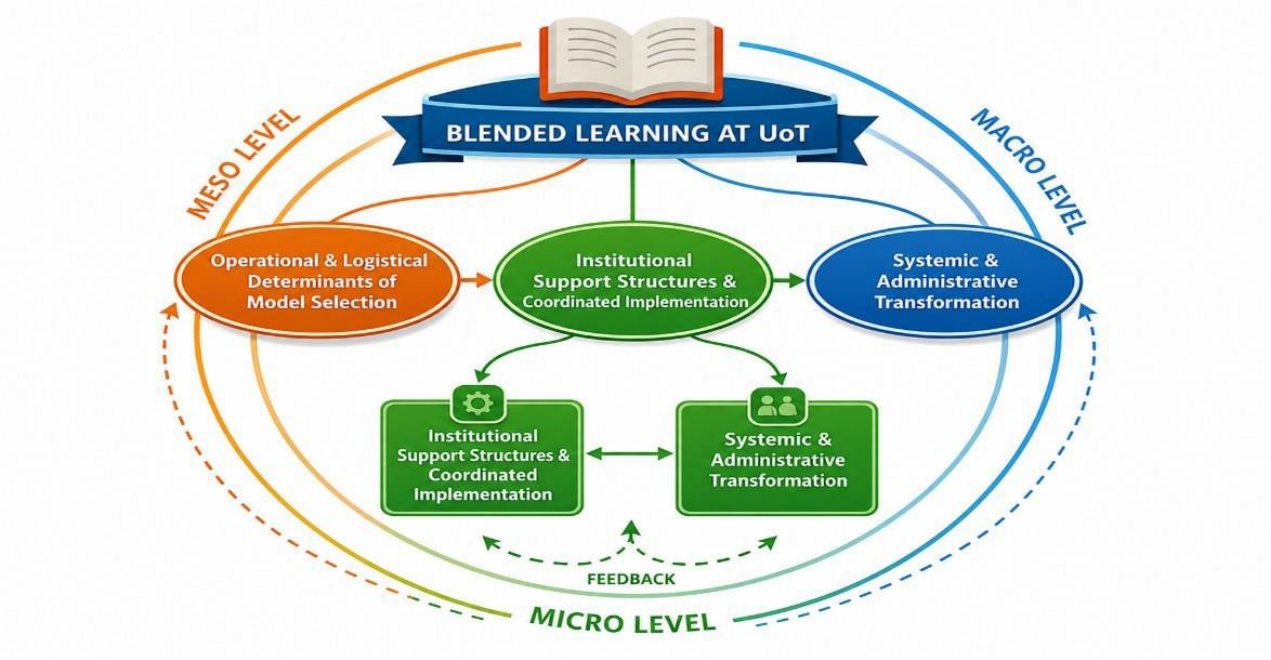


Figure 5.2: Conceptual Model of Institutional Transformation through Blended Learning at the UoT

Source: Generated using ChatGPT (OpenAI, 2025) based on author's prompts

Figure 5.2 depicts three interlinked dimensions. The operational and logistical layer (macro) encompasses infrastructure provision, policy development, LMS selection, and the DHET mandate context, framed through DOI. The institutional support layer (meso) encompasses professional development, CIET support, the CTS service, HEPS compliance, and staff development policies, framed through the CBAM. The pedagogical transformation layer (micro) encompasses classroom redesign, assessment evolution, engagement strategies, and adaptation responses, framed through the TAM. Directional arrows indicate the causal flow from macro to meso to micro, while feedback arrows indicate that micro-level challenges (adaptation, workload, engagement) inform meso-level support refinements and, ultimately, macro-level policy revisions.

5.9 Synthesis of Findings and Theoretical Integration

The meta-finding of this study is that institutional support is the central determining factor in the depth and sustainability of blended learning transformation at the UoT. When institutional support is robust, coherent, and pedagogically oriented, adoption becomes transformational. When it is technically focused, crisis-reactive, and pedagogically shallow, adoption remains

compliance-driven and superficial. This meta-finding bridges all three themes and explains the primary sources of variation in adoption depth documented across the participant accounts.

The causal chain of the study's three themes can be summarised as follows. The crisis-driven model selection process of Theme 1, characterised by forced diffusion, compressed deliberation, and survival-oriented compatibility, created the conditions for a rapid but structurally shallow institutional adoption. This rapid adoption created an urgent demand for professional development and support (Theme 2); however, the speed and crisis-orientation of the implementation meant that the support provided addressed technical anxieties (CBAM Management stage) rather than pedagogical needs (CBAM Consequence and Refocusing stages). The resulting gap between technical competence and pedagogical redesign capacity constrained the depth of classroom transformation (Theme 3), producing a spectrum of outcomes from sophisticated, student-centred redesign among advanced adopters to compliance-level content uploading among those at the Mechanical Use level.

The three theoretical frameworks are supported, qualified, and in some cases challenged by the findings as follows.

The DOI framework (Rogers, 2003) is partially supported. The constructs of compatibility, relative advantage, and observability all played demonstrable roles in the adoption process. However, the study's most significant theoretical contribution with respect to DOI is its evidence of forced diffusion: a form of adoption driven by external crisis rather than perceived relative advantage, in which the voluntary choice-based assumptions of the S-curve are structurally impossible. The South African load-shedding context and the DHET mandate further qualify DOI's applicability in developing-country, crisis-driven adoption scenarios, an extension of Straub's (2009) criticism that DOI inadequately accounts for structural inequalities and cultural specificities.

The TAM (Davis, 1989) is partially supported. The Perceived Usefulness and Perceived Ease of Use constructs clearly shaped individual adoption behaviour. However, the study reveals a temporal dimension that the TAM's static framework does not capture in a compulsory, crisis driven adoption context: the attitudinal determinants of the TAM become relevant only in the post-adoption phase, once lecturers begin to evaluate the technology through actual use rather than prior choice. Furthermore, the study reveals a disciplinary dimension to Perceived Usefulness that the TAM's individual-cognitive model does not account for: in professional

and vocational education, the question of curriculum fit – whether blended tools are compatible with the epistemology and pedagogy of a specific discipline – is a critical mediating variable between technology availability and genuine pedagogical integration.

