

DURBAN UNIVERSITY OF TECHNOLOGY

EXPLORING THE ADOPTION FACTORS FOR ENTERPRISE RESOURCE
PLANNING CLOUD-BASED SYSTEM: A CASE STUDY OF DURBAN UNIVERSITY
OF TECHNOLOGY

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ABSTRACT

This research investigated the primary factors affecting the implementation of ERP cloud-based systems at Durban University of Technology (DUT). The objective was to identify obstacles, evaluate user perceptions, and recommend ways to improve enterprise resource planning acceptance and utilisation at higher education institutions (HEIs).

A quantitative research methodology was employed, and data were gathered using a standardised questionnaire administered to 62 DUT personnel. Data were collected using a structured questionnaire administered electronically via Microsoft Forms to a sample of 62 staff members at the Durban University of Technology (DUT). A stratified random sampling technique was employed to ensure proportional representation across different staff categories

The findings demonstrated that training, technical assistance, and management communication substantially influence user satisfaction and total ERP adoption. Regression research indicated that training and management communication were the most significant predictors of ERP satisfaction. Participants also identified difficulties, including insufficient consultation during system implementation, restricted technical support, and sluggish system performance.

The research concludes that effective ERP implementation in higher education institutions relies on both technological and organisational preparedness. Effective communication, ongoing user training, and stakeholder involvement are essential for achieving system acceptability and enduring sustainability. Recommendations encompass the creation of role-specific training program, enhancement of change management procedures, and the alignment of ERP deployment with institutional strategic objectives.

The results enhance comprehension of ERP adoption dynamics in higher education institutions and offer a paradigm for optimising implementation outcomes in developing countries.

DECLARATION

I, Thabile Ntuli, thus declare that:

This dissertation, titled “Exploring the Adoption Factors for ERP Cloud-Based Systems: A Case Study of Durban University of Technology,” is my original work.

All utilised information sources have been duly acknowledged and cited.

This dissertation has not been submitted, either wholly or partially, for any degree or examination at any other university.

I acknowledge that plagiarism constitutes a grave academic violation and affirm that my work adheres to the policies and laws of Durban University of Technology.

Signature: _____

Complete Name: Thabile Ntuli

Date: 17 October 2025

DEDICATION

I wish to express my sincere gratitude to my partner, Mr M.R. Mbatha, for his unwavering support and for overseeing our family during times when my academic endeavours demanded my whole attention.

I express my deep gratitude to the Ntuli and Mbatha families for their patience, understanding, and support throughout my academic pursuits.

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ABBREVIATIONS AND ACRONYMS

API	Application Programming Interface
BI	Behavioural Intention
DUT	Durban University of Technology
ERP	Enterprise Resource Planning
HEI(s)	Higher Education Institution(s)
HR	Human Resources
ICT	Information and Communication Technology
ITS	Integrated Tertiary Software
LMS	Learning Management System
OIPT	Organisational Information Processing Theory
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
SAP	Systems, Applications, and Products in Data Processing
TAM	Technology Acceptance Model
UTAUT	Unified Theory of Acceptance and Use of Technology

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1. CHAPTER ONE: INTRODUCTION AND ORIENTATION TO THE STUDY

1.1 Introduction

Information systems have become more accessible and essential to organisational operations as digital technologies continue to develop. Although cloud computing is derived from the network and grid computing models of the 1990s, it represents a substantial change in the manner in which institutions manage and deploy IT resources (Al-Dulaimy et al., 2024; Meena & Santhanalakshmi, 2024). This change allows organisations to access software, storage, and computing capacity through the internet, thereby reducing the necessity for expensive infrastructure and maintenance (Golightly et al., 2022).

ERP systems are instrumental in this transformation by integrating critical institutional functions, including finance, human resources, procurement, and academic administration, into a unified platform that facilitates informed decision-making and improves efficiency (Katuu, 2020; Hansen, Haddara & Langseth, 2023). It can be contended that conventional ERP systems are becoming increasingly insufficient in contemporary institutional settings, as they are frequently associated with high costs, restricted remote accessibility, and limited flexibility (Jo & Park, 2023; Kansara, 2021).

Cloud-based ERP systems have emerged as a viable and transformative alternative in response to these limitations. These systems are estimated to have substantially lower implementation costs than traditional ERP systems, as well as scalability and flexibility (Panigrahi, 2025; Alharbi & Almouteq, 2024). In my opinion, the capacity of cloud ERP systems to offer real-time access to data and advanced analytics is particularly advantageous for institutions that operate in resource-constrained environments. This is due to the fact that it reduces the necessity for substantial capital investment while simultaneously improving operational capabilities (Odukoya 2024; Hariprasad 2024).

Despite the global rise in cloud ERP adoption, its implementation in South Africa is still relatively limited, particularly among public institutions and smaller organizations (Malope & van der Poll, 2024; Dlamini, 2021).

This implies that adoption is still being influenced by contextual challenges, including infrastructure limitations and organizational preparedness. In this context, higher education institutions encounter supplementary challenges as a result of their distinctive governance structures, diverse user groups, and dependence on specialized academic processes.

This investigation concentrates on the Durban University of Technology (DUT), which has lately implemented the SAP S/4HANA Cloud ERP system. The study aims to offer insight into the effective adoption of cloud-based ERP systems by higher education institutions in developing contexts through the examination of this case. The results are expected to enhance comprehension of ERP adoption in higher education institutions and provide practical recommendations for enhancing institutional performance and system acceptance.

1.2 PROBLEM STATEMENT

Enterprise Resource Planning systems have become crucial for contemporary organisations, such as HEIs, to optimise operations and enhance efficiency. Recently, DUT effectively deployed the cross-industry cloud-based ERP system, representing a major change in its administrative and operational procedures. Although the ERP system at DUT is currently fully functional, its acceptance among staff remains a critical factor in achieving its full effectiveness.

The successful implementation of ERP systems does not necessarily guarantee user acceptance, as end-users may experience challenges related to system complexity, lack of familiarity, and resistance to change. Existing literature supports this view, indicating that ERP adoption is often hindered by user-related factors such as perceived difficulty, insufficient training, and misalignment with organisational processes (Misukka, 2025; Jatul Urus, 2024; Ryan, 2025). In HEIs, these challenges can be more pronounced due to the unique academic and administrative requirements that may not always align with cross-industry ERP systems. Understanding and addressing user acceptance is essential for ensuring that the system delivers its intended benefits at DUT.

As a newly implemented system, Cross-industry ERP introduces several challenges for end-users who need to adjust to different workflows, interfaces, and processes. In contrast to conventional ERP solutions typically utilised in HEIs, SAP is mainly developed for cross-industry usage, indicating that its adaptation to the specific requirements of a university context might need more customisation, training, and assistance. Users, such as faculty and administrative personnel, might face obstacles in system navigation, data handling, and task performance because of insufficient previous experience with SAP ERP in higher education settings.

Despite the possible advantages of cloud-based ERP solutions such as greater accessibility, better data integration, and heightened operational efficiency, successful implementation relies on user acceptance and involvement.

Elements such as system usability, perceived usefulness, training effectiveness, and institutional backing are vital in facilitating a seamless transition. Opposition to change, insufficient support, and perceived difficulty could impede complete utilisation, resulting in inefficiencies and dissatisfaction among users.

1.3 The Research Aim and Objectives

This research aims to investigate the main adoption factors that affect the effective incorporation of SAP cloud-based ERP at DUT. It will analyse user experiences, obstacles, and perceptions, with the goal of discovering methods that can improve user adoption and maximise the system's effect within the higher education field.

The outcomes will aid in a deeper comprehension of ERP adoption processes in HEIs, providing valuable information for enhancing user involvement and institutional support systems in comparable implementations.

The Study Objectives

- To identify the key factors that influence the adoption of the SAP cloud-based ERP system at DUT.
- To assess the challenges faced by users in adopting and effectively using the system.

- To analyse user perceptions regarding the usability, effectiveness, and benefits of the SAP ERP system.
- To examine the impact of training, institutional support, and system customisation on user adoption.
- To recommend strategies for improving user adoption and optimising the effectiveness of the SAP ERP system in higher education institutions.

1.4 Research Questions

- What are the main elements that affect the uptake of the SAP cloud-based ERP system at DUT?
- What obstacles do users encounter while adopting and utilising the SAP ERP system at DUT?
- How do users view the usability, efficiency, and advantages of the SAP cloud-based ERP system?
- What significance does training, institutional assistance, and system personalisation have in promoting successful adoption?
- What approaches can be employed to enhance user uptake and optimise the effectiveness of the SAP ERP system in a higher education setting?

1.5 Hypotheses

A hypothesis is an assumption that, if correctly executed, will result in the expected outcomes indicated in the assertion. A hypothesis is used for preparing the tests that the hypothesis must pass to be successfully proven.

In this study we have developed two hypotheses which are linked to the perceived benefits of cross-industry ERP cloud-based systems at DUT and organisational support:

1. DUT Perceived Benefits hypothesis

(a) Null Hypothesis (H0): Perceived Usefulness and ERP adoption

Perceived usefulness (for example, operational efficiencies, cost reduction, scalability) does not significantly influence the adoption of cross-industry ERP cloud-based system at DUT

(b) Alternative Hypothesis (H1): Perceived Usefulness and ERP adoption

Perceived usefulness (for example, operational efficiencies, cost reduction, scalability) significantly influence the adoption of cross-industry ERP cloud-based system at DUT.

2. DUT organisational support hypothesis

(c) Null Hypothesis (H0): Organisational Support and ERP adoption

Organisational support (for example, training and workshops) do not significantly influence the effective utilisation of cross-industry ERP cloud-based system at DUT.

(d) Alternative Hypothesis (H1): Organisational Support and ERP adoption

Organisational support (for example, training and workshops) significantly influence the effective utilisation of cross-industry ERP cloud-based system at DUT.

The first hypothesis is deeply embedded in the long-term success of DUT and if the staff understands the perceived benefits or usefulness of adopting the cross-industry ERP cloud-based system in line with their performance and business activities, this could influence the adoption rate.

This hypothesis will direct the TAM framework by examining how this perception affects the intention to adopt the system. Statistical investigation will ascertain the strength of the correlation between perceived usefulness and user adoption.

Subsequently, the second hypothesis is centred on the effectiveness of the support to enhance perceived ease of use, which in turn influences the adoption of the system. This will enhance the TAM framework by incorporating external elements (training and resources) that influence perceived ease of use.

The hypothesis will direct the model to evaluate how support influences users' perceptions of the system's complexity, and their overall readiness to embrace it.

If there is high level of organisational support, for instance, trainings and workshops, the DUT staff will gain the skills, knowledge, and confidence required to influence an increased adoption rate.

1.6 Rationale and Significance of the Study

The adoption of SAP cloud-based ERP at DUT represents a substantial transformation in institutional operations, given that the implementation of cloud-based ERP systems in HEIs is still a relatively recent development.

This research is pivotal in promoting user adoption by analysing critical influencing factors and challenges, ultimately enhancing user engagement and optimising system usability. Furthermore, it facilitates the successful execution of implementation strategies by emphasising essential components, including training, system adaptation, and institutional backing.

This study addresses the knowledge gap by investigating the applicability of the SAP ERP system within higher education institutions, thereby enriching the existing body of literature on ERP implementation in the educational sector. This study aims to enhance system utilisation at DUT by examining user perceptions and addressing barriers to adoption, thereby fostering improved efficiency, data management, and decision-making processes.

1.7 Definition of Key Terms Used in the Study

ERP System: Is an integrated software platform that enables organisations to manage and automate core business processes such as finance, human resource management, procurement, and administration within a unified system (Tuli & Kaluvakuri 2022; Chopra et al. 2022). ERP systems facilitate real-time data sharing and improve organisational efficiency by integrating various functional areas.

Cloud-Based ERP: Cloud-based ERP refers to an enterprise resource planning system that is hosted on cloud computing infrastructure and accessed using the internet, allowing users to access the system remotely without relying on on-premises hardware (Bitkowska, Dziembek & Gzik 2023).

Cloud based ERP system provides advantages such as scalability, flexibility, and cost-effectiveness compared to traditional ERP systems (Jhurani 2022).

SAP ERP: is an enterprise resource planning system developed by SAP SE, designed to integrate and streamline business processes across multiple functional areas within organisations. It is widely used across industries to support data-driven decision-making and operational efficiency (Aroba & Abayomi 2023).

ITS: Integrated Tertiary Software - an ERP system specifically developed for higher education institutions, particularly in South Africa. It is designed to support academic and administrative functions such as student registration, academic records management, finance, and human resources (Aggrey, Acakpovi & Peters 2025)

HEIs: Encyclopaedia Britannica (2026) defines higher education Institutions as a post-secondary educational organisation, including universities and colleges, that are responsible for teaching, research, and administrative functions.

1.8 Outline of the Dissertation

This dissertation is divided into five chapters to ensure a logical flow of information and systematic analysis of the adoption factors for the cloud-based ERP system at DUT. In Chapter One, the dissertation provides an overview of the study, including the background, problem statement, research questions, objectives, significance of the study, and definition of key terms. This sets the foundation for understanding the importance of ERP adoption in higher education institutions.

Chapter Two examines the current literature about the use of ERP systems in HEIs. The discourse presents the principal theoretical framework supporting this study, delineates the development and function of ERP in higher education institutions, and integrates previous research on the catalysts, advantages, and obstacles to implementation. Special emphasis is placed on research regarding user acceptance,

organisational and technological aspects, as well as the unique problems presented by cloud-based and cross-industry systems like SAP.

Through a critical analysis of these themes, the chapter refines the extensive ERP literature to the context of DUT's shift from an education-centric platform to a cross-industry platform, therefore pinpointing the need this study aims to remedy.

Chapter Three covers the study's methodology, strategy, and research design.

The demographic, sampling strategies, data collection methods, research tools (questionnaire), and data analysis strategies are all covered in depth. Limitations and ethical issues are also covered.

Chapter Four summarises the information gathered from participants, examines the results, and interprets them considering the goals of the study. To find patterns, connections, and important information on ERP adoption at DUT, descriptive and inferential statistical techniques were employed.

Chapter Five, discusses the findings from the data analysis, comparing them with existing literature. The discussion highlights the key adoption factors, challenges, and best practices identified in the study.

1.9 Summary

Chapter 1 laid the groundwork for analysing the determinants affecting the adoption of ERP cloud-based systems at DUT. This chapter is positioned as both practically significant and theoretically sound, addressing a crucial research gap in ERP implementation among emerging higher education institutions. Chapter 2 provides a comprehensive examination of pertinent literature and theoretical models that underpin the study's conceptual framework

2. CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

A literature review entails the critical assessment and integration of prior research on a particular subject (Mauer & Venecek 2022). Although ERP adoption in HEIs has been widely studied, investigations into cloud-based, cross-industry platforms SAP S/4HANA Cloud main scant in South Africa. This study situates itself at DUT, where a recent migration from the legacy ITS platform to SAP Cloud ERP represents a major organisational and technological transformation.

Guided by the Technology Acceptance Model (TAM) and complementary frameworks (Mukred et al. 2023; Ahn & Ahn 2020), this chapter critically reviews global and local ERP literature to identify the factors that influence uptake, the obstacles encountered, and the roles of training, support, and customisation in successful adoption. Gaps in South African cross-industry cloud-ERP research is highlighted to justify the present study's contribution to practice.

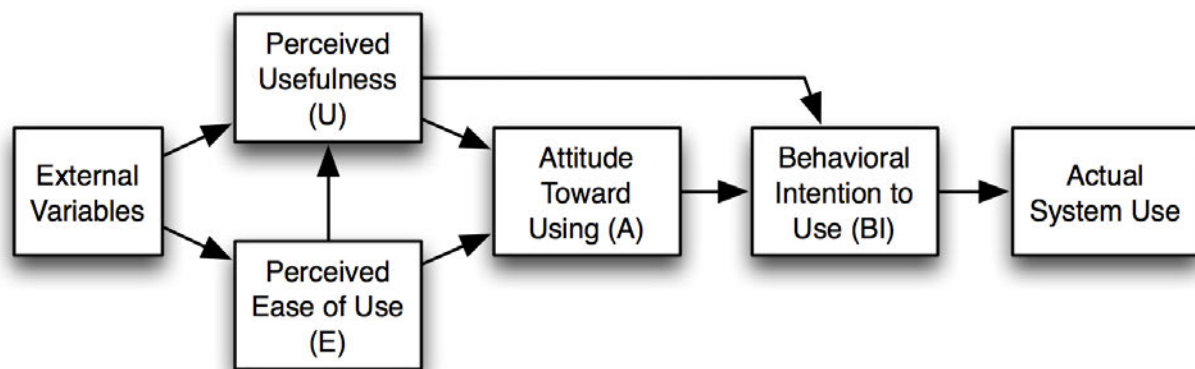
The purpose of this chapter is to provide an extensive review of all the theories, studies, and data that are currently available about the adoption, deployment, and performance of ERP systems with an emphasis on HEIs. This chapter will review research papers, case studies, and theories that address the weaknesses, benefits, and external factors influencing the effectiveness of ERP systems. This literature review looks at previous research to contextualise the specific topic of this study and identify any gaps in the current body of knowledge.

2.2 Theoretical Framework: Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), created by Fred Davis in 1986, serves as a theoretical framework elucidating the process by which users adopt and use the technology (Schorr 2023; Filipina et al. 2023). Baskaran et al. (2020) highlights the idea that the perceived advantages of technology in enhancing productivity, effectiveness, and overall job results are what motivate the adoption.

A systematic perspective for understating the elements impacting cross-industry ERP adoption is offered by TAM and drivers of user acceptance are identified by the model through the measurement of perceived usefulness and perceived ease of use (Solano & Cruz 2024).

Figure 2.2.3.1 The Technology Acceptance Model (TAM) Framework. (Na et al. 2022)



The core principles of the Technology Acceptance Model (TAM) assert that two primary factors perceived usefulness and perceived ease of use influence a user's likelihood to adopt and use a new technology (Andika, Masudin & Zulfikarijah 2022). In HEIs context such as DUT, perceived usefulness refers to the extent to which staff believe that the SAP ERP system enhances their job performance, for example, by improving efficiency in student administration, grading, and reporting processes. Similarly, perceived ease of use relates to how simple and user-friendly staff find the system when performing tasks such as capturing marks, accessing student records, or managing class lists.

Given that ERP systems like SAP were originally designed for cross-industry operational management rather than HEIs (Vaka & Azmeera 2024), users in HEIs may experience challenges in aligning the system with their daily academic and administrative tasks (Gonugunta & Leo 2024).

If DUT staff perceive the system as complex or not well-suited to their needs, their willingness to adopt and effectively use the system may be reduced. Applying TAM in this study provides a useful framework for understanding how these two core principles influence ERP adoption within the specific context of DUT

.2.2.1 Perceived Usefulness (PU) This metric assesses an individual's belief that employing a particular strategy will enhance their professional achievement (Al-Adwan et al. 2024; Rawashdeh et al. 2021). Users are more inclined to use a system if they believe it will facilitate the efficiency of their work-related duties (Gehlot et al. 2024; Shamsi, Iakovleva, Olsen & Bagozzi 2021). Nonetheless, if users consider that the system fails to satisfy specific requirements, the perceived utility diminishes (Chiu 2025; Wang et al. 2025).

2.2.2 Perceived Ease of Use (PEOU)

Perceived ease of use (PEOU) denotes the degree to which a user perceives that utilising a system necessitates minimal effort (Choudhery & Kesharwani 2025; Yan, Eng & Seong 2024). Intuitive and user-friendly systems are regarded as more advantageous (Gehlot et al. 2024; Jove et al. 2023; Hadalgekar & Desai 2025).

The ease of use is influenced by users' views of the effort needed and their familiarity with the system's design (Zubir & Abdul Lapid 2024).

New ERP systems necessitate significant alterations in interface and workflow, compelling users to modify their traditional work patterns (Muntala & Karri 2023; Szelągowski et al. 2022; Saputra et al. 2023). The Technology Acceptance Model the technology Acceptance Model designates perceived usefulness (PU) and perceived ease of use (PEOU) as primary determinants of behavioural intention and actual system utilisation (Or 2024; Almusharraf & Bailey 2023). TAM has progressively developed through extensions like TAM2, TAM3, and TAM++, integrating elements such as stress, system quality, and user habits to enhance prediction validity (Mogaji et al. 2024; Kang & Hwang 2022).

The Unified Theory of Acceptance and Use of Technology (UTAUT) enhance the Technology Acceptance Model (TAM) by incorporating dimensions such as performance expectancy, effort expectancy, social influence, and facilitating factors (Alyoussef 2022).

The Technology Social Exchange Model (TSEM) combines the Technology Acceptance Model (TAM) with social exchange theories to assess the perceived advantages and social expenditures associated with technology utilisation (Alshammari & Alkhwalidi 2025).

In ERP adoption, perceived ease of use is affected by interface design, user training, and the availability of assistance (Seneviratne & Colombage 2023). Inadequate training or assistance may lead users to oppose adoption and resort to manual methods. Recent research expands the Technology Acceptance Model (TAM) to encompass cloud-based ERP systems, identifying perceived security and trust as critical variables for adoption (Mogaji et al. 2024; Alsyouf et al. 2023).

Security assurance influences the connection between perceived usefulness (PU) and behavioural intention (Ahn & Ahn 2020), whereas vendor reliability and network quality determine perceived ease of use (PEOU). Moreover, UTAUT2 variables including habit, hedonic motivation, and price value encapsulate behavioural determinants specific to subscription-based SaaS models (Wu et al. 2025).

This study constructs a comprehensive framework for examining SAP Cloud ERP adoption at DUT by integrating TAM, UTAUT2, and trust-security variables, with a focus on usability, perceived benefits, and contextual facilitators of system acceptance.

2.2.3 Attitude Toward Usage and Behavioural Intention

The Technology Acceptance Model posits that PU and PEOU interact to shape a user's attitude toward system usage, which subsequently affects their behavioural intention to use the system, ultimately leading to actual system utilisation (Schorr 2023; Enu-Kwesi & Opoku 2020).

Botha & Mostert (2023) and Hasan (2017) asserts that users' perceptions of the usefulness and ease of use of ERP systems enhance their attitudes toward adoption, resulting in more frequent and effective utilisation.

Lee, Ramasamy and Subbarao (2025); Yang, Lee and Lee (2025) emphasises that users' belief in their ability to utilise the system and their understanding of its benefits are crucial for the effective adoption of even the most advanced ERP systems.

Users' opinions of the ERP system will primarily be shaped by their direct experiences with the user interface, its applicability to their tasks, and the observable advantages it provides (Kelly & Palaniappan 2023). Adverse experiences will thus affect behavioural intention and, subsequently, actual usage.

User adoption is expected to increase when the ERP system is perceived as advantageous for improving job performance, streamlining workflows, and providing timely data (Singh & Bawa 2024; Anaya, Flak & Abushakra 2023). The perception of the ERP system as user-friendly, characterised by practical features and straightforward navigation, is likely to reduce resistance to change (Jawad 2023).

An inadequate PU or PEOU jeopardises the company's investment in technological change, as users may choose to avoid the system, revert to outdated technologies, or completely reject it (Wicaksono & Maharani 2020).

2.4 Overview of ERP Systems in HEIs

Enterprise Planning systems are comprehensive software solutions designed to integrate various organisational functions into a unified system, thereby enhancing productivity and decision-making capabilities (Hustad & Stensholt 2023; Tuli & Kaluvakuri 2022). ERP systems represent significant advancements in the domain of business information systems (Al-Assaf et al. 2025). Syed et al. (2024) assert that ERP systems enable the management of all critical organisational functions within a unified information architecture, thereby promoting efficient data sharing and optimising business processes.

2.3.1 ERP Systems in Higher Education

Enterprise Resource Planning systems optimise administrative, financial, academic, and human resource operations in higher education institutions (HEIs) via centralised data management (Ramananda & Katuri 2025; Ayush et al. 2024).

Integrating finance, procurement, HR, and student modules, ERPs improve workflow efficiency, data analysis, and overall institutional performance (Chaudhari 2025; Hariprasad 2024).

A consolidated database enables efficient information exchange, minimises redundancy, and enhances real-time decision-making (Guruprasad 2023; Mehta 2025). ERP system automate academic and administrative functions, resolving issues like fragmented data and manual processing in higher education institutions (Adams 2024; Emma 2024).

In the context of HEIs ERP System is used to integrate and manage core business functional, including finance, human resources, academic operations, and student administration, on a single platform. For an example, ERP systems facilitate the administration of student lifecycles, which encompasses the maintenance of academic records, registration, admissions, and applications. Additionally, they facilitate the acquisition and management of student grades, the generation of class lists, and the performance of mark calculations by academic staff. ERP systems facilitate budgeting, procurement, fee administration, and financial reporting in the finance departments. The system is responsible for the management of staff records, payroll processing, and leave administration in human resource functions. ERP platforms enable HEIs to enhance data accuracy, enhance workflow efficiency, and facilitate informed decision-making throughout the institution by consolidating these diverse functions into a single integrated system.

Studies emphasise the increasing implementation of cloud-based ERPs at colleges. Cloud-based implementations have demonstrated considerable decreases in infrastructure expenses and time efficiency (Nakeng, Mokwena & Moeti 2021). Studies from Kenya and King Saud University demonstrate that SAP cloud modules enhance user satisfaction and financial outcomes, decreasing ownership costs by as much as

30%; however, challenges like broadband reliability and training persist as significant concerns (Kipruto 2023; Mungai 2023; Amin et al. 2024; Hamad, Yassin & Okour 2022). These findings highlight the revolutionary potential of ERP systems in higher education, contingent upon the strategic management of implementation issues.

2.4 Factors and Advantages of ERP Implementation in Higher Education Institutions

Enterprise Resource Planning systems are crucial in the HIEs due to their capacity to integrate and streamline complex institutional operations such as which ones? (Tiwari & Kalla 2021). These systems offer numerous advantages, including enhanced productivity in administrative tasks, improved decision-making capabilities, and more effective resource management (Chopra et al. 2022). ERP systems centralise organisational data such as which Student marks, student records providing a unified platform for managing diverse operations such as finance, human resources, procurement, and student services (Gonugunta & Kornada 2024).

Furthermore, they assist HIEs in maintaining competitiveness and enhance their ability to address the needs of staff such as such as?and students by optimising internal operations and facilitating improved service delivery (Tarigan, Siagian & Jie 2021; Brown & Mooketsi, 2018). This enhances the institution's reputation and appeal in the global education market (Tolefree 2020). In a competitive environment, HEIs must enhance their attractiveness to prospective students by ensuring efficient administrative processes, such as admissions and student records management (Ebirim 2024).

HEIs can enhance operational efficiency, reduce errors, and improve decision-making processes through the implementation of ERP systems, which facilitate real-time data access (Chesang 2024). These systems facilitate the management of administrative tasks, thereby contributing to a modernised and competitive educational environment (Deep, Athimoolam & Enoch 2024).

The successful implementation of ERP systems in HEIs enhances alignment with governmental regulations and stakeholder demands for improved performance and accountability (Al-Assaf et al. 2024).

ERP systems have become essential investments for HIEs to maintain flexibility and responsiveness in evolving educational landscapes, driven by competitive pressures and the necessity for technological progress (Nzama 2021). ERP systems are acknowledged as a strategic tool for promoting innovation in HEIs.

ERP systems enable organisations to make informed decisions, adapt to changing demands, and implement innovative practices more rapidly by providing real-time data and insights (Mhaskey 2024). This flexibility is essential to stay relevant in the rapidly evolving field of education.

2.4.1 Operational Efficiency

The operational efficiency of higher education institutions (HEIs) significantly relies on the effective implementation of ERP systems (Akhmad Firdaus, Nahayu & Shinta Aminda 2024; Vukman et al. 2024). ERP systems consolidate institutional activities, including finance, procurement, and administration, onto a singular platform, enhancing data accuracy, decision-making, and financial reporting (Adesina, Babayemi & Adesina 2024; Hasanudin 2024). ERPs improve managerial effectiveness and facilitate data-driven governance by optimising workflows and minimising manual errors (Graham & Nelson 2025; Elugbaju, Okeke & Alabi 2024).

The enhancement of data management is a principal result of ERP implementation. These systems standardise and centralise data, enhance interdepartmental communication, and facilitate real-time access to information for prompt academic and administrative decision-making (Emma 2024; Han et al. 2024). The implementation of ERP facilitates business process reengineering (BPR), prompting organisations to revamp obsolete procedures and synchronise them with contemporary automated operations (Gonuganta & Leo 2024).

This adaptability enables institutions to swiftly respond to policy or enrolment alterations, preserving their competitiveness (Soliman & Noorliza 2022). Technological advancements, including the integration of blockchain with ERP systems, enhance data security and transparency (Kundu 2023).

ERP-driven automation minimises redundancies, decreases administrative expenses, and enhances accountability via improved data governance (Tuli & Kaluvakuri 2022; Al Maruf 2025). Ultimately, ERP systems augment productivity, efficiency, and institutional sustainability by facilitating evidence-based decision-making in resource-limited higher education settings (Alzahmi et al. 2025).

2.4.2 Enhanced Data Management

ERP systems substantially enhance institutional data management, a function that directly influences organisational performance across all industries, including higher education (Mukred et al. 2021). In HEIs, ERP systems support the management of diverse categories of data, student data such as applications, registrations, academic records, and grades, financial data which includes tuition fees, budgeting, and procurement, and human resource data (such as staff records, payroll, and leave management). ERP systems facilitate the management of academic data, including course information, timetables, and assessment records, as well as broader administrative data used for reporting and institutional planning.

ERP systems play a critical role in facilitating data collection and ensuring the availability of precise and timely information (Ayush et al. 2024). ERP systems increasingly utilise Application Programming Interfaces (APIs) to enable seamless interaction between institutional databases and external accreditation or governmental systems, thereby expediting data exchange and reducing manual intervention (Budiman et al., 2021).

This technological competence enhances process sustainability, enabling HIEs to oversee faculty workloads and financial planning within a cohesive and perpetually updated framework (Mithi & Govender 2020). The uninterrupted exchange of data among subsystems improves adaptability to changing accreditation criteria, enrolment trends, and stakeholder demands (Georgescu & Schmuck 2025). Enhancing stakeholder accessibility and openness is equally significant. Universities function within a milieu of varied stakeholders, students, professors, regulators, and financial bodies, each necessitating accurate and prompt information ((Alsharari 2022).

ERP platforms consolidate access, providing role-specific dashboards and reporting that minimise delay and improve accountability (Bhagat 2025). ERP promotes institutional transparency and strengthens adherence to external accrediting bodies by allowing authorised users to access precise data as needed (Bansal et al. 2025).