The CBAM (Hall & Hord, 2015) is the framework most significantly challenged by the findings. The model's assumption of a broadly sequential, developmental progression through the Stages of Concern was disrupted by the pandemic's crisis conditions, which collapsed the developmental timeline and forced simultaneous, non-linear engagement with multiple stages. The study's finding that lecturers were moved directly from Awareness to Management without adequate support for the Informational and Personal stages represents a structural failure of the institutional support system, with direct implications for the depth of adoption achieved. The CBAM remains, however, the most diagnostically powerful of the three frameworks for retrospective mapping of individual adoption trajectories. Its stages and LoU provide a precise vocabulary for describing where individuals were at different points in the process and what kinds of support, they needed but did not receive.

Together, the three frameworks provide a multi-level account of the UoT's blended learning adoption that is more analytically complete than any single framework could deliver. The DOI framework explains why the adoption happened the way it did (institutionally mandated, crisis driven, compatibility-based). The CBAM explains what the adoption experience was like for individual lecturers (non-linear, anxiety-driven, technically supported but pedagogically under supported). The TAM explains the cognitive mechanism through which some lecturers transformed compliance into genuine integration (by accumulating evidence of Perceived Usefulness), while others did not (due to persistent Perceived Ease of Use barriers and insufficient Perceived Usefulness incentives).

5.10 Integrated Thematic Model of Blended Learning Implementation

The integrated thematic model presented in Figure 5.3 provides a comprehensive visual representation of the study's analytical architecture and findings. It depicts the three -theme structure, the theoretical frameworks applied at each level, the causal direction of institutional transformation, and the feedback loops through which micro-level challenges inform meso- and macro-level adjustments.

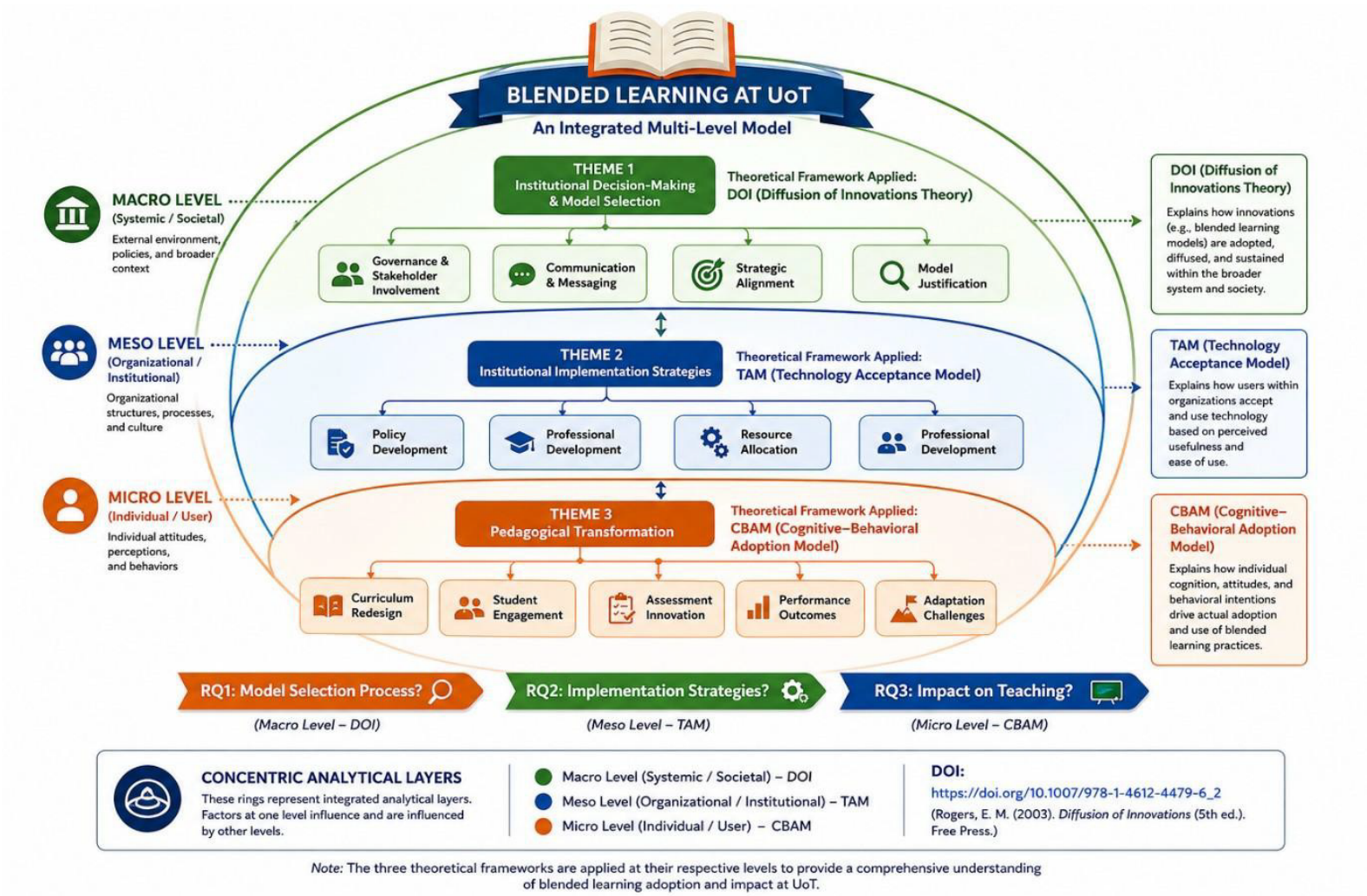


Figure 5.3: Integrated Thematic Model of Blended Learning Implementation at the UoT

Source: Generated using ChatGPT (OpenAI, 2025) based on author's prompts

Figure 5.3 shows three concentric analytical layers representing the macro (Theme 1, DOI), meso (Theme 2, CBAM), and micro (Theme 3, TAM) levels. Directional arrows from macro to meso to micro indicate the causal flow of institutional transformation. The five subthemes of Theme 1 are mapped onto the macro ring; the five subthemes of Theme 2 onto the meso ring; and the five subthemes of Theme 3 onto the micro ring. Feedback arrows from micro to meso and from meso to macro represent the adaptation loop through which lecturers' challenges inform institutional support refinement and policy revision respectively. The meta finding that institutional support determines the depth of transformation is indicated at the centre of the model, where all three levels converge.