The research regularly emphasises that effective data management serves as both an operational advantage and a strategic facilitator for long-term institutional sustainability (Zaman 2024). ERP integration facilitates accreditation reporting, accelerates audits, and improves performance tracking, hence enhancing institutional agility in competitive educational markets (Khan 2023; Mohammed & Alharthi 2021). As HEIs increasingly seek worldwide standards and performance-based funding, the ability to collect, verify, and share precise data becomes essential (Ali 2024).

The direct correlation between data integrity and organisational foresight seamlessly transitions to the subsequent essential advantage of ERP deployment in higher education institutions: enhanced decision-making (Hassan et al. 2024).

2.4.3 Improved decision-making

The implementation of ERP improves the quality and timeliness of decision-making by consolidating precise, real-time data throughout all organisational tiers (Biswas, Hossain & Cinute 2024; Al-Amin et al. 2023). In higher education institutions, this facilitates evidence-based planning, resource distribution, and performance evaluation (Chiang et al. 2025; Olayinka 2021). By optimising financial and administrative procedures, ERPs diminish delays and empower managers to respond to real-time insights instead of historical reports (Wedha & Hindarto 2023; Ogedengbe et al. 2024).

Contemporary ERPs include sophisticated analytics that convert raw data into predictive insights, enabling institutions to foresee trends in enrolment, funding, and compliance (Mhaskey 2025; Samson 2025). Their scalability facilitates adaptability to increasing data quantities and intricate operations, hence providing sustained efficiency and organisational agility (Aithal & Maiya 2023; Hustad & Stensholt 2023). Customisable elements enhance the alignment of systems with academic and administrative requirements, thereby reinforcing governance and sustainability (Chimpiri 2025; Hassan et al. 2024).

ERP solutions integrate operational management with predictive analytics to enhance strategic agility and sustained competitiveness in higher education (Morawiec & Sołtysik-Piorunkiewicz 2023).

2.4.4 Cloud-Specific Advantages

DUT stands to derive significant benefits from implementing a cloud-based ERP, surpassing conventional efficiency improvements.

On-demand scalability allows the institution to augment computing and storage resources during peak periods such as registration or budget closure and reduce them during less active terms, thereby optimising costs and performance (Muralidhar, Borovica-Gajic & Buyya 2022; Christiansen, Haddara & Langseth 2022). Automatic updates alleviate IT duties by optimising security, compliance, and feature enhancements (Mukred et al. 2023).

The subscription-based operational expenditure approach minimises initial investments and correlates IT expenditures with consumption, enhancing affordability for financially limited colleges (Nakeng et al. 2021; Almeida et al. 2022). Integrated catastrophe recovery and multi-regional redundancy guarantee data security and service continuity (AlHamrashdi 2023).

Cloud ERP facilitates remote access to financial, HR, and academic modules, hence enhancing blended learning and institutional collaboration (Harriprasad 2024; Kalla 2021). The architecture incorporates upcoming technologies AI, IoT, and analytics for enhanced operations (Al-kateeb & Abdullah 2024). Moreover, cloud infrastructure promotes sustainability by utilising energy-efficient data centres (Twala 2021) and strengthens security through encryption, identity management, and ongoing surveillance (Kipruto 2023). The ability for rapid deployment enhances institutional agility and competitiveness (Azwidowi, Smit & Thobejane 2024; Kratzke & Siegfried 2021).

2.5 Factors Influencing ERP Adoption

Enterprise Resource Planning systems represent a complex process shaped by numerous interrelated factors (Amade, Ogbonna & Nkeleme 2022).

Successful adoption requires consideration of organisational, technological, and environmental factors (Al Hadwer et al. 2021).

2.5.1 Organisational Factors

Organisational characteristics, especially leadership commitment, change management, and user training, significantly influence the effectiveness of ERP adoption (Yathiraju 2022). Commitment from top management diminishes uncertainty and user resistance, promoting favourable perceptions and enhanced adoption results (Zangana, Ali & Oma 2024; Kowsar & Rahman 2022).

Project endorsement relies on managerial prioritising, effective communication, and early user engagement (Stone & Zhang 2021; Hörnlund & Alender 2021).

Effective change management incorporates human, technological, and procedural modifications, underpinned by proactive leadership and organised communication (Domagała et al. 2021; Wang et al. 2024).

Inadequate preparation or training hinders staff adaption and system use (Imran et al. 2021; AlMarri et al. 2025). User engagement during implementation via training, feedback, and experiential learning mitigates resistance and bolsters confidence (Amado & Belfo 2021; Singh Bawa 2024; Wei & Cao 2025). Ongoing managerial assistance guarantees system coherence, enhances self-efficacy, and maintains ERP integration throughout the organisation (Bhattacharya, Ramakrishnan & Fosso Wamba 2023; Azouri et al. 2022).

2.5.2 Technological Factors

Technological considerations are crucial in influencing the success or failure of ERP system implementation in higher education institutions (Lutfi et al. 2024). Ease of use and utility are primary factors influencing user satisfaction and system efficacy (Gkrimpizi, Peristeras & Magnisalis 2023). Intuitive and user-friendly ERP systems necessitate reduced cognitive effort and training for personnel, hence enhancing the probability of adoption and continued utilisation (Keefer & Thomason 2021).

Higher education institutions implement ERP systems mostly to enhance data management, operational efficiency, and service delivery (Cannone et al. 2024).

Differing technological competencies across personnel render usability and accessibility essential for successful adoption (Almatrodi 2023).

Complex systems result in user irritation and resistance (Mughal, Weber & Abbas 2025), whereas sufficient training and support markedly improve adoption results (Kabakus, Bahcekapili & Ayaz 2025). Research indicates that firms favour ERP systems that are user-friendly, cohesive, and necessitate minimal customisation (Alshabeeb et al. 2023; Barua & Rahman 2023).

Intuitive solutions facilitate interdepartmental communication, minimise task redundancy, and enhance decision-making via real-time information accessibility (Gonçalves et al. 2023; Faccia & Petratos 2021). Consequently, higher education institutions deploying ERP systems must emphasise simplicity, alignment with user requirements, and extensive training and support (Alherimi et al. 2025; Latreche, Bellahcene & Dutot 2024).

2.5.3 Environmental Factors

Environmental considerations profoundly affect the efficacy of ERP systems, especially in intricate organisations like higher education institutions (Abu Madi, Ayoubi & Alzbaidi 2024). Organisational Information Processing Theory (OIPT) posits that businesses must adeptly navigate environmental uncertainty while deploying intricate systems such as ERP (YahiaMarzouk & Jin 2023).

Uncertainty emerges when inadequate information hinders decision-making on internal and external conditions (Jaradat, AL-Hawamleh & Hamdan 2025).

Internal factors, including institutional culture, human resources, and technological capacity, directly influence ERP deployment (Imran et al. 2022). Insufficient IT infrastructure and restricted personnel expertise can impede system integration and operational efficiency (Elbadri, Altaher & Alkawan 2024; Salih et al. 2022). The efficacy of ERP performance is contingent upon the alignment of university procedures with the best practices included inside ERP software (Alsharari 2022).

Universities function in dynamic contexts influenced by technological advancements, regulatory requirements, and market pressures (Alenezi 2023; Morawiec & Sołtysik-Piorunkiewicz 2023). Regular upgrades, data protection regulations, and accreditation standards impose further complexity and expense (Ebirim 2024; Mahmood, Khan & Bokhari 2019). Fluctuations in governmental financing, competitiveness, and student choices exacerbate environmental uncertainty (Jo 2023; Wang et al. 2020).

To tackle these difficulties, higher education institutions must invest in resilient infrastructure, ongoing staff development, and adaptive management techniques that guarantee system adaptability and compliance (Nour 2023; Tarigan et al. 2021). These initiatives can mitigate uncertainty and improve the efficacy of ERP systems.

2.5.4 Factors Influencing Cloud-Based ERP Adoption

In the implementation of cloud-based ERP, critical factors encompass more than conventional organisational, technological, and environmental effects (Al Hadwer et al. 2021). Key determinants encompass security, trust, reliability, and cost transparency, which significantly influence institutional decisions. The remote nature of cloud systems presents challenges around confidentiality, data integrity, and regulatory compliance (Ali et al. 2024). Security perceptions, in conjunction with usability, are essential to adoption decisions, including encryption, intrusion detection, and breach notifications (Gilbert & Gilbert 2025).

The reliability of the system is contingent upon network performance and accessibility. Inadequate bandwidth or latency problems diminish perceived usability and user confidence in system performance (Vukovic et al. 2024). Service-level agreements (SLAs) delineating uptime, response time, and vendor support are crucial for mitigating operational risk and ensuring continuity (Swain & Garza 2023; Yathiraju 2022). Vendor dependability and explicit warranties foster user confidence and institutional faith in the long-term viability of systems (Goldston 2019).

Financial predictability constitutes another essential element. Clear pricing and equitable subscription models avert unforeseen expenses that may destabilise institutional budgets (Sanakal 2022; Ahn & Ahn 2020).

Institutions ought to construct adaptable, usage-based agreements that correspond with enrollment and processing volumes to regulate operational expenditures (Kratzke & Siegfried 2021).

User views about security, reliability, service quality, and cost transparency must be perpetually assessed to uphold trust and satisfaction (Yosevine et al. 2021).

The elements, together with the conventional TAM aspects of utility and user-friendliness (Nilashi & Abumalloh 2025), are pivotal to the successful deployment of cloud-based ERP in higher education.

2.6 Comparative Analysis of ERP Systems Across Industries vs Sector-Specific ERP

Enterprise Resource Planning systems are categorised as either cross-industry (generic) or industry-specific solutions (Aggarwal, Anirudh & Buddala 2021). Cross-industry ERPs provide adaptable, adjustable modules appropriate for various businesses, whereas industry-specific ERPs are pre-structured to address the operational requirements of specific sectors (Munkácsi, Orosz & Alexy 2024; Popoola et al. 2024).

While sector-specific systems improve process alignment, they compromise scalability and interoperability, whereas cross-industry solutions prioritise adaptability and comprehensive integration (Kumar Gali & Kumar 2025; Frogeri et al. 2022). The implementation of ERPs in businesses presents issues related to data integration, customisation, and change management (Frogeri et al. 2022).

In higher education institutions (HEIs), ERP requirements diverge from those in business environments due to intricate academic and administrative duties (Noaman & Ahmed 2015). Although corporate ERPs predominantly improve financial efficiency, compliance, and profitability (Agarwal 2024; Ren 2022), colleges are additionally required to oversee grants, research budgets, and donor reporting (Elmagrhi & Ntim 2023; Sharma & Sharma 2021).

Effective financial modules in higher education institutions should consequently facilitate decentralised cost centres, ensure transparent reporting, and integrate with student information systems (Ahmed 2025; Vettriselvan et al. 2024)

Numerous higher education institutions implement cross-industry solutions first developed for firms due to their scalability and robust financial and human resources components (Ayush et al. 2024).

Nonetheless, these systems necessitate extensive adaptation to meet academic requirements, including research management and student services (Nunes, Alexandre & Gaspar 2024) Corporate-style standardisation enhances compliance and cost-effectiveness; nevertheless, in academia, it may limit flexibility and adaptability to policy changes (Mauer & Venecek 2022).

Recent advancements indicate that colleges are implementing contemporary ERP systems to integrate academic and financial operations (Hassan et al. 2024). Cross-industry systems such as SAP offer comprehensive modules for finance, human resources, and procurement, whereas higher education institutions augment these with extensions for grants, alumni relations, and facilities management (Gonuganta & Leo 2024).

Integrated Tertiary Software (ITS) has optimised admissions and registration processes; yet it is limited by inflexible institutional workflows (Mhina & Lashayo 2023; Mashabela & Pillay 2017).

The efficacy of ERP is contingent upon its alignment with institutional processes and its capacity for adaptation to change. Inflexible systems or policies impede enhancements and user efficacy (Anjaria 2025; Twala & Kekwaletswe 2019). Contemporary cloud-based technologies such as SAP S/4HANA Cloud, foster agility and ongoing enhancement yet require robust change-management strategies to guarantee successful implementation. For DUT, this equilibrium exists between SAP's innovation and the reduced customisation expenses and familiarity of ITS.

2.6.1 Challenges to Address in Customisation and Integration

The intricacy of customising ERP systems to meet specific institutional requirements remains a continual problem (Vukman et al. 2024). Integrating enterprise systems across industries necessitates the harmonisation of varied workflows and regulatory mandates (Gujar 2025). Vendors offer extensive suites applicable to many sectors; nonetheless, attaining ideal outcomes sometimes requires significant modification (Sarker 2024). Integrating systems with legacy infrastructure escalates expenses and risks (Blessing & Hubert 2024).

Vorster (2024) notes that companies need to re-engineer essential processes to align with cross-industry ERP logic, rendering meticulous customisation crucial for success. To mitigate these restrictions, ERP developers have implemented industry-specific modules designed for sector compliance, operational workflows, and technical compatibility (Li, Ji & He 2024).

2.7 Challenges and Barriers in ERP Implementation

The implementation of ERP systems in higher education institutions presents numerous challenges and difficulties (Basu 2024). HEIs are characterised by diverse stakeholders, complex administrative structures, and unique academic processes, unlike corporate entities, which operate under conventional, profit-oriented models (Cai et al. 2025).

2.7.1 Technical Challenges

The efficacy of ERP systems in higher education is significantly contingent upon the technological preparedness of both users and institutions.

Numerous universities encounter deficiencies in ICT competencies among personnel whose proficiency is not in technology. A significant technical issue emerges from the selection of an unsuitable ERP solution, resulting in a misalignment between the system and institutional requirements (Berarma, Bouamama & Latreche 2025). When functionality does not conform to established processes or older systems, integration challenges, escalating costs, and inefficiencies arise (Adepoju et al. 2024; Anjaria 2025).

Successful ERP implementation necessitates the alignment of system functionalities with organisational processes and the provision of adequate vendor support and maintenance (Patil et al. 2025). Inadequate software alignment and ineffective customisation approaches elevate project risk, complexity, and user discontent (Dwivedi 2024; Vijay Mhaskey 2025). Choosing reliable vendors and providing adequate training and support are essential to reducing system failures (Mahmood, Khan & Bokhari 2019; Kipruto 2023).

Customisation can improve user experience but adds considerable complexity, especially for large institutions (Camillo 2023). Excessive alterations may complicate further updates, escalate expenses, and necessitate comprehensive Business Process Reengineering (Szelagowski et al. 2023). Inadequately managed customisation results in user resistance and diminished productivity (Chang 2020; Bin Hammad, Yahaya & Mohamed 2024).

Data migration presents supplementary obstacles during ERP implementation. Inconsistent data architectures, overlapping schemas, and incomplete records in legacy systems can result in data loss or corruption (Kadoda et al. 2022; Mehta 2025). Universities must allocate resources to comprehensive data profiling and validation techniques to guarantee integrity and completeness (Nandish Shivaprasad 2024).

Ultimately, security and trust are essential considerations in the implementation of cloud-based ERP systems. Data breaches, unauthorised access, and service disruptions continue to pose significant threats (Oranefo, Eke & Egbunike 2024; Mahajan 2024). Institutions must ensure that providers offer robust encryption, explicit service-level agreements, and disaster recovery processes to protect data privacy and uphold trust in system resilience (Tatineni 2023; Das & Mukherjee 2024).

2.7.3 Financial Constraints

The expense of ERP adoption constitutes a major obstacle, encompassing licensing, infrastructure, customisation, and consultant costs (Kowsar & Rahman 2022).

Higher Education Institutions in underdeveloped nations encounter financial constraints that impede sustained system support, enhancements, and training (Bhati & Saxena 2024).

Cross-industry ERPs generally entail elevated expenses due to significant modification, while industry-specific systems may be more economical (Aggarwal, Anirudh & Buddala 2021). Although capable of enhancing processes, numerous firms find it challenging to achieve the financial advantages of ERP. Projects sometimes surpass budgets due to inadequate planning, misalignment with organisational objectives, and insufficient user proficiency (Jayamaha et al. 2024; Harun, Dorasamy & Ahmad 2022).

Inadequate training and human error following implementation result in inefficiencies and unforeseen expenses (Rahman, Zamil & Hoque 2025; Zongyuan & Haiyan 2024). Miscommunication between management and employees diminishes engagement and productivity (Sudarmi & Sunaryo 2024).

Financial difficulties emerge when ERP systems lack alignment with institutional plans or become outdated due to insufficient upgrades (Campbell et al. 2020; Law, Chen & Wu 2010). The upkeep of interrelated modules and data management inaccuracies can elevate operational expenses and risks (Elragal & Hassanien 2019; Mayowa, Temitope & Joshua 2024).

To resolve these challenges, institutions must allocate resources towards efficient change management, ongoing training, and system alignment across the ERP lifetime (Wright 2023; Jaradat et al. 2025). The advent of cloud-based ERP systems has transitioned expenditures from capital expenditure (CAPEX) to operating expenditure (OPEX), providing more budgeting flexibility (Savolainen 2023; Batalla Martinez, Wilfinger & Tschandl 2021). Nevertheless, variable consumption rates and tiered pricing may disguise overall costs (Aaltolehto 2021; Bhaskaran 2019).

To ensure financial sustainability, institutions must adopt cost governance, monitor consumption, and establish explicit service-level agreements (SLAs) with specified expenditure limits (Mdletshe 2024; Jhurani 2022).

In the absence of these precautions, the expected cost efficiencies from cloud ERP adoption may not be realised (Alsharari, Al-Shboul & Alteneiji 2020).

2.7.4 Resistance to Change

Resistance to change constitutes a significant obstacle in ERP deployment, especially within higher education institutions where personnel are familiar with legacy systems (Azouri et al. 2022; Althani 2024). The deployment of ERP systems disrupts traditional administrative and academic processes, causing users to view the new systems as complicated or intimidating (Senbeto & Hon 2021; Krantz 2024). This resistance is exacerbated when cross-industry ERPs inadequately match institutional workflows (Lim et al. 2025; Halliday 2024).

Overcoming opposition necessitates the use of effective change management practices, such as Kotter's 8-Step Model, which underscores leadership, communication, and employee engagement (Mbarek 2024). Employee apprehensions arise from work instability, diminished autonomy, and trepidation surrounding the acquisition of new technologies (Ivanov et al. 2020).

Research indicates that absorptive capacity the capability to comprehend and utilise new knowledge substantially influences the effectiveness of ERP adoption (Fuad et al. 2024; Al Musadieq et al. 2025). Employees who exhibit adaptability and a willingness to learn demonstrate reduced resistance and increased acceptance of systems (Kurniawanti et al. 2025; Meena & Santhanalakshmi 2024).

Effective leadership and clear communication regarding ERP advantages are crucial for enhancing user acceptance (Jayeola et al. 2022; Mutambik & Almuqrin 2024). External consultants and providers can facilitate knowledge transfer and illustrate system value, thereby smoothing the transition (Martin-Granizo 2023; Debnath et al. 2025). Continuous assistance via training, mentorship, and help desks bolsters confidence and encourages sustained utilisation (Almatrodi, Li & Alojail 2023).

Organisations characterised by creative cultures encounter diminished resistance, as employees are more familiar with technological change (Rahmita et al. 2023; Nowak 2023).

Fostering technical preparedness and symbolic endorsement promotes receptivity to change (Thomas 2024). Ultimately, cultivating an adaptive culture, augmenting absorptive capacity, and sustaining ongoing support are essential for surmounting resistance and guaranteeing ERP success (Llavisaca-Villazhañay et al. 2025).

2.8 User Adoption and Utilisation of ERP Systems

2.8.1 Determinants of User Acceptance

The efficacy of ERP systems predominantly hinges on user approval, which influences the extent of their adoption and utilisation within enterprises (Joshi & Sengupta 2025). User acceptance is influenced by perceived utility, user-friendliness, and system compatibility (Jo & Park 2023), all of which affect the incorporation of ERP systems into routine operations and overall organisational efficacy (Nyo 2022).

Successful adoption necessitates addressing user apprehensions regarding usability, functionality, and congruence with institutional objectives (Keenavinna et al. 2025). Organisational culture, training, and support are crucial in influencing favourable user attitudes (Akrong, Shao & Owusu 2022).

Offering local support and practical assistance bolsters user confidence and preparedness to adopt ERP systems (Mkhulisi et al. 2024; Bin Hammad, Yahaya & Mohamed 2024).

The Unified Theory of Acceptance and Use of Technology (UTAUT2) provide a comprehensive framework for analysing user behaviour, especially when augmented with constructs like as trust and learning value (Tamilmani, Rana & Dwivedi 2021; Syamsuar et al. 2023). Research indicates that users are more inclined to accept and proficiently employ ERP systems when they possess faith in the system and perceive that mastering its utilisation is beneficial (Yathiraju 2022; Surbakti et al. 2024).

2.8.2 Training and support for users

User training is a critical determinant affecting the success and efficacy of ERP installation (Salih et al. 2022). Insufficient training results in underutilisation, inefficiencies, and even project failure (Nyansiro, Mtebe & Kissaka 2021; Madathala et al. 2025).

Thorough and uniform training enables personnel to proficiently maneuver the system, maximising both human and technological resources (Nath & Nipa 2024; Mankge et al. 2024)

Due to the regular customisation of ERP systems, personnel must receive training on the specific features to maximise the utilisation of new functionalities and enhance decision-making (Tyagi & Abdul 2024; Pech & Vrchota 2022). Partnerships with seasoned suppliers improve training quality by offering system-specific technical knowledge and user-centred educational programs (Zamil, Jyoti & Ikbal 2023; Vukman et al. 2024).

2.9 Strategies for Effective ERP Implementation

The effective implementation of ERP systems in higher education institutions entails more than just technical configuration; it signifies a multifaceted transformation within the institution (Ismail 2025). The effectiveness of ERP systems is primarily contingent upon the transition management strategies utilised, notwithstanding their promise of integration, efficiency, and alignment with corporate objectives (Hammouch 2024).

Anjaria (2025) emphasises that the adoption of ERP in higher education institutions encompasses not only software implementation but also necessitates a transformation of institutional culture, the optimisation of processes, and the facilitation of meaningful user engagement with new technology.

HEIs, unlike private sector organisations, face specific challenges such as decentralised governance, complex stakeholder groupings, and diverse user requirements (Priyadarshini & Abhilash 2022). To effectively adopt ERP, solutions must be comprehensive, context-sensitive, and holistic, simultaneously addressing organisational, cultural, human, and technical dimensions (Machado Becker et al. 2025).

2.9.1 Robust Leadership and Executive Management Endorsement

Effective ERP implementation necessitates both technology enhancements and a cultural transformation inside the organisation to accept new processes and practices (Feng & Ali 2024).

Leaders who actively participate in the change process can cultivate a culture of innovation and collaboration, prompting teams to adopt new technologies and practices, thereby motivating employees and enabling the organisation to adapt efficiently to changing market demands (Musaigwa 2023).

Leadership is a crucial factor for the successful implementation of ERP systems (Lakdinu et al. 2022). In the absence of robust, unified leadership, this decentralisation could lead to fragmented decision-making and resistance to established protocols (Altamimi, Liu & Jimenez 2023). An essential aspect of good leadership is the ability to negotiate agreements among diverse stakeholders, including employees who may perceive ERP systems as administrative tools that threaten their employment (Almatrodi 2023).

Senior management must actively endorse the ERP initiative by articulating a clear vision, delineating expected benefits, and reinforcing the system's alignment with organisational strategic objectives (Jo & Bang 2023). In universities, this necessitates that senior leaders, including vice-chancellors, deans, and directors, offer visible support and serve as exemplars in adopting the change (Waghid 2023). Given that ERP projects may be vulnerable to shifting objectives, political interference, and budget constraints in developing countries, the backing of leadership is crucial (Alkraiiji et al. 2022).

Leadership can acquire resources and sustain momentum by positioning ERP deployment as a strategic objective associated with institutional competitiveness and global benchmarking (Hussein 2024). ERP projects risk stagnating without such support due to user resistance or bureaucratic inertia (Sakita, Helgheim & Bråthen 2024).

2.9.2. Holistic Change Management

Lunga (2021) asserts that ERP adoption transcends mere technical enhancement; it constitutes a process of institutional transformation. ERP efforts, unlike conventional IT deployments, transform workflows, business processes, and decision-making frameworks across the entire enterprise (Hustad & Stensholt 2023).

The cultural, behavioural, and organisational dimensions of change are the critical factors; technological proficiency alone cannot guarantee success (Bozkus 2024). The disregard of "human" elements has been identified as a prevalent reason for ERP failure (Senaya, van der Poll & Schoeman 2022).

Structured frameworks are vital for efficient change management, as they facilitate the necessary organisational and psychological transformations required for ERP adoption (Gaur & Bharti 2025). ERP systems necessitate substantial process reengineering, resulting in alterations to entrenched procedures (Rahman, Zamil & Hoque 2025). Consequently, change management strategies are crucial to mitigate resistance and foster acceptance (Xue et al. 2024). Kotter's 8-Step Change Model delineates phases such as forming coalitions, cultivating urgency, and embedding change within organisational culture (Majika 2024).

Clear communication of the ERP's objectives, alignment with institutional goals such as internationalisation and digital transformation, and staff involvement in decision-making processes are crucial elements of effective change management in higher education institutions (Díaz-García et al. 2023). Effective change management in HEIs necessitates employee involvement in decision-making, alignment with institutional missions such as internationalisation and digital transformation, and a clear articulation of the ERP's objectives (Rughani, Sharma & Joseph 2025; Monferdini & Bottani 2024).

2.9.3 Customised Training and Capacity Development

Training and capacity building are essential for the successful use of ERP systems in higher education institutions (Hassan et al. 2024). In contrast to corporate environments, higher education institutions (HEIs) encompass a variety of user groups academics, administrators, IT personnel, and students necessitating customised program that cater to distinct abilities and responsibilities (Sułkowski 2023; Gupta, Kumar & Mishra 2024). Comprehensive ERP training should encompass technical, conceptual, and cultural aspects, enabling users to grasp the system's objectives and its alignment with organisational goals (Leso, Cortimiglia & Ghezzi 2023; Amade, Ogbonna & Nkeleme 2022).

In developing contexts, inadequate digital literacy obstructs adoption; hence, multi-faceted strategies that integrate workshops, self-directed courses, and mentorship are advised (Barikzai et al. 2024; Asthana 2025). Continuous professional development (CPD) facilitates the implementation of evolving ERP systems (Pohrib, Goga & Pîsla 2025). This corresponds with the TAM and UTAUT models, wherein continuous training enhances perceived usefulness and performance expectancy (Nnaji et al. 2023; Williams, Rana & Dwivedi 2015).

Tailored programs augment confidence and role-specific expertise—technical for IT personnel and analytical for managers (Gavidia, Junglas & Chou 2023; Ebirim et al. 2024). Train-the-trainer approaches enhance institutional sustainability and diminish external reliance (Sudarmo, Vandika & Fahrijal 2024). Ongoing feedback, assessment, and iterative modifications guarantee that training retains its efficacy and pertinence over time (AlMuhayfith & Shaiti 2020; Zhou & He 2024).

2.9.4 Incremental or Staged Implementation

The implementation of ERP systems at higher education institutions is intricate due to varied users, multiple procedures, and established governance frameworks (Lamey et al. 2023). A singular "big-bang" implementation entails considerable dangers, potentially jeopardising academic and administrative functions (Baumann 2024).

In contrast, a phased or incremental technique offers a more sustainable method, facilitating gradual module implementation, diminishing uncertainty, and enhancing user acceptance (Kumar 2025; Malik & Khan 2021).

This incremental approach enables institutions to learn progressively, addressing issues such as data transfer or staff training prior to progressing to more intricate modules like student systems (Mızrak & Caylan 2023; Majika 2024).

It additionally facilitates corporate learning and diminishes reliance on external consultants (Dutta & Kumar 2022).

2.9.5 Ongoing Communication and Stakeholder Involvement

Communication is a vital aspect of success in ERP adoption, characterised as the essential element of organisational transformation (Gupta 2025). ERP projects are intricate, protracted endeavours that alter conventional workflows, necessitating personnel and management to function amid uncertainty (Berglund 2023). In these circumstances, clear and consistent communication is vital to combat misinformation, diminish resistance, and regulate expectations (Müller & Syed 2021). In the absence of efficient communication, employees may depend on informal networks, thereby distorting project perspectives and intensifying anxiety (Culberson 2025).

Jepsen et al. (2025) emphasise the significance of organised communication tactics, such as progress bulletins, newsletters, interactive dashboards, and town hall meetings, which are designed to keep stakeholders informed and involved.

Stakeholder involvement encompasses more than just communication; it addresses the collaborative aspect of ERP deployment (Huang et al. 2021). In HEIs, decision-making frameworks are decentralised, with authority distributed among faculties, administrative divisions, and governing bodies (Moloi & Mhlongo 2025).

This presents a distinct barrier in contrast to corporate environments, where top-down orders are more embraced (Gotsch et al. 2023). In higher education institutions, the implementation of ERP systems fails when faculty and administrators view the system as externally mandated or inconsequential to their operational roles (Alhazmi et al. 2023). This feeling of detachment has been associated with diminished system utilisation, perfunctory compliance, and even outright repudiation of ERP projects (Baumann 2024).

Blockis (2025) asserts that authentic engagement includes not merely informing stakeholders but also their active participation in the design, customisation, and evaluation processes. Co-design workshops, focus groups, and pilot implementations are increasingly recognised as useful methods that enable users to articulate their demands and influence system functionality (Kelly et al. 2024). Involving a variety of stakeholders is essential (Madanian, Subasinghage & Tachiona 2021).

Personnel and external collaborators ought to participate in pilot testing, feedback sessions, and decision-making procedures (Wondmagegn 2025). When stakeholders have a sense of ownership in the ERP endeavour, opposition diminishes, and commitment escalates (Ojikutu, Meadows & Omakanye 2024). Stakeholder participation is crucial for ensuring that ERP systems accurately represent company operations instead of being exclusively influenced by vendor-driven templates (van Til 2025).

2.9.6 Resilient Technical Infrastructure and Vendor Collaborations

Technical preparedness is essential for successful ERP deployment, as the efficacy of these systems is inherently linked to the strength of an institution's technology infrastructure (Halim 2023). For cloud-based ERP systems, preparation encompasses more than mere software installation; it necessitates adequate broadband access, secure networks, dependable hardware, and scalable infrastructure capable of accommodating variable user needs (Alessandro, Candidate & Cristofaro 2022).

In underdeveloped nations, issues such as restricted internet access, frequent power outages, and inadequate ICT infrastructure are prevalent obstacles that impede ERP implementation (Barikzai, Bharathi S & Perdana 2024). These constraints prevent institutions from fully capitalising on the advantages of ERP systems, irrespective of the efficacy of leadership or the calibre of change management efforts (Rajapakse & Thushara 2023). In addition to infrastructure, technical readiness necessitates possessing the appropriate internal competence to oversee the system (Wijaya, Wiratama & Egeten 2023).