5.11 Chapter Summary

This chapter presented, analysed, and critically discussed the study's thematic findings through a dual inductive and deductive analytical approach, integrating documentary and interview data to distinguish between what was institutionally intended and what was enacted. Three themes and 15 subthemes were inductively constructed from the data and deductively interpreted through the integrated theoretical framework of DOI (macro), the CBAM (meso), and the TAM (micro).

Theme 1 revealed that the UoT's blended learning model was selected through forced diffusion, rather than deliberate pedagogical planning, driven by pandemic-related crisis rather than compatibility evaluation. Theme 2 demonstrated that the institutional implementation strategy was technically comprehensive but pedagogically narrow, successfully moving lecturers through the lower CBAM Stages of Concern but failing to provide the curriculum redesign support needed to advance them to higher-order pedagogical transformation. Theme 3 documented a spectrum of classroom transformation, from sophisticated, high-impact redesign among pedagogically engaged adopters to compliance-level content migration among those at the Mechanical Use level. This variation was mediated by the quality of institutional support and the degree to which individual adoption was attitudinal rather than compliance-driven.

The meta-finding that institutional support is the central determinant of the depth of blended learning transformation integrates all three themes and extends the three theoretical frameworks by contextualising their assumptions within the specific conditions of crisis driven, resource-constrained adoption in South African higher education. The findings challenge key assumptions of DOI (voluntary diffusion), the CBAM (linear stage progression), and the TAM

(Attitudinal adoption) in compulsory, crisis-driven contexts and propose a series of contextually grounded qualifications for each framework.

Chapter Six concludes the dissertation by reflecting on the study's contributions to theory, practice, and policy and situating the findings within the broader discourse on digital transformation in South African higher education.

CHAPTER 6:
CONCLUSIONS, CONTRIBUTIONS, AND RECOMMENDATIONS

6.1 Introduction

This chapter concludes the dissertation by bringing together the study's principal findings, reflecting on their practical significance, and situating them within the broader discourse on digital transformation in South African higher education and the TVET sector. The chapter revisits the study's focus, summarises the key findings across the three themes, discusses them in relation to the research questions, affirms and critically evaluates the theoretical frameworks, and presents implications for practice, study limitations, recommendations for further research, and an overarching conclusion.

The study investigated the implementation of blended learning at a selected UoT in South Africa's Western Cape province, examining how the institution selected its blended learning model, how it was implemented, and how the integration of blended learning influenced teaching methodologies. Data were generated through semi-structured interviews with seven participants and a systematic documentary analysis of institutional and national policy sources, analysed through both inductive thematic analysis and deductive interpretation using three integrated theoretical frameworks: DOI, the CBAM, and the TAM.

6.2 Review of the Focus of the Study

The study was motivated by two imperatives. Scholarly, the existing South African literature on blended learning has been predominantly descriptive, documenting challenges rather than analysing the institutional processes through which blended learning is selected, implemented, and internalised. A theoretically integrated, multi-level study of this process represented a significant gap. Practically, the researcher's background as a TVET lecturer, working within a blended learning programme developed in partnership with the UoT under study, raised questions about how such a model could be adapted for vocational contexts characterised by similar resource constraints, student profiles, and curriculum mandates. The study therefore served two complementary purposes: to generate a rigorous account of blended learning implementation at the UoT and to produce transferable insights for TVET colleges.

6.3 Summary of Findings

The study produced three thematic findings, each addressing one research question and interpreted through the corresponding theoretical framework. The overarching meta-finding is that institutional support is the central determinant of blended learning transformation depth: robust, pedagogically oriented support produces genuine transformation; technically focused, crisis-reactive support produces compliance-driven adoption that does not meaningfully alter teaching practice.

6.3.1 Theme 1: Institutional Decision-Making and Model Selection (Macro Level – DOI)

Although the institution's strategic documents projected a narrative of deliberate digital transformation, the actual model selection was driven by crisis management rather than pedagogical planning. Blackboard was adopted because it already existed within the institution's infrastructure, not because it was evaluated as the best pedagogical fit. This process was characterised as forced diffusion: an adoption that departed fundamentally from the voluntary, deliberate nature assumed by the DOI framework. The pandemic collapsed the gradual S-curve of diffusion, compelling simultaneous adoption across all staff categories without the deliberative time that meaningful adoption requires. The selection process also failed to adequately address the digital divide and infrastructure barriers, such as data costs, device access, and load-shedding, and it created access inequalities that the institution's interventions only partially mitigated.

6.3.2 Theme 2: Institutional Implementation Strategies (Meso Level – CBAM)

The institution's implementation strategy combined policy directives, technical training, peer mentoring, and 24-hour technical support, enabling rapid and functionally sound adoption. However, the CBAM analysis revealed that these strategies addressed only the lower-order developmental concerns of staff awareness, information-seeking, and operational management, while falling short of supporting the higher-order developmental stages required for genuine pedagogical transformation. Professional development equipped lecturers to navigate digital platforms but not to redesign their curricula for blended delivery. Many lecturers consequently remained at the Mechanical Use and Routine levels, uploading existing content rather than reconsidering their pedagogical approach. The crisis timeline further disrupted the developmental progression, moving lecturers directly from awareness to operational

management without the intermediate developmental support that the CBAM assumes is necessary.