Khashab et al. (2022) emphasise that higher education institutions with robust ICT departments are more effectively equipped to install, oversee, and modify ERP systems over time.

In contrast, organisations that depend solely on external consultants or contractors may develop a long-term dependency that impedes innovation and adaptability (George 2024). Consequently, enhancing internal capacity via technical training, recruitment of ICT experts, and ongoing professional development is essential for attaining ERP sustainability (Lubasi 2024).

ERP providers significantly influence the adoption process (Nour 2023). Successful vendor collaborations provide access to cutting-edge technologies, specialised knowledge, and industry best practices that institutions might otherwise be deficient in (Schomaker & Gilliam 2022). Schomaker (2023) asserts that partnerships with ERP consultants and vendors are equally crucial for the successful implementation and advancement of ERP systems within an organisation.

ERP vendors are essential in the creation, implementation, and ongoing enhancement of ERP systems, guaranteeing that the software remains efficient, adaptable, and user-friendly (Sierszeń & Klesta 2024). Their responsibilities generally encompass tailoring systems to fulfil the distinct requirements of organisations, which may entail programming to rectify functional deficiencies, augment capabilities, and incorporate bespoke solutions into configurable alternatives to improve usability and adherence to business process standards (Dcruze 2022). Vendors provide crucial technical support by addressing software-related difficulties, preparing data for system prototypes, and delivering initial training to key users on system functioning, data flow, and customisation portions (Corum 2024).

2.9.7 Ongoing Assessment and Enhancement

The implementation of ERP should be regarded as a continuous corporate learning process rather than a singular undertaking (Carroll et al. 2023). ERP systems engage with many institutional processes and necessitate continuous monitoring and assessment methods to guarantee continued value delivery and alignment with institutional objectives (Mankge et al. 2024). Jawad and Balázs (2024) emphasise several instruments and methodologies essential for efficient monitoring.

This encompasses Key Performance Indicators (KPIs) that assess operational efficiency, financial management, and student service delivery, along with post-implementation audits that determine if the system operates as planned and fulfils user requirements (Schwarz 2022). Post-implementation evaluations, user satisfaction surveys, and performance indicators serve as ongoing assessment tools that enable firms to identify issues and execute corrective measures (Cataldo et al. 2022).

Nevertheless, critical viewpoints contend that the evaluation of ERP performance must encompass more than conventional efficiency metrics, such as cost reductions, automation levels, or processing durations (Asif 2024). In higher education institutions, the genuine value of ERP systems is reflected in strategic outcomes, such as their effectiveness in enhancing research administration by optimising grant management or in bolstering institutional accountability through improved reporting and compliance mechanisms (Khand 2020). Comprehensive assessment frameworks guarantee that ERP systems enhance both operational excellence and the fundamental aim of higher education (Maruf 2025).

The notion of constant learning is essential (Anaya & Qutaishat 2022). The introduction of ERP systems inherently entails a process of trial and error, as initial configurations may not completely correspond to the varied requirements of the organisation (Dachepalli 2025). A culture of "learning by doing," characterised by the ongoing refinement of business processes, retraining of users, and adjustment of governance structures, has demonstrated a substantial enhancement in long-term adoption outcomes (Martin-Granizo 2023). This corresponds with the dynamic capabilities theory, which emphasises that companies must cultivate the capacity to reconfigure, integrate, and rejuvenate their systems and processes in reaction to evolving environments (Zongyuan & Haiyan 2024).

For higher education institutions functioning in competitive and swiftly changing educational environments, this entails utilising ERP not as a fixed instrument but as a dynamic platform that adjusts to changes in pedagogy, student expectations, and regulatory frameworks (Samodien, Du Plessis & Van Vuuren 2024).

Through the comparison of ERP performance with similar institutions, universities can discern best practices, implement innovative modules, and circumvent prevalent hazards (van Raay et al. 2025). Engaging external auditors or accreditation agencies in post-implementation assessments guarantees that ERP systems fulfil both internal objectives and external compliance and quality standards (Gonuganta & Leo 2024).

2.9.8 Strategic Alignment with Institutional Vision

A significant determinant for ERP implementation in HEIs is its congruence with the overarching institutional strategy and long-term vision (Ramachandran & Thangamani 2020). AlMuhayfith and Shaiti (2020) assert that ERP systems should not be regarded solely as operational or administrative instruments but as strategic facilitators that assist institutions in fulfilling their fundamental objectives. ERP projects implemented in isolation, lacking a clear connection to institutional aims, face resistance, underutilisation, and potential failure (Ghawe & Chan 2022).

Strategic alignment guarantees that ERP adoption transcends mere efficiency improvements in domains like finance or human resources, instead facilitating significant institutional transformation (Pooja, Chikhale & Dhir 2025). Institutions seeking global competitiveness may prioritise cross-industry ERP systems that facilitate scalability, international integration, and real-time analytics (Olayinka 2021).

In contrast, colleges predominantly functioning within national frameworks, in developing nations, may prioritise ERP solutions designed for local compliance, governmental reporting, and accreditation standards (Balićet al. 2022). In both instances, the value of the ERP is ascertained not solely by its technical attributes but by its efficacy in promoting the institution's long-term objectives (Abobakr, Abdel-Kader & Elbayoumi 2024). A further aspect of strategic alignment pertains to governance and policy integration (Kashyap 2025).

The integration of ERP adoption into institutional planning procedures is essential for alignment with digital transformation goals, quality assurance policies, and performance management frameworks (Lameyet al. 2023).

Shimange & Pillay (2023) emphasise that ERP systems matched with institutional vision facilitate the transition of universities from fragmented, department-centric decision-making to more cohesive, data-driven governance frameworks. This change promotes transparency, accountability, and evidence-based decision-making, hence augmenting institutional legitimacy and confidence among stakeholders (Igwe-Nmaju & Ucheya 2025).

The effective implementation of ERP is contingent upon its strategic alignment with the university's long-term vision and objectives (Anjaria 2025). Institutions emphasising worldwide competitiveness may prefer cross-industry ERPs for scalability and integration, whilst those concentrating on local compliance may opt for sector-specific systems (Butt & Alghababsheh 2025). Perceiving ERP as a strategic facilitator instead of merely an operational instrument enables institutions to optimise its worth in enhancing their operations (Allen, Kern & Havenhand n.d.).

2.10 Gaps in Existing Literature

2.10.1 Broad Gaps

Despite the increase in research on ERP use in higher education, most studies concentrate on sector-specific systems, such as the Integrated Tertiary Software (ITS) utilised by South African universities. Nevertheless, the literature about ITS uptake, user experience, and institutional alignment is fragmented and insufficient. Extensive research examining the motivations, problems, and user acceptance of ERP systems in South African universities is limited and outdated.

The recent implementation of SAP, a cross-industry cloud-based ERP at DUT, signifies a significant digital revolution; yet, there is a paucity of research investigating the deployment and user experience of such cross-industry ERP systems in South African higher education institutions. Current international research (Kumar Gali & Kumar 2025; Munkácsi et al. 2024) examines ERP adoption in developing contexts but is not immediately applicable due to variations in governance, funding, and institutional culture.

2.10.2 Research Gaps and Correspondence with Objectives

Current research predominantly utilises the Technology Acceptance Model (TAM) and UTAUT frameworks to investigate ERP adoption; yet, there is a paucity of studies addressing SAP S/4HANA Cloud ERP in South African higher education institutions (HEIs).

Previous research (Tarus 2023; Ahn & Ahn 2020) investigated trust, usability, and pricing transparency mostly within general industries or individual university courses, hence creating a vacuum in understanding the adoption determinants at DUT. This gap corresponds with Objective 1 and RQ1, which investigate the primary adoption determinants for SAP Cloud ERP at DUT.

Most of the ERP research concentrates on legacy, on-premise systems, emphasising data validation and integration issues (Gonuganta & Leo 2024). Nevertheless, there is scant research regarding the problems of cloud ERP implementation in South African higher education institutions.

Comprehending these cloud-related obstacles, including network reliability and vendor reliance (Al Hamrashdi 2023), directly informs Objective 2 and RQ2, which evaluate user and technical difficulties in ERP adoption. Despite the frequent examination of user experience, comparative analyses between legacy systems (ITS) and contemporary cross-industry platforms (SAP Cloud ERP) in South Africa are lacking. This limits comprehension of usability, utility, and performance advantages, support Objective 3 and RQ3, which seek to evaluates staff opinions of ERP user-friendliness and benefits.

Training and support frameworks remain inadequately examined. Although research emphasises the significance of user readiness and personalisation in ERP implementation (Mhina & Lashayo 2023), there is a lack of studies focusing on training-of-trainers or hybrid capacity-building frameworks in South African higher education institutions. This gap supports Objective 4 and RQ4, which investigate the impact of training, continuous assistance, and system customisation on adoption success.

Ultimately, although basic ERP adoption frameworks exist (Hamad et al. 2022; Twala 2021), there is no customised, evidence-based paradigm for higher education institutions such as DUT, where governance, funding, and stakeholder dynamics diverge from corporate environments.

Rectifying this weakness advances Objective 5 and RQ5, which seek to provide context-specific measures to improve SAP Cloud ERP adoption and sustainability in South African higher education institutions.

2.11 Frameworks for Cloud-ERP Adoption

Cloud ERP study incorporates TAM concepts alongside additional constructs including trust, security, and cost transparency (Ahn & Ahn 2020; Hamad et al. 2022). These aspects are essential in subscription-based contexts, because perceived utility and trust significantly affect behavioural intentions. The ERP Adoption Model by Mukred et al. (2023) highlights organisational preparation, leadership support, and IT capacity as essential prerequisites for successful adoption in higher education.

This study formulates a conceptual model for DUT by integrating TAM and UTAUT2 constructs perceived utility, ease of use, trust, and security with organisational aspects such as training, support, and customisation.

This model will undergo evaluation through a quantitative survey and statistical analysis to ascertain adoption drivers, obstacles, and institutional preparedness.

2.12 Contextual Elements in South African Higher Education Institutions

South African higher education institutions function amid intricate socio-economic, policy, and governance contexts that influence ERP implementation. Funding Variability: Dependence on variable government subsidies hinders long-term ERP subscription strategies (Nakeng et al. 2021). Long-term vendor contracts with adaptable payment conditions are crucial for sustainability.

Digital Literacy: Deficiencies in cloud architecture and cybersecurity skills impede adoption (Twala 2021). Ongoing professional development and accredited SAP training can enhance organisational preparedness.

Stakeholder Complexity: Unions, councils, and academic bodies impact ICT decisions (Azwidowi et al. 2024). Collaborative governance via joint steering committees cultivates trust and collective ownership.

Data Sovereignty: The Protection of Personal Information Act (POPIA) requires local data hosting or comparable privacy protections. A hybrid cloud strategy storing sensitive data on-premises while utilising SAP's global infrastructure for non-essential modules can guarantee compliance and operational efficiency.

2.13 Security, Privacy, and Governance

Security is paramount to the adoption of cloud ERP. Risks in multi-tenant systems require zero-trust architectures, encryption, and robust key management (Abukari et al. 2022). Service Level Agreements (SLAs) must explicitly delineate uptime, data ownership, and compliance checks (Salih et al. 2022). Effective data governance at DUT must incorporate quarterly security assessments, audit documentation, and established accountability frameworks to maintain confidence, ensure compliance, and uphold system reliability.

2.14 Summary

This chapter examined essential theories and research regarding the deployment of ERP and cloud-based ERP in Higher Education Institutions.

It emphasised essential elements including user acceptance, training, organisational preparedness, and technology infrastructure. Notwithstanding global advancements, there is a paucity of studies regarding the adoption of cloud-based ERP. This chapter examines these deficiencies utilising DUT as a case study. The subsequent chapter delineates the research approach, specifying the design, sampling, data collection, and analytical techniques employed to examine the selected parameters.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3. 1 Introduction

The chapter presents the research methodology that was adopted, outlining the research design, targeted population, sampling strategy, data collection instruments, data analysis methods techniques. It further discusses data organisation and the ethical considerations upheld throughout the research process. Additionally, the chapter details the measures undertaken to ensure the reliability and validity of the collected data. Finally, the chapter explains how the analysed data will contribute to addressing the research objectives.

3.1 Research Approach

There are three commonly used research approaches, namely, qualitative research, quantitative research, and mixed research. The quantitative approach uses numerical data that is gathered and analysed to find trends, connections, and patterns (Ghanad 2023). For investigations needing statistical analysis and objective measurement, the quantitative approach is more suitable (Abdulsalam et al. 2022). The qualitative approach commits to comprehending phenomena by means of in-depth, non-numerical data such as observations, interviews, and textual analysis (Ugwu & Val 2023). It is usually employed to investigate profound understanding of the motives, experiences, and perceptions of participants. The mixed research approach utilises the advantages of both quantitative and qualitative techniques to create a grasp of the research subject (Taherdoost, Mohamed & Madanchian 2024).

This study adopted a quantitative approach to examine factors that influence the adoption of a cross-industry ERP cloud-based system in DUT. The quantitative research approach was adopted due to its ability to systematically collect and analyse numerical data, enabling the objective examination of patterns, relationships, and trends among variables (Abuhamda & Bsharat 2021). This approach is particularly appropriate for this study, as it seeks to measure and analyse factors influencing the adoption of a cloud-based ERP system among staff at the DUT. Numerical data was gathered through a survey-based method, which was in the form of structured questionnaires.

This approach enabled the collection of a substantial amount of data from a given population, ensuring that the results were both statistically significant and broadly applicable (Zyoud, Dweikat & Bsharat 2024).

This approach supports evidence-based conclusions by offering quantifiable and broadly applicable insights into the variables driving the adoption of ERP systems (Smith & Hasan 2020).

3.2 Research Design

This study employed a case study design to examine the adoption factors for ERP cloud-based systems in HEIs, with a particular focus on the Durban University of Technology (DUT). A case study approach was considered appropriate because it allowed an in-depth, contextualised examination of complex real-life phenomena within a specific setting.

In this case, DUT serves as a representative example of a higher education institution transitioning to a cross-industry cloud-based ERP system. Paparini et al. (2021) highlighted the value of case study approaches in evaluating complex interventions within real-world contexts to gather rich and detailed data, from various stakeholders such as administrative staff, faculty members, and IT personnel who are directly involved in or affected by the system's adoption.

This approach was especially suitable for understanding the multifaceted nature of ERP implementation, including technological, organisational, and human factors (Nohria 2021). By focusing on one institution, the study was able to capture the nuances, challenges, and contextual variables. Moreover, the findings from this case will offer valuable insights and practical implications that can be applicable to other HEIs facing similar adoption processes.

3.3 Research Setting and Population

3.3.1 Research Setting

The study was conducted at DUT, a multi-campus higher education institution in KwaZulu Natal, South Africa.

DUT has deployed a cross-industry ERP system with the aim of enhancing the effectiveness of various institutional departments, including student administration, finance, and human resources management. As DUT is currently implementing this cross-industry ERP system, it provides an ideal context for this investigation. This transition allows for an exploration of the key factors that influence successful adoption, such as organisational support, perceived utility, training efficacy, and user readiness. The findings of this study can offer DUT valuable insights into potential obstacles and facilitators, aiding in the development of change management strategies, increasing user engagement, and enhancing the overall efficiency of the implementation process. Given that DUT is in the early stages of adopting a cross-industry ERP system, it serves as a fitting framework for this research.

The institution's diverse workforce, composed of both administrative and academic staff, provides a rich array of perspectives on the benefits, challenges, and determinants of ERP adoption. Aligned with the study's objective of identifying and analysing the factors that influence ERP adoption in a higher education context, this research will help DUT better understand user needs and improve the effectiveness of its system deployment.

3.3.2 Targeted Population

The study used DUT personnel as the targeted population. The population of the study is DUT employees representing different units at DUT, including Finance, Technical Support, Academic Administration, and Human Resources, who are involved in the deployment and utilisation of the cross-industry ERP cloud-based system. There are 200 employees in the population overall. The population's diversity made it possible to represent a range of viewpoints and ERP adoption-related experiences.

TABLE 3.4 DUT POPULATION DISTRIBUTION

Department/Division	Number of Staff
Finance	70
Technical Support	35
Administrators	65
Human Resources	30
Total	200

Table 3.4 DUT Population

3.5 Sampling Strategy

Sampling is the process of choosing a representative subset from a larger population to gather data quickly and accurately represent all subgroups. There are different sampling techniques, including non-probability sampling for qualitative studies and stratified random sampling in probability sampling for quantitative studies (Shamsudin, Hassim & Hassim 2024).

A stratified random sampling technique was used in this study to guarantee equitable and proportionate representation in each DUT unit. Stratified sampling involves dividing the population into non-overlapping groups, known as strata, and then selecting random samples from each stratum (Makwana et al. 2023).

3.5.1 Justification for the Stratified Sampling

The rationale behind selecting stratified sampling was:

1. By guaranteeing units variety, stratified sampling improves the accuracy of the results (Sadaiyandi et al. 2023).
2. The validity of results is enhanced and the possibility of bias is decreased by random selection (Daniel et al. 2024).
3. It guarantees that the opinions of every units are represented proportionately (Stehman & Xing 2022).

The sample size for this study was 62 respondents, determined from a total population of 200 staff members at DUT. To ensure that the sample accurately reflected the structure of the population, a stratified random sampling technique with proportional allocation was employed. This approach allowed each subgroup to be represented according to its size within the population.

3.5.2 Sample Size Determination

This population will be divided into strata, each representing units at DUT involved with the system. To calculate the sample size for each stratum the following formula will be used:

$$n_h = \frac{N_h}{N} \times n$$

Where n_h = sample size for stratum h

N_h = population size for stratum h

N = total population size

n = total sample size

Calculate the Sample Size for Each Stratum

HR = $(30/200) \times 62 = 9$

IT Support = $(35/200) \times 62 = 11$

Finance = $(70/200) \times 62 = 22$

Administrators = $(65/200) \times 62 = 20$

The sample size is 62

This formula ensured that each entity was proportionally represented in the overall sample, allowed more accurate and reliable study findings (Giri 2024).

3.6 Data Collection

3.6.1 Data Collection Method

Data was gathered through a survey-based method. A survey-based method is a quantitative research approach used to collect standardised data from a specific population or sample through structured questionnaires or interviews (Yavuz 2023). This method is useful for gathering information on participants' attitudes, perceptions, behaviours, or characteristics related to the research topic.

In this study, data was gathered through a survey-based method to obtain insights from staff members at DUT regarding their experiences, perceptions, and challenges associated with the adoption of the cloud-based ERP system. The use of a survey allows for the efficient collection of data from a large number of respondents, ensuring that the findings are both measurable and generalisable within the context of the case study (Gamage 2025). Additionally, it enables the researcher to statistically analyse

relationships between variables relevant to ERP adoption. The survey approach was appropriate, guaranteeing greater representation and more useful results.

The flexibility to employ structured questions in surveys enables statistical comparisons and thorough analysis (Taherdoost 2021). The questionnaires were accessible online, and participants in each sampled stratum received a link to provide their responses. The approach was self-administered, allowing individuals to answer the questionnaire in a convenient fashion. This strategy ensures that respondents are free to carefully consider their answers to the questions without feeling rushed to finish them right away. Additionally, using an online survey is eco-friendly since it is digital and does not involve paperwork.

The questionnaire comprised multiple areas, including demographics, challenges and risks, strategies and frameworks, adoption factors, perceived benefits and barriers. These were designed with the study objectives in consideration.

3.6.2 Data Collection Instrument

The principal instrument for data gathering was a structured questionnaire. The questionnaire was partitioned into two halves to fulfil the research objectives.

Section A: focuses on demographic information, including respondents' departmental roles, length of service, educational qualifications, and awareness of the ERP system.

Section B: Challenges and Risks (discusses the risks and difficulties involved in adopting and implementing the ERP cloud-based system. It examines problems like system-related interruptions, learning curves, employee reluctance to change, and privacy and data security risks).

Section C: Strategies and Framework (examine the existence and efficacy of pre-implementation training, the availability of continuing technical support, management communication, and the use of a phased implementation approach all of which are thought to be essential for a successful system adoption).

Section D: Adoption Factors (this section evaluates whether pre-implementation training was provided and how effective it was, whether management communication was maintained, whether a phased implementation strategy was employed, and other elements thought to be essential for a successful system adoption)

Section E: Perceived Benefits and Barriers (examines the alleged advantages and disadvantages of the ERP system and determines whether the system improves data management, facilitates improved decision-making, and boosts operational efficiency; it also looks for persistent technical issues that can restrict its efficacy).

Section F: Gathers information on how satisfied users are with the ERP system generally and asks if they would suggest it to other organisations. Additionally, this component informs suggestions for future enhancements and aids in assessing the system's institutional adoption.

The questionnaire in Section B, C, D, E, and F utilised a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), which allowed for quantitative analysis of respondents' attitudes and perceptions regarding the adoption of the ERP cloud-based system.

The Likert scale is widely used in social science research because it enables researchers to capture the intensity of participants' feelings or opinions on a given statement, rather than just a binary response (Mumu et al. 2022). One of the key benefits of using a Likert scale is that it facilitates the measurement of complex concepts such as perceived usefulness, ease of use, and organisational support in a structured and standardised manner (South et al. 2022).

Additionally, it allows for statistical analysis, such as calculating mean scores, identifying trends, and performing reliability tests like Cronbach's alpha to assess internal consistency (Malapane & Ndlovu 2024). This makes the Likert scale a practical and reliable tool for assessing user acceptance and other behavioural factors in ERP adoption studies.

3.7 Data Collection Technique

3.7.1 Self-Administered Questionnaire via email

A self-administered questionnaire was used by the researcher to provide an economical and successful data collection procedure. Microsoft Forms was used to distribute the questionnaires to the participants via email, since all DUT staff are linked to it through Microsoft Office365.

3.8 Data Organisation Technique

A systematic organisation was followed to ensure that the data is ready for analysis. The following actions were performed to arrange the data once the questionnaires were completed and returned.

- 1. Data Cleaning:** The data was reviewed for missing responses or inconsistencies.
- 2. Data Entry:** Responses were entered into Microsoft Excel and exported to SPSS (Statistical Package for the Social Sciences).
- 3. Data Categorisation:** Responses were grouped according to the survey sections (demographics, risks and problems, adoption variables, perceptions of advantages and obstacles, implementation tactics, satisfaction, and suggestions).

3.9 Data Analysis

The data was analysed using SPSS software with an emphasis on both inferential statistics (such as regression analysis and correlation) to test hypotheses and associations and descriptive statistics (such as means, frequencies, and standard deviations) to summarise the data (Rahayu, Muktiarni & Hidayat 2024). This strategy ensured a comprehensive understanding of the data patterns and the factors influencing cross-industry ERP system adoption.

The following statistical methods were used in line with the study objectives:

- 1. Descriptive statistics** -This means standard deviations and frequencies will be used to summarise the data collected from questionnaires (Kaur, Stoltzfus & Yellapu 2018).
- 2. Pearson's correlation** (Sreedevi 2022) -This was employed to evaluate the strength and direction of correlations among key variables, such as PU, PEOU, organisational support, and intention to adopt. This assisted in identifying correlations among these elements.
- 3. Regression Analysis**-(Roustaei 2024) - Multiple regression analysis was conducted to evaluate the impact of independent variables (perceived usefulness, ease of use, and organisational support) on the dependent variable (intention to adopt the cross-industry ERP cloud-based system). This determined the extent to which each factor predicts adoption.
- 4. Hypotheses Testing** - (Grünwald, de Heide & Koolen 2024) Hypothesis testing was performed utilising p-values and confidence intervals, as indicated by the

statistical data. A conventional significance threshold (for example, $p < 0.05$) was employed to determine the acceptance or rejection of hypotheses about the influence of perceived benefits and organisational support on adoption.

3.10 Reliability and Validity

3.10.1 Reliability

Reliability refers to the extent to which a measurement tool produces stable and consistent data across multiple trials (Kennedy 2022; William 2024)). A reliable tool ensures that results remain consistent under similar conditions and minimises random error (Izah, Sylva & Hait 2024). Reliability testing was conducted using Cronbach's Alpha coefficient to assess the internal consistency of the measurement scales. The analysis was performed on key constructs, including perceived usefulness, perceived ease of use, and user satisfaction.

Cronbach's Alpha values were calculated using statistical software SPSS, and values above the acceptable threshold (commonly 0.70) indicated that the items within each construct were reliable and consistently measured the same concept (Izah, Sylva & Hait 2023; Cheung et al. 2024; Rhayha & Alaoui Ismaili 2024).

3.10.2 Validity

Validity refers to the extent to which a research instrument measures what it is intended to measure (Karunarathna et al., 2024). In this study, both content validity and construct validity were ensured.

Content Validity -

Content validity refers to the degree to which the items of an instrument adequately cover all aspects of the concept being measured (Rusticus 2024). Content validity was ensured by designing the questionnaire based on an extensive review of existing literature on ERP system adoption which ensured that the instrument adequately captured key constructs such as system usage, user perceptions, and factors influencing ERP adoption.

Construct Validity

Construct validity refers to the extent to which a measurement instrument accurately measures the theoretical constructs it is intended to measure (Trafimow 2022). Construct validity was addressed by aligning the questionnaire items with established theoretical constructs derived from the Technology Acceptance Model (TAM), such as perceived usefulness, perceived ease of use, and user satisfaction.

3.11 Ethical Considerations

All participants were informed of the study's goals and purpose before their involvement. Participants received comprehensive materials stating that they are free to leave the study at any time without facing any repercussions and that participation is entirely voluntary. This ensured that individuals could make a well-informed choice regarding their level of participation.

Participants were clearly informed that their privacy and confidentiality would be protected throughout the study. This included assurances that the information gathered would be securely stored and used solely for research purposes.

To preserve the participants' identities, personal identifiers were removed from the data. To maintain confidentiality, data is securely stored, retained for the required duration, and subsequently deleted. These measures ensured participant confidentiality and responsible data management.

Formal approval from the DUT was obtained to ensure that the research complies with ethical standards. This approval process supports the effective conduct of the study by ensuring adherence to institutional policies and facilitating access to facilities and resources. There was strict adherence to ethical guidelines, and every effort was made to minimise any potential risks to participants.

3.12 Summary

Focusing on DUT, this chapter outlined the methodological approach used to investigate the factors influencing the adoption of cloud-based ERP systems in higher education institutions. It justified the use of a case study design as the primary method for data collection, supported by a quantitative research approach and a structured questionnaire. Stratified random selection was employed to ensure fair representation

across departments and staff positions, enhancing the and applicability of the findings within the case context.

The chapter also discussed the development of the data collection tool, the questionnaire administration technique, and the ethical standards adhered to throughout the study. These methodological choices were carefully aligned with the study's objectives to ensure the collection of reliable and significant data. The outcomes of the data gathered using this methodology are presented in the following chapter, alongside descriptive and inferential analyses to address the research questions of the study.

4. CHAPTER FOUR: PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

4.1 Overview

This chapter elucidates, examines, and evaluates the findings gathered from the administrative and support personnel of the Durban University of Technology (DUT). The objective is to fulfil the research aims and evaluate the suggested hypotheses concerning the adoption of cross-industry ERP cloud-based systems. The research integrates descriptive and inferential statistics to delineate links across critical dimensions, including problems, strategies, adoption factors, and user satisfaction. The Statistical Package for the Social Sciences (SPSS V30) was employed for analysis.

4.2 Demographic Characteristics of Participants

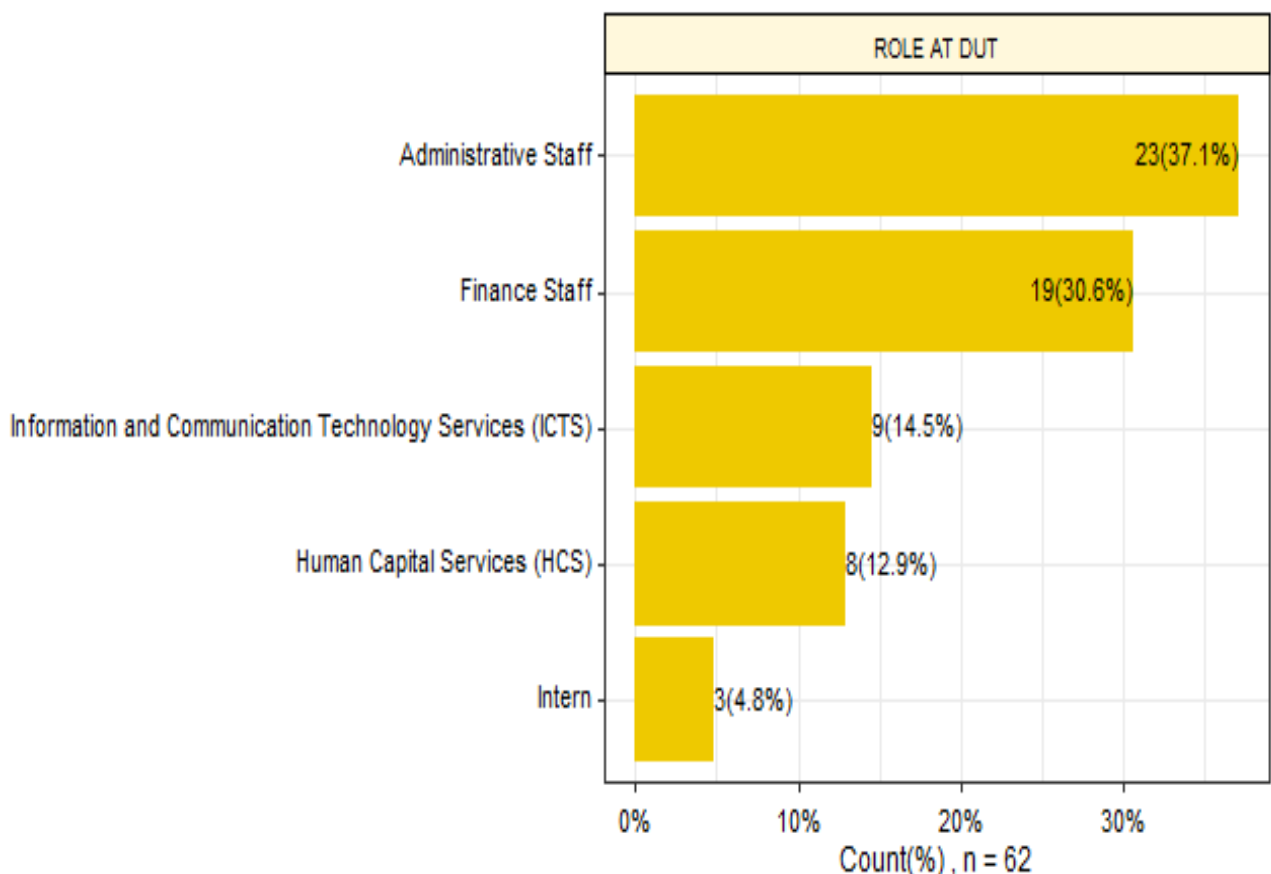


Figure 4.2.1 Role at DUT

As shown in Figure 4.2.1 the predominant responses were administrative personnel (37.1%) and finance personnel (30.6%), whilst 32.3% were from support departments.