6.3.3 Theme 3: Pedagogical Transformation (Micro Level – TAM)

Blended learning produced genuine but uneven pedagogical transformation across the institution. Lecturers who progressed to the CBAM Refinement and Refocusing levels redesigned their courses along flipped classroom lines, developed formative and creative assessment strategies, and used digital tools to monitor student engagement in real time. Lecturers who remained at the Mechanical Use level adopted technology as an additional delivery channel without reconsidering the underlying pedagogical design. The TAM constructs of Perceived Usefulness and Perceived Ease of Use explained this divergence: those who observed concrete teaching benefits invested in deeper integration, while those who perceived the technology primarily as additional workload did not. The most consistent transformation across all participants was the shift from summative to continuous formative assessment. Student engagement and performance were shaped significantly by access inequality. The finding that blended learning amplified rather than closed the gap between well-resourced and under-resourced students was the most urgent unresolved challenge identified by the study.

The originality of this study lies in demonstrating that blended learning implementation is best understood as a multi-level institutional change process rather than merely a technology adoption process. By integrating DOI, CBAM and TAM within a single analytical framework, the study explains not only why institutions adopt blended learning, but also how implementation evolves and why pedagogical transformation remains uneven.

6.4 Discussion of Findings in Relation to the Research Questions

6.4.1 Research Question 1: How did the UoT Select and Identify Suitable Blended Learning Models for Implementation?

The model selection process was primarily crisis-driven rather than pedagogically deliberate. The institution's strategic documents indicated an aspiration toward compatibility-aligned digital transformation, but interview data revealed that the actual selection was determined by three pragmatic factors: the pre-existing presence of Blackboard as the institutional LMS, the national mandate for remote learning, and the imperative of keeping the academic year intact.

Compatibility operated as a constraint rather than a deliberate evaluation criterion. Blackboard was adopted because it was already in place, not because it was deemed the optimal pedagogical choice. No formal comparative evaluation of platforms or design approaches was documented, and no participant reported being involved in such a process. The UoT's blended learning model was therefore inherited from its pre-pandemic infrastructure rather than genuinely selected, which has significant implications for long-term pedagogical fit and sustainability.

6.4.2 Research Question 2: What Institutional Strategies did the UoT Employ to Adopt and Implement Blended Learning Approaches to enhance teaching and learning?

The institution deployed a multi-layered implementation strategy that was technically functional and institutionally responsive, enabling rapid adoption and establishing a sustainable operational infrastructure. However, the strategy was pedagogically shallow: it addressed staff's operational anxieties without providing the curriculum redesign support needed for genuine pedagogical transformation. The CHE's (2025) HEPS quality assurance criteria specify staff digital competence and pedagogical redesign capacity as institutional obligations; the data confirm that these were not consistently met. The most significant gap was the absence of sustained, discipline-specific professional development that moved beyond tool proficiency towards curriculum-level redesign. The pandemic-compressed timeline compounded this weakness, bypassing the developmental stages through which lecturers would ordinarily build pedagogical confidence alongside technical competence.

6.4.3 Research Question 3: In what Ways has the Integration of Blended Learning Models Influenced Lecturer's Teaching Methodologies at the UoT?

Blended learning produced a genuine but uneven influence on teaching methodologies. Among advanced adopters, it enabled substantive redesign: the reorganisation of contact time around discussion and application, the development of diverse formative assessment portfolios, and the use of digital monitoring to identify and address learning gaps in real time. Among lecturers at the Mechanical Use level, the influence was minimal, with existing content migrated to digital platforms without pedagogical reconceptualisation. Student engagement outcomes were similarly uneven: lecturers consistently reported that students with reliable access and self-regulatory capacity benefited, while those without these capacities were further marginalised.

The amplification of existing access inequalities, rather than their reduction, was the most concerning effect of blended learning integration and represents the study's most urgent practical finding.

6.5 Implications for Practice in the TVET Sector

The study's findings carry substantive implications for institutional practice in South African higher education, and specifically for the TVET sector, which shares many of the structural conditions, student profiles, and pedagogical challenges documented at the UoT. Four interconnected implications are presented below.

6.5.1 Conduct a Deliberate Model Selection Process Before Committing to a Platform

The risk of inheriting a crisis-deployed model and treating it as a deliberate blended learning strategy is that it may be fundamentally misaligned with the institution's curriculum, student profile, and pedagogical philosophy. For TVET colleges, this risk is compounded by the specific occupational and vocational education mandates of the Quality Council for Trades and Occupations (QCTO), which oversees the design, accreditation, implementation, assessment and certification of training programmes. The hands-on, work-integrated learning requirements of vocational qualifications impose structural limits on online delivery that must be factored into any model-selection decision.

Before committing to a platform or design approach, TVET colleges should conduct a structured model selection process that includes a curriculum analysis, an assessment of students' current devices and connectivity, and a review of the institution's technical infrastructure and support capacity. This process does not need to be lengthy or expensive. A dedicated half-day workshop involving the principal, curriculum heads, and a representative group of lecturers, structured around the three blended learning design levels (low, medium, and high impact), would provide an adequate foundation for an informed decision. For most TVET occupational programmes, a medium-impact blend that moves theoretical content online while preserving mandatory face-to-face contact hours for practical assessment is likely to be the most compatible starting point.

6.5.2 Invest in Pedagogically Oriented Professional Development, Not Only Technical Training

The UoT's experience demonstrated that technical training focused on teaching lecturers to

navigate an LMS does not produce pedagogical transformation. The same risk is acute in TVET colleges, where lecturers are typically appointed for their industry expertise rather than their teaching qualifications and where many have limited formal experience of curriculum design. A professional development programme that begins with Blackboard navigation and ends there will not enable TVET lecturers to redesign their programmes for blended delivery.