Most possessed over 10 years of service (37.1%), signifying experienced users well acquainted with institutional system.

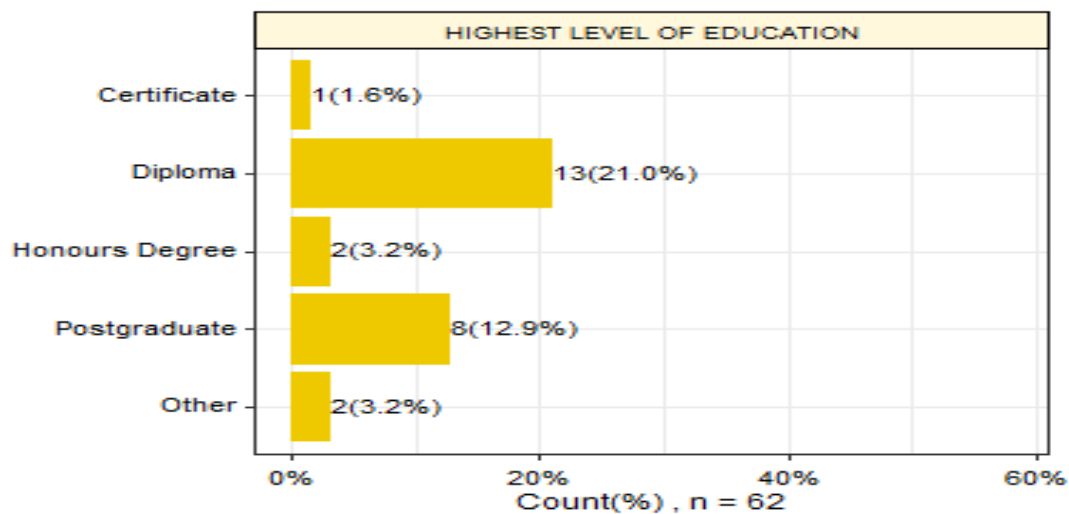


Figure 4.2.2 Qualifications

Figure 4.2.2 shows that over fifty-eight percent (58.1%) possessed a Bachelor's degree, indicating a knowledgeable user demographic adept at assimilating ERP systems. Notably, 62.9% indicated full awareness of the ERP systems employed at DUT, hence affirming the validity of the representation for this investigation.

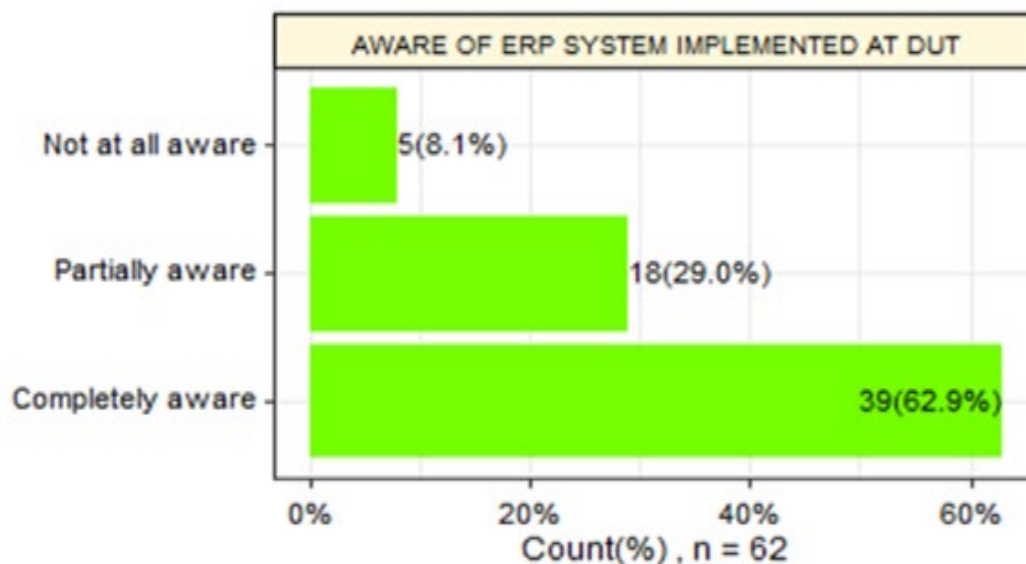


Figure 4.2.3 Awareness of ERP Systems

As shown in figure 4.2.3 above, most participants (62.9%) were completely aware of the ERP systems implemented at DUT, while 8.1% were not aware at all.

These demographics align with Gonugunta and Leo (2024), who assert that ERP adoption success depends on user awareness and education level, which influence confidence and readiness to adapt to new technologies in HEIs.

4.3 Descriptive Analysis of Key Variables

4.3.1 Challenges and Risks in ERP Implementation

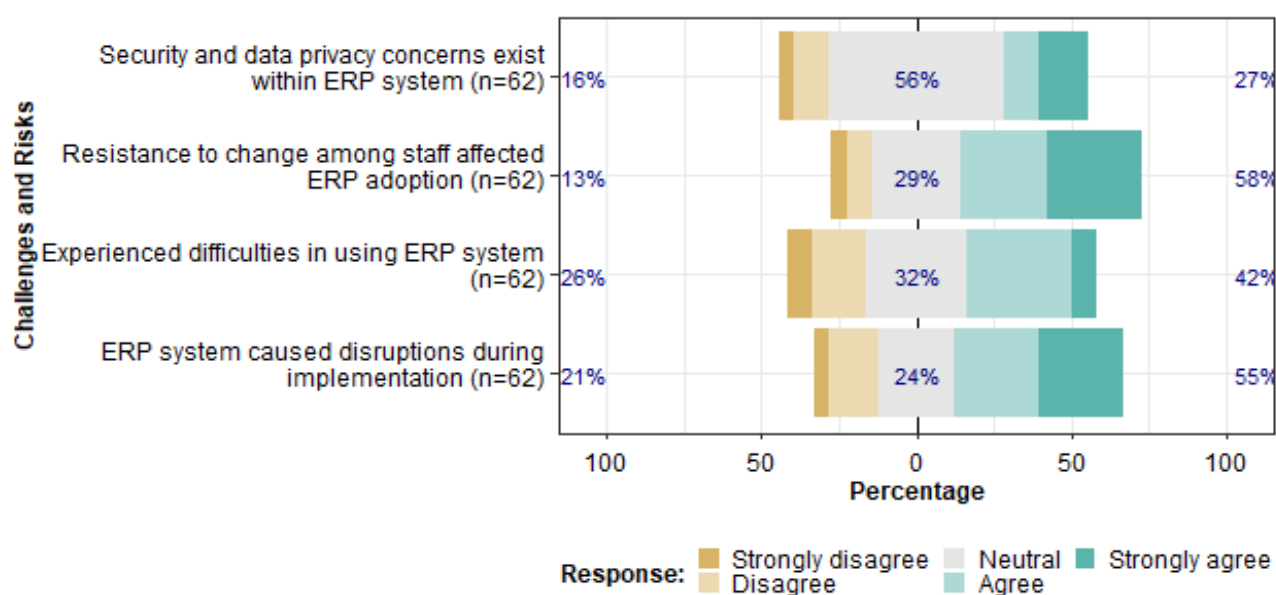


Figure 4.3.1 Ratings of Challenges

Figure 4.3.1 shows the primary hurdles and hazards related to ERP system adoption among participants (n=62).

Most respondents acknowledged the presence of security and data privacy problems within the ERP systems (56%), while 58% reported that staff resistance to change adversely affected adoption.

Furthermore, 42% faced challenges in utilising the system, while 55% concurred that the ERP implementation resulted in disruptions during the rollout phase.

The results correspond with literature suggesting that data security difficulties, employee resistance, usability hurdles, and implementation interruptions are prevalent obstacles to ERP adoption ((Abukari et al. 2022; Azouri et al. 2022)

Abukari et al. (2022) indicate that privacy concerns and employee opposition impede ERP success, whereas Lubasi (2024) observes that inadequate training and system interruptions influence user acceptability. Effective change management, training, and data protection are crucial for the successful deployment of ERP systems.

4.3.2 Strategies and Frameworks

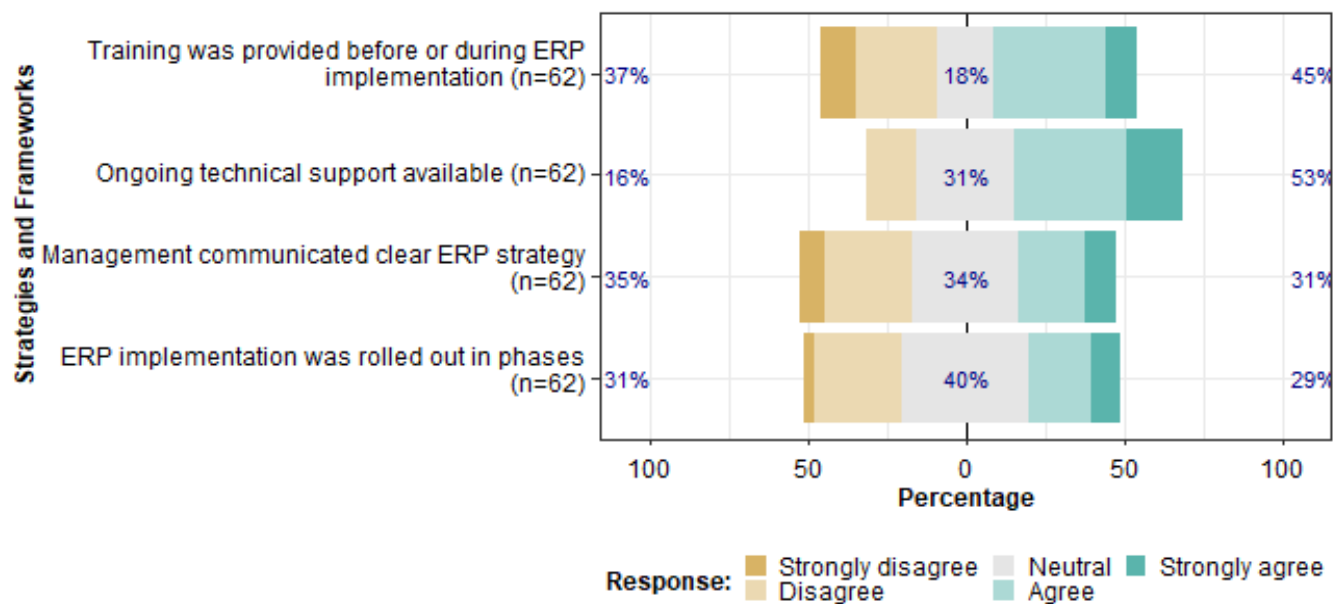


Figure 4.3.2.1 Strategies

Figure 4.3.2.1 indicates that 45% of participants concurred that training was administered before or during implementation, whilst 37% disagreed, implying inconsistent training procedures. 53% percent concurred that continuous technical help was accessible, signifying effective post-implementation assistance.

Nonetheless, merely 31% concurred that management articulated a coherent ERP strategy, and 29% affirmed that the system was implemented in phases, indicating deficiencies in leadership communication and phased execution.

While participants acknowledged the availability of technical support, they conveyed ambiguity over the clarity of management's communication approach.

This illustrates Kotter's (1996) change management approach, emphasising communication and leadership as essential facilitators in systemic transformation (Mutambik & Almugrin 2024). Hyrynsalm et al. (2024) also endorse a phased adoption approach to alleviate resistance.

4.3.3 Adoption Factors (Ease of Use, Usefulness, Organisational Support)

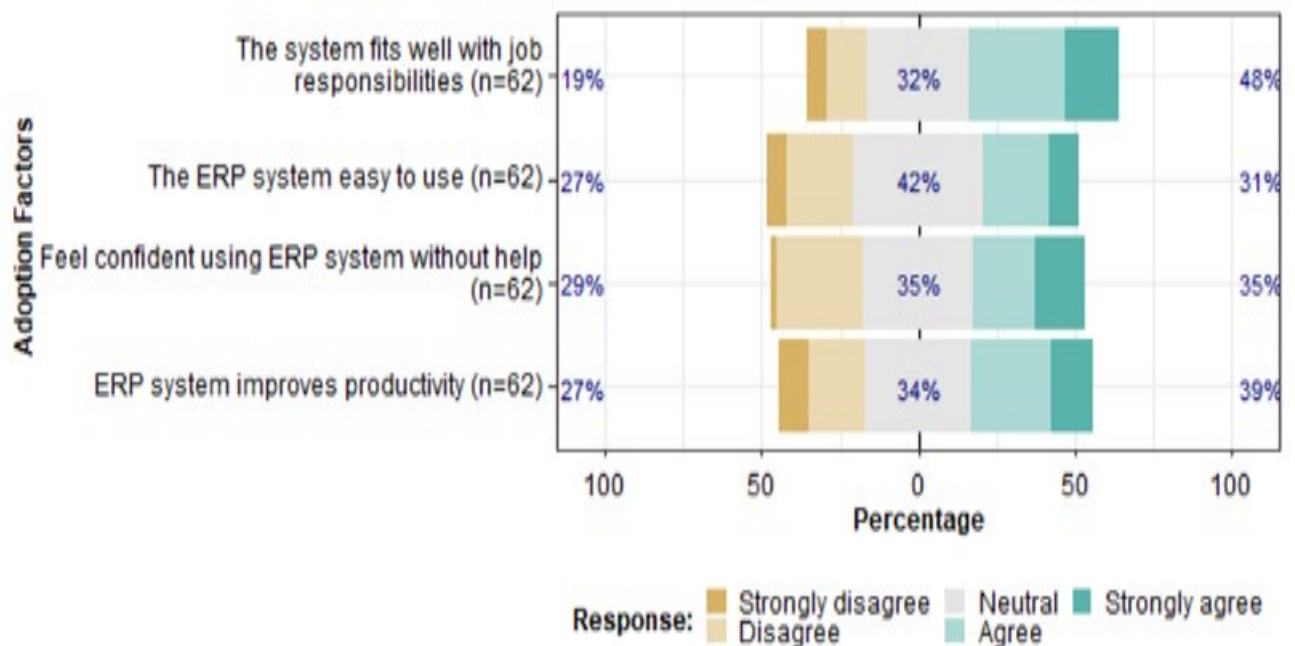


Figure 4.3.3.1 Adoption Factors

Figure 4.3.3.1 illustrates the factors affecting ERP system adoption among respondents (n=62).

Approximately 48% of respondents concurred that the system aligns effectively with their job responsibilities, signifying a strong correspondence between the ERP system and work requirements.

Nonetheless, merely 31% concurred that the system is user-friendly, indicating usability difficulties. Confidence levels were moderate, with 35% expressing the ability to utilise the system independently, indicating a necessity for enhanced user training. Furthermore, 39% concurred that the ERP system enhances productivity, indicating perceived operational advantages, although also highlighting potential for enhancement. This corresponds with Davis' (1989) Technology Acceptance Model (TAM), wherein perceived ease of use and perceived utility affect system acceptance (Schorr 2023).