TVET colleges should implement a two-phase professional development model. The first phase addresses pedagogical fundamentals: what blended learning is, how to analyse course outcomes and assign appropriate delivery modes, and how to design asynchronous online activities that work within TVET's occupational qualification framework. The second phase addresses platform-specific skills within that pedagogical context. This sequencing of pedagogy before the platform-specific training is the critical structural change that the UoT's experience demonstrates was missing. Where dedicated curriculum support staff are available, they should lead Phase 1; where they are not, a short-term external facilitator with TVET sector experience should be engaged. This is a realistic and cost-effective adjustment to existing professional development programmes that requires no new infrastructure.

6.5.3 Address Equity of Access as a Structural Prerequisite, Not an Afterthought

The study's finding that blended learning amplified rather than closed the access-related performance gap between well-resourced and under-resourced students is particularly significant for the TVET sector, where students are disproportionately drawn from South Africa's most economically marginalised communities. Implementing blended learning without first securing equitable access conditions is likely to produce an educational model that excludes the very students the TVET sector is mandated to serve.

Practically, TVET colleges should take three steps before launching any blended programme. First, conduct a simple student access audit and a brief intake survey on device ownership, home connectivity, and experience with digital platforms. This takes less than a week to design and administer and provides the data needed to realistically calibrate the blended model. Second, negotiate zero-rated or subsidised data access for the institution's LMS with a mobile network provider; several colleges have successfully done so at low cost. Third, ensure that on campus computer labs and Wi-Fi zones are accessible during evening hours and on weekends for students who cannot access online learning from home. These are not aspirational long-term interventions; they are achievable within a standard college budget and management cycle, and

each directly addresses a documented barrier to equitable participation in blended learning.

6.5.4 Use the CBAM Framework to Diagnose and Stage Professional Development Support

The UoT's deployment of a uniform training programme across staff with widely divergent levels of digital readiness produced uneven outcomes and left many lecturers under-supported at their actual Stage of Concern. TVET colleges can avoid this by using the CBAM Stages of Concern questionnaire, a validated, freely available instrument, as a simple diagnostic tool before designing any professional development programme. The questionnaire can produce a clear picture of where each staff member sits on the developmental spectrum.

Once this diagnostic picture is in place, professional development can be stratified appropriately. Lecturers at the Awareness and Informational stages need short, motivating orientation sessions that address their basic concerns and build initial confidence. Lecturers at the Personal and Management stages need practical, hands-on workshops that address workload, scheduling, and tool navigation. Lecturers at the Consequence, Collaboration, and Refocusing stages are ready to participate in curriculum redesign workshops, peer learning circles, and mentoring responsibilities that leverage their experience to support colleagues. This staged approach requires no additional budget; it simply reorganises existing professional development time and resources around a diagnostic rather than a uniform model.

6.6 Limitations of the Study

Four limitations must be acknowledged when interpreting the findings of this study.

First, the sample was dominated by participants from a single faculty, with five of the seven participants drawn from the same disciplinary context. While this concentration reflected the purposive selection of participants with the most direct and sustained engagement with blended learning implementation, it limits the transferability of findings to other faculties and disciplines. A more diverse sample, including greater representation from Engineering, Health Sciences, and Business and Management Sciences, would have provided a more comprehensive account of how adoption varied across the institution's full range of programmes.

Second, all student performance data were based solely on participants' self-reports and were not triangulated against institutional academic records. These accounts are interpreted as

perceptions of impact, consistent with the study's interpretivist paradigm, rather than as verified empirical evidence. Claims such as the 90% pass rate reported by one participant cannot be assessed beyond their status as a subjective account without access to institutionally verified performance data.

Third, students were excluded from the study to maintain analytical focus on institutional and pedagogical processes. The absence of student perspectives means that the impact of blended learning on learners is filtered entirely through lecturer accounts, which may not accurately reflect students' actual experiences of engagement, access, and performance.

Fourth, the study was conducted after a period of acute pandemic-related institutional disruption. The crisis conditions that shaped the adoption process, the compressed timeline, the non-linear CBAM progression, and the forced diffusion dynamic may not be fully generalisable under normalised conditions, where institutions have more time for deliberate planning and graduated adoption.

6.7 Recommendations for Further Research

The following recommendations are grounded directly in the study's findings and limitations and are designed to address specific evidential gaps that future research could close.

- Conduct a parallel study in the South African TVET sector, examining how TVET colleges selected, implemented, and adapted blended learning during and after the COVID-19 pandemic. This study should use the same three-level analytical framework (DOI/CBAM/TAM) to enable direct comparison with the UoT findings and should specifically address the QCTO occupational qualification constraints that make TVET blended learning designs structurally different from conventional higher education contexts.

- Incorporate student perspectives into future blended learning research at both the UoT and in the TVET sector. A mixed-methods study combining a student access and engagement survey with focus group discussions would provide the missing learner side account of blended learning's impact and would enable a more complete assessment of whether institutional equity interventions, such as NSFAS laptops, zero-rated data access, and campus Wi-Fi, are bridging or widening the digital divide in practice.

- Design and evaluate a CBAM-informed, staged professional development programme specifically for TVET lecturers. An action research study that co-designs a two-phase programme – pedagogical fundamentals followed by platform-specific training – with a cohort of TVET lecturers and evaluates its outcomes over a two-year period would directly test the key practical recommendation of this study and provide an evidence-based model for sector-wide adoption.

6.8 Conclusion

South African higher education and the TVET sector stand at a critical juncture in their digital transformation. The COVID-19 pandemic, through disruption and necessity, created the conditions for a digital transition that might otherwise have taken decades to achieve. For the first time, many South African post-education lecturers have direct experience of teaching with digital tools, and many students have direct experience of learning with them. The foundational infrastructure, platforms, policies, and connectivity investments are largely in place.

What remains unfinished is the pedagogical transformation that makes that infrastructure educationally meaningful. The gap between structural adoption – deploying a platform, uploading materials, and completing a training session – and genuine pedagogical transformation – redesigning a curriculum, rethinking an assessment strategy, and building a student-centred digital learning experience – is precisely the gap this study has documented. Closing it requires not more infrastructure but more intentionality: deliberate model selection over crisis inheritance; pedagogically oriented professional development over tool-proficiency training; equity frameworks that treat access as a prerequisite over aspiration; and staged institutional support that meets lecturers where they are rather than where an administrator assumes they should be.

This is the work that remains. It is not glamorous or quick, but it is achievable and necessary. The story told in this dissertation is not one of failure. It is the story of an institution that responded to an unprecedented crisis with considerable resourcefulness and, in doing so, created the conditions, imperfect, uneven, but real, for a digital transformation that now needs to be deliberately completed. For the UoT, for other South African universities of technology, and for the TVET colleges that serve the country's most economically marginalised learners, the next chapter of that story is the most important one to get right.

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APPENDICES

APPENDIX A: UKZN ETHICAL APPROVAL

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

28 October 2025

Tolle Grace Khumalo (216041771)
School of Education (Prior Restructuring)
Pietermaritzburg Campus

Dear TG Khumalo,

Protocol reference number: HSSREC/00008702/2025
Project title: Exploring the implementation of blended learning approaches in a selected university in the Western Cape Province
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 21 May 2025 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

Incidents of adverse events and serious adverse events (AEs and SAEs) should be reported in writing to HSSREC, the study sponsors, and any regulatory authority (where appropriate), within 7 working days of the occurrence for local sites and 14 days for all other South African sites.

This approval is valid until 28 October 2026.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Doctor Shamila Naidoo (Interim Chair)

/nng

Humanities and Social Sciences Research Ethics Committee
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 8350/4557/3587 **Email:** hssrec@ukzn.ac.za **Website:** http://research.ukzn.ac.za/Research-Ethics
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

APPENDIX B: UoT ETHICAL APPTOVAL

[redacted] [redacted]

[redacted] [redacted]

FACULTY OF EDUCATION

On the 22 October 2025 the Chairperson of the Faculty of Education Ethics Committee of the [redacted] granted ethics approval (EFEC 01-09.2025) to Tolle Grace Khumalo for research activities related to a staff project / **degree project**)

Title:	Exploring the implementation of blended learning approaches in a selected university in the Western Cape Province

Comments:

This clearance is valid until 30th September 2028. Permission is granted to conduct research within the Faculty of Education only. Research activities are restricted to those details in the research project as outlined by the Ethics application. Any changes wrought to the described study must be reported to the Ethics committee immediately.

[redacted]

Date: 22 October 2025

Professor P Boer

Chair

EFEC

APPENDIX C: UoT SITE PERMISSION

[redacted] [redacted]

22 October 2025

Ms Tolle Grace Khumalo
Masters in Education
Collages of Humanities
University of KwaZulu-Natal

Dear Ms Khumalo

RE: SITE PERMISSION TO CONDUCT RESEARCH AT [redacted]

Based on the recommendation of APPROVAL from the Faculty of Education Research Ethics Committee, I am pleased to support your research study "*Exploring the implementation of blended learning approaches in a selected university in the Western Cape Province*". Your request to access [redacted] as a research or recruitment site is granted.
The study explores the implementation of blended learning approaches in a selected University of Technology located in the Western Cape Province of South Africa. Blended learning, which combines traditional face-to-face teaching with online learning components, has gained momentum in the higher education sector, particularly in response to the disruptions caused by the COVID-19 pandemic. The study investigates how academic staff perceive, adopt, and apply blended learning methodologies within their teaching practices, as well as the institutional support structures that facilitate or hinder this implementation. Using a qualitative research design, data will be collected through semi-structured interviews with academic staff and document analysis of relevant institutional policies.

This site permission covers the time-period of 22 October 2025 to 22 October 2026.

The [redacted] site permission is contingent on research ethics approval as well as adhering to all the relevant [redacted] policies and regulations.

The following information has relevance:
Research Ethics Approval Date: 22 October 2025
Research Ethics Approval valid until: 30th September 2028
Research Ethics Approval Reference EFEC 01-09.2025

Permission is herewith granted for you to do research at the [redacted]

Wishing you the best in your study.

Sincerely

Prof Dina Burger
Director: Directorate Research Development

[redacted]

APPENDIX D: INFORMED CONSENT FORM

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL

For research with human participants

INFORMED CONSENT RESOURCE

Information Sheet and Consent to Participate in Research

Date: xx 2025

Greetings

My name is Tolle Grace Khumalo, I am a master's candidate at the University of KwaZulu-Natal in the School of Education under the College of Humanities. I am currently pursuing my master's degree in the Adult Education discipline. I will be conducting a research study as part of my degree requirements. The title of my study is Exploring the Implementation of blended learning approaches in a Selected University in the Western Cape Province. My research study will be conducted under the supervision of Dr L.L. Mbatha. She is a lecturer in the School of Education, College of Humanities, Pietermaritzburg Campus, University of KwaZulu-Natal. My contact details are [redacted] and my email address is 216041771@stu.ukzn.ac.za. My supervisor's contact number is 0332605339 and email address is MbathaL5@ukzn.ac.za.

You are invited to participate in a study involving strategies used to implement blended learning. The aim and purpose of this research is to thoroughly document UoT's selection, adoption, and implementation processes, and to analyse how blended learning has shaped UoT's educational objectives and teaching methods. The detailed examination of UoT's experiences is anticipated to provide valuable insights, lessons learnt, and contribute to the broader theoretical understanding of how digital tools used in line with traditional classroom strategies can enhance educational practices.

The study is expected to enrol a sample size of ten individuals, including six lecturers, two academic heads, and two programme managers. Two campuses will be selected for the research; the overall sample will represent roughly 10% of the staff.

The following procedures will involve participants purposively chosen based on the following inclusion criteria: involvement in a blended learning programme during and after the pandemic, access to technological resources, and blended learning practices integrated into the curriculum, using both face-to-face sessions infused with online learning. The duration of your participation, if you choose to enrol and remain in the study, is expected to be one hour, and either a face-to-face or an online interview on Teams will be conducted based on your preference.

The study seeks to provide actionable insights for institutions of higher learning, particularly those struggling to implement blended learning due to rigid curricula, limited technological infrastructure, and inadequate training. The primary objective of this research is to offer practical recommendations that can assist other institutions in implementing blended learning successfully. Technology integration in education extends beyond traditional classroom norms, aiming to provide quality training for youth and adults, fostering a positive learning environment that equips students with the skills needed to become employable.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number_____).

In the event of any problems or concerns/questions, you may contact me at ([redacted]) email address 216041771@stu.ukzn.ac.za, my supervisor on (033 260 5339) email address is MbathaL5@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Participation in this research is voluntary, and you may withdraw at any point. If you refuse/withdraw your participation, you will not incur a penalty or repercussions. You may also stop participating without stating any reasons, and your withdrawal can be done verbally or in writing. I may terminate you from the study if you are no longer employed at the chosen college or campus.

Your responses will be strictly confidential and used only for academic purposes. You will be anonymous throughout the study and given a pseudonym. The names and any information that could identify you as a participant will not be used in the final thesis or any publication deriving from this study. Published findings will be anonymised, preventing your identity as a participant.

Printed copies of raw data/transcripts of interviews will also be securely locked away in my supervisor's office. All digital audio files and other electronic data will be stored on a private cloud with password protection for safety as well as the hard drive of the password-protected personal computer and the hard drive of the password-protected laptop of my supervisor. All data from computers and any other device will be deleted after five years.

CONSENT (Edit as required)

I…… (Participants Name) have been informed about the study entitled Exploring the implementation of blended learning approaches in a selected university in the Western Cape Province by Tolle Khumalo.

I understand the purpose and procedures of the study.

I have been allowed to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I am usually entitled to.

I have been informed about any available compensation or medical treatment if an injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study, I understand that I may contact Tolle Khumalo at 216041771@stu.ukzn.ac.za or my supervisor at mbathaL@ukzn.ac.za.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers, then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban
4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 – Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to: Audio-record my interview YES / NO

_____ _____
Signature of Participant Date

_____ _____
Signature of Witness Date
(Where applicable)

_____ _____
Signature of Translator Date
(Where applicable)

APPENDIX E: DATA GENERATION TOOLS

APPENDIX E1: Data generation tool for academic heads



Title of the study:
Exploring the Implementation of Blended Learning Approaches in a Selected University in the Western Cape Province

1. **Introduction**

Purpose of the study:

1. To explore the processes of selecting and identifying a suitable blended learning model.
2. To ascertain institutional strategies for adopting and implementing blended learning approaches to enhance education delivery.
3. To investigate how the integration of the blended learning model has influenced teaching. methodologies.

Confidentiality Assurance:

- All responses will be kept confidential and used solely for academic purposes.

Consent:

- Before we begin the interview, I would like to obtain verbal consent from you to record the interview for the study.

2. **Participants' Information**

Name [optional]……...
Age…….....
Gender……
Position/Role at CPUT: Lecturer Academic Head P☐amme Administrato☐
Department/Faculty Specify…☐…….
No. of years' experience with blended learning……

<u>Interview Question (Academic Heads)</u>

Research Question 1: What were the processes for selecting and identifying the most suitable blended learning model?

Interview Questions: (These questions should explore the decision-making process and the factors that influenced the choice of a specific blended learning model.)

1. Who were the key individuals or groups involved in the selection process, and what roles did they play?
2. How was the decision to adopt a blended learning model communicated to staff?
3. From your perspective, how well did the selected blended learning model align with the overall academic goals of CPUT?

Research Question 2: What institutional strategies were utilised to adopt and implement blended learning approaches to enhance education delivery?

Interview Questions: (These questions should explore the strategies and support mechanisms the institution put in place.)

1. What institutional policies or guidelines were developed or modified to support blended learning?
2. What resources (financial, human, technical) were allocated to support blended learning implementation?
3. What change management strategies were employed to facilitate the transition to blended learning, and how effective were they?

Research Question 3: How has the integration of the blended learning model influenced teaching methodologies?

Interview Questions: (These questions should explore the impact of blended learning on teaching practices.)

1. How has the integration of blended learning affected the design and structure of the curriculum and programmes?
2. Have you observed any changes in student performance or learning outcomes at the programme or department level that you attribute to blended learning?

Closing: Thank you for sharing your experiences, insights, and for making time for the interview. Your input is invaluable to this study and is highly appreciated.

APPENDIX E2: Data generation tool for lecturers



Title of the study:
Exploring the Implementation of Blended Learning Approaches in a Selected University in the Western Cape Province

1. **Introduction**

Purpose of the study:

1. To explore the processes of selecting and identifying a suitable blended learning model.
2. To ascertain institutional strategies for adopting and implementing blended learning approaches to enhance education delivery.
3. To investigate how the integration of the blended learning model has influenced teaching. methodologies.

Confidentiality Assurance:

- All responses will be kept confidential and used solely for academic purposes.

Consent:

- Before we begin the interview, I would like to obtain verbal consent from you to record the interview for the study.

2. **Participants' Information**

Name [optional]……...
Age…….....
Gender……
Position/Role at CPUT: Lec ☐ Academic I ☐ Programme Administrator ☐
Department/Faculty Specify…….
No. of experience with blended learning……

<u>Interview Question (Lecturers)</u>

Research Question 1: What were the processes for selecting and identifying the most suitable blended learning model?

Interview Questions: (These questions should explore the decision-making process and the factors that influenced the choice of a specific blended learning model)

1. To what extent were faculty perspectives included in the selection process?

Research Question 2: What institutional strategies were utilised to adopt and implement blended learning approaches to enhance education delivery?

Interview Questions: (These questions should explore the strategies and support mechanisms the institution put in place.)

1. What professional development opportunities (e.g., training, workshops, mentoring) were provided to staff to support the adoption of blended learning?
2. How effective were these professional development opportunities in preparing you for blended learning?
3. To what extent do you believe that blended learning has enhanced your teaching effectiveness/student learning outcomes?

Research Question 3: How has the integration of the blended learning model influenced teaching methodologies?

Interview Questions: (these questions should explore the impact of blended learning on teaching practices.)

1. How has the integration of blended learning affected the design and structure of your classroom?
2. In what ways, if any has blended learning positively affected student engagement and participation in your course?
3. How have your assessment strategies evolved, if at all, with the adoption of blended learning?
4. What challenges, if any, have you encountered in adapting your teaching methodologies to blended learning?
5. Have you observed any changes in student performance or learning outcomes that you attribute to blended learning in your courses?

Closing: Thank you for sharing your experiences, insights, and for making time for the interview. Your input is invaluable to this study and is highly appreciated.

APPENDIX E3: Data generation tool for administrators



Title of the study:
Exploring the Implementation of Blended Learning Approaches in a Selected University in the Western Cape Province

1. Introduction

Purpose of the study:

1. To explore the processes of selecting and identifying a suitable blended learning model.
2. To ascertain institutional strategies for adopting and implementing blended learning approaches to enhance education delivery.
3. To investigate how the integration of the blended learning model has influenced teaching methodologies.

Confidentiality Assurance:

- All responses will be kept confidential and used solely for academic purposes.

Consent:

- Before we begin the interview, I would like to obtain verbal consent from you to record the interview for the study.

2. Participants' Information

Name [optional]……...
Age…….....
Gender……
Position/Role at CPUT: Lec☐ Academic L☐ Programme Admin☐r
Department/Faculty Specify…….
No. of years' experience with blended learning……

Interview Question (Programme Administrators)

Research Question 1: What were the processes for selecting and identifying the most suitable blended learning model?

Interview Questions: (These questions should explore the decision-making process and the factors that influenced the choice of a specific blended learning model.)

1. What logistical considerations were important when selecting the blended learning model(s)?

Research Question 2: What institutional strategies were utilised to adopt and implement blended learning approaches to enhance education delivery?

Interview Questions: (These questions should explore the strategies and support mechanisms the institution put in place.)

1. How were support services (e.g., technical support, student support) structured and delivered to facilitate blended learning?

2. How was the implementation of blended learning coordinated across different departments or faculties?

Research Question 3: How has the integration of the blended learning model influenced teaching methodologies?

Interview Questions: (These questions should explore the impact of blended learning on teaching practices.)

1. How has blended learning influenced the support services provided to students and faculty?
2. What new administrative processes or systems have been implemented to support blended learning?

Closing: Thank you for sharing your experiences, insights, and for making time for the interview. Your input is invaluable to this study and is highly appreciated.

APPENDIX F: DOCUMENT REVIEW FORM



Title of the study:
Exploring the Implementation of Blended Learning Approaches in a Selected University in the Western Cape Province
Purpose of the study:

1. To explore the processes of selecting and identifying a suitable blended learning model.
2. To ascertain institutional strategies for adopting and implementing blended learning approaches to enhance education delivery.
3. To investigate how the integration of the blended learning model has influenced teaching methodologies.

Objective 1: Selection and Identification of the Blended Learning Model		
Source of document		**Evaluate the following**
1	Minutes of meetings, UoT	• Selection of blended learning model and tools • Criteria used for evaluation of technological infrastructure, institutional capacity, and pedagogical effectiveness • Pilot study and benchmark exercises • Training of lectures on digital tools by institutions
2	Blended learning policy and practice in higher education (2022)	• Blended learning goals • ICT infrastructure • BL model for rural and urban, large and small institutions recommendations
3	• Draft white paper on e-Education, Transforming Learning and Teaching in ICT (2003)	• Use of ICT in Education • Implementation strategies

4	National integration policy for ICT white papers (2020)	• National digital and future skills strategy • Academic capacity building in TVET and Universities • Open online courses
Objective 2: Institutional Strategies for Adoption and Implementation		
Source of document		**Evaluate the following**
1	Revised strategic plan for (2020-2025)	• Managing the impact of COVID-19 on higher education and training • Transformation • Strengthening the PSET system for growth opportunities
2	UoT's multimodal and blended learning for teaching and learning (2020)	• Institution implementation plan • Monitoring and evaluation considerations • Risk assessment • Adaptations concerning teaching and learning changes • Evaluation and support programmes
Objective 3: Influence on Teaching Methodologies		
Source of document		**Evaluate the following**
1	UoT's multimodal and blended learning for teaching and learning (2020)	• Administrative support • Learning resource development • Training of staff • Quality consideration of the curriculum
2	Western Cape Government No. 53 policy of blended learning (2024)	• Diverse and dynamic learning environment for undergrad and postgraduate students • Principles and procedures for staff and students • Guidelines for blended learning • Monitoring

3	Western Cape Government IT End User Policy (2015)	• Use of desk computers • Use of IT equipment and tools • Acceptable use of the internet

APPENDIX G: LANGUAGE DECLARATION CERTIFICATE

KD Editing Services

Kate Davies
209 Gregorio Street
Boknesstrand 6189
Eastern Cape South Africa

5 June 2026

To whom it may concern

Declaration of language editing

I, Kate Davies, ID number [redacted] an accredited text editor (English) and member of the Professional Editors' Guild (number DAV013) with copy-editing certification from the University of Cape Town, confirm that I have conducted an English proofreading and copy edit on the master's dissertation by

Tolle Grace Khumalo

titled

Exploring the implementation of blended learning approaches in a selected university of technology in the Western Cape province

Yours faithfully

[redacted]

Kate Davies

Professional EDITORS Guild 30+ Est 1993
Promoting excellence in editing

Kate Davies
Accredited Text Editor (English)

National Exco: Eastern Cape regional chair
Membership number: DAV013
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All corrections were indicated using Track changes (MS Word) for the author to verify. As editor, I am not responsible for changes not implemented, AI use, plagiarism, unverified fact and/or sourcess. The final document remains the responsibility of the author.

Kate Davies [redacted]