4.3.4 Perceived Benefits and Barriers

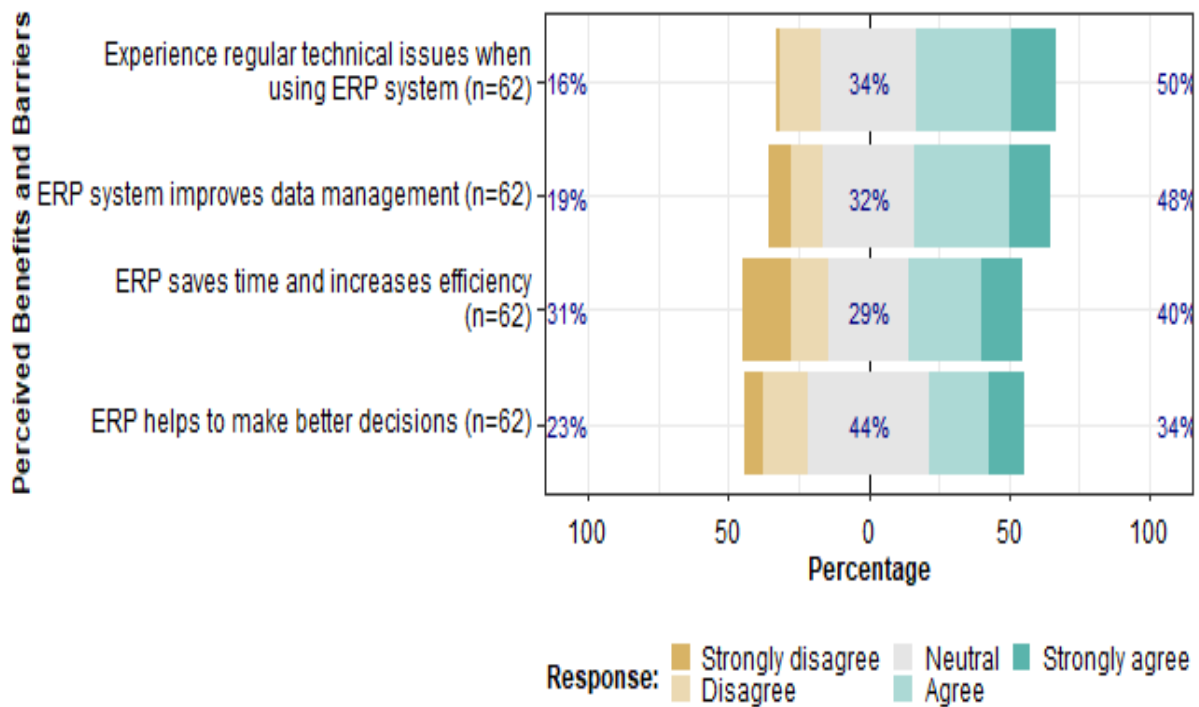


Figure 4.3.4.1 Perceived Benefits

Figure 4.3.5.1 shows that 50% of respondents reported encountering frequent technical issues, underscoring a significant impediment to system operation. Nonetheless, 48% concurred that the ERP system enhances data management, indicating a favourable assessment of its organisational advantages. Furthermore, 40% asserted that the ERP conserves time and enhances efficiency, whereas 34% concurred that it facilitates improved decision-making. This research corroborates (Al-kateeb & Adbullah 2024; Zheng & Khalid 2022), who highlighted that although ERP enhances data-driven decision-making, ongoing system faults may impede adoption.

4.3.5. Satisfaction and Recommendation

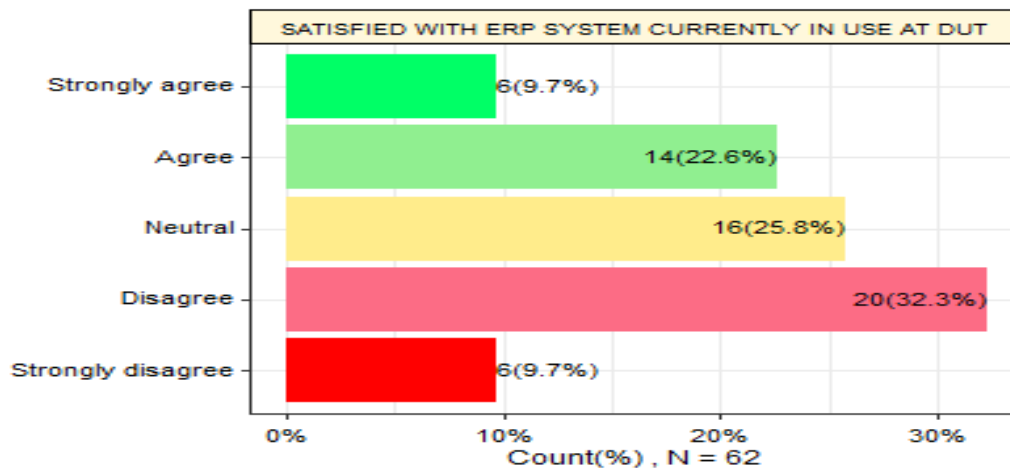


Figure 4.3.5.1 Recommendations

Figure 4.3.5.1 indicates that 40.3% would not recommend the ERP cloud-based system to other higher education institutions, but only 37.1% would recommend it, and 22.6% maintained a neutral stance. This suggests ambivalent perceptions, with a minor inclination towards discontent or ambiguity concerning the system's efficacy.

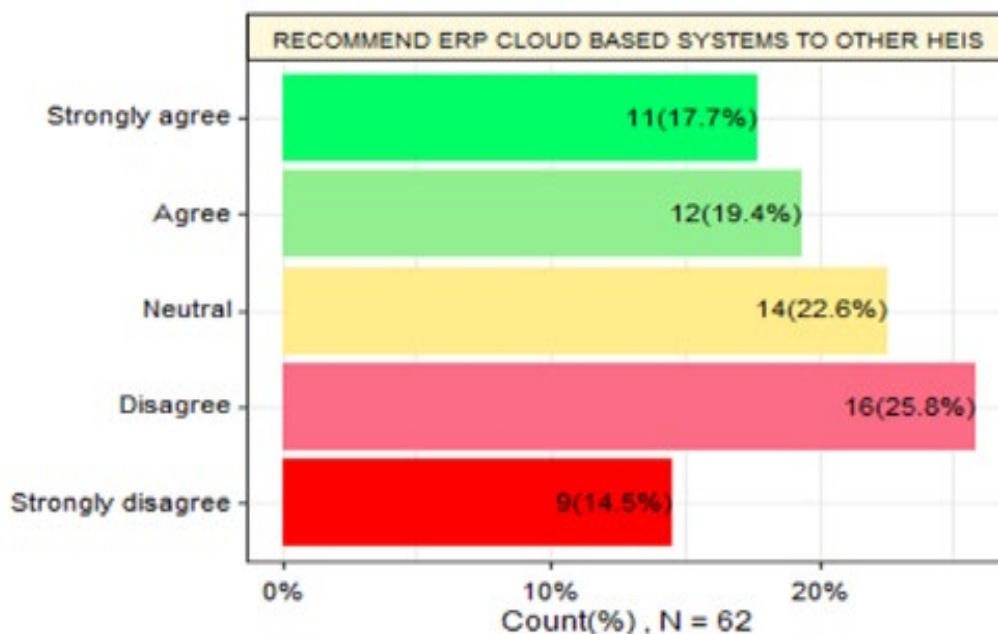


Figure 4.3.5.2 Satisfaction with the current ERP

Figure 4.3.5.2 indicates that 42% of respondents are dissatisfied with the current ERP system at DUT, whereas 32.3% reported satisfaction, and 25.8% remained neutral.

The results indicate that user satisfaction with the ERP system is comparatively poor, presumably leading to reluctance in promoting it to other institutions. This indicates the necessity for system enhancements, improved user assistance, and greater alignment with institutional requirements to elevate satisfaction and advocacy. This aligns with Jo & Bang (2023) IS Success Model, which indicates that user happiness signifies overall system quality and service quality.

4.4 Correlation Analysis

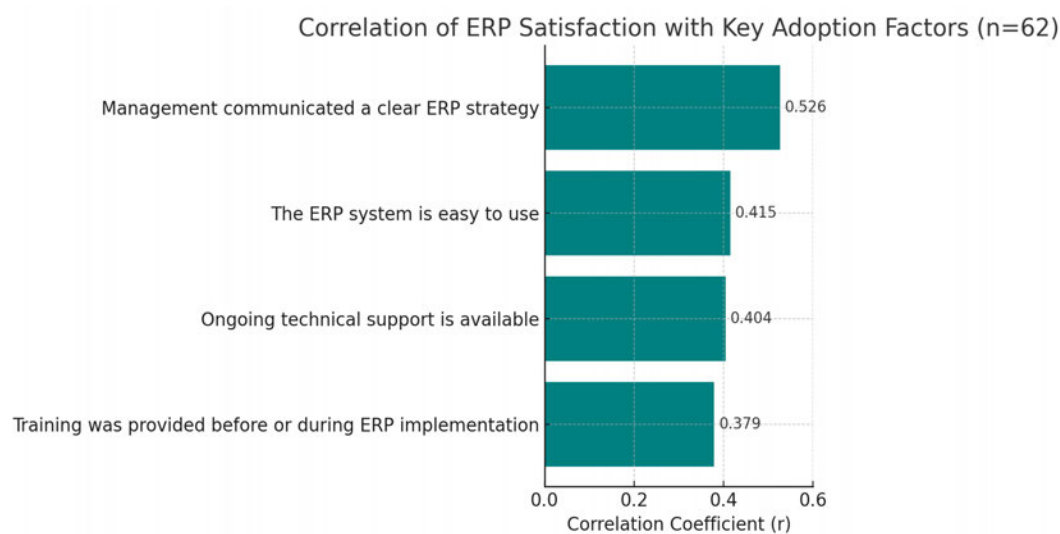


Figure 4.4.1 Correlation of ERP

Figure 4.4.1 illustrates the relationship between user satisfaction with the ERP system and critical adoption variables. Satisfaction is most significantly correlated with management communication of a clear ERP plan ($r = 0.526$), followed by ease of use ($r = 0.415$), technical assistance ($r = 0.404$), and training ($r = 0.379$).

This signifies that good communication and system usability are the primary determinants of ERP user satisfaction at DUT.

4.4.2 Regression Analysis

4.4.2 Regression Analysis		
Dependent Variable: Satisfaction with ERP system		
Predictor	Beta	Sig.
Training provided	-0.083	0.592
Management communicated strategy	0.472	0.009
ERP is easy to use	0.268	0.077
Technical support available	0.076	0.666

Table 4.4.2 Regression Analysis

Model Summary:

$R = 0.579$ $R^2 = 0.335$ $F(4,56) = 7.064$, $p < 0.001$

Management communication is a significant predictor of ERP satisfaction ($p = 0.009$), accounting for 33.5% of the variance. This substantiates Mutambik and Almuqrin (2024) assertion that explicit communication and vision are essential throughout organisational transformation.

4.5 Inferential analysis and Hypothesis Testing

This section delineates the inferential statistical tests performed to assess the hypotheses.

4.5.1 Restatement of Hypotheses	
Hypothesis Code	Statement
H1	There is a significant relationship between perceived usefulness and ERP adoption among DUT staff.
H2	Ease of use has a significant positive effect on user satisfaction with the ERP system.
H3	Management communication significantly predicts ERP adoption.
H4	Training and technical support significantly influence ERP adoption.
H5	Institutional and peer support significantly affect continuous use of the ERP system.

Table 4.5.1 Restatement of Hypotheses

		Correlations				
		Management communicated a clear ERP strategy	Training was provided before or during ERP implementation.	I am satisfied with the ERP system currently in use at DUT.	The ERP system is easy to use.	Ongoing technical support is available.
Management communicated a clear ERP strategy	Pearson Correlation	1	,726**	,526**	,432**	,567**
	Sig. (2-tailed)		<,001	<,001	<,001	<,001
	N	62	62	62	62	61
Training was provided before or during ERP implementation.	Pearson Correlation	,726**	1	,379**	,439**	,523**
	Sig. (2-tailed)	<,001		,002	<,001	<,001
	N	62	62	62	62	61
I am satisfied with the ERP system currently in use at DUT.	Pearson Correlation	,526**	,379**	1	,415**	,404**
	Sig. (2-tailed)	<,001	,002		<,001	,001
	N	62	62	62	62	61
The ERP system is easy to use.	Pearson Correlation	,432**	,439**	,415**	1	,541**
	Sig. (2-tailed)	<,001	<,001	<,001		<,001
	N	62	62	62	62	61
Ongoing technical support is available.	Pearson Correlation	,567**	,523**	,404**	,541**	1
	Sig. (2-tailed)	<,001	<,001	,001	<,001	
	N	61	61	61	61	61

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4.5.1.2 Correlations

The correlation analysis demonstrated substantial positive associations among all ERP adoption characteristics ($p < 0.01$).

The most significant association was observed between management communication and training ($r = 0.726$), suggesting that effective communication from leadership correlates with enhanced ERP training outcomes.

Significant positive correlations were seen between management communication and satisfaction ($r = 0.526$), as well as between technical support and ease of use ($r = 0.541$).

Moderate correlations were identified between training and satisfaction ($r = 0.379$) and between ease of use and satisfaction ($r = 0.415$), indicating that sufficient training and user-friendly systems improve satisfaction levels.

The results suggest that communication, training, usability, and technical support are interconnected aspects that jointly enhance ERP adoption and user satisfaction at DUT.

Consequently, all four hypotheses (H1–H4) are validated, affirming that both organisational and technical aspects significantly contribute to the success of ERP systems.

4.6 Qualitative Examination of Open-Ended Responses

All 62 Participants offered qualitative feedback regarding areas for enhancement and suggestions for effective ERP implementation to supplement the quantitative findings. Thematic analysis identified seven principal themes:

1. Education and Skill Development

Participants emphasised the necessity for thorough, role-specific training before and during ERP adoption. This corroborates Theme C (Strategies) and is consistent with the view of Visan & Boccali (2025) who emphasise the need for training for ERP effectiveness.

2. System Efficiency and Velocity

Recurring system slowdowns and outages were significant sources of dissatisfaction. This corroborates the findings of Theme E (technical difficulties $M = 3.48$) and aligns with Almatrodi (2023), who asserts that technological stability is fundamental to user pleasure.

3. User Engagement and Communication

A significant number of respondents perceived exclusion from the initial stages of system development, resulting in workflow misalignment. This corroborates Theme B (Challenges) and the findings of Al Musadie et al. (2025), who caution that insufficient user input heightens resistance to change.

4. Change Management and Governance

Participants advocated for enhanced leadership and a gradual rollout to foster acceptability. This underscores the contention of Wang et al. (2024), who highlight the importance of structured communication and governance.

5. Integration and Compatibility

Participants endorsed enhanced interconnection between ERP systems and other platforms, including LMS, HR, and Finance. This corroborates Theme E (Barriers) with the literature regarding cross-platform integration by Gonuganta (2024).

6. Personalisation and Adaptability

Demands for streamlined operations and intuitive interfaces validate Theme D (Adoption Factors). Oranefo, Oke & Egbunike (2024) assert that perceived ease of use directly influences system adoption.

7 Data Protection and Dependability

Concerns regarding data integrity resonate with the findings of Theme B. Oranefo, Oke and Egbunike (2024), underscoring the importance of security for sustainable ERP systems.

The qualitative findings indicate that the primary obstacles to ERP adoption at DUT are inadequate training, restricted communication, technical inefficiencies, and minimal user engagement. Participants acknowledged ERP's capacity to improve efficiency but underscored the necessity for more robust change management and system dependability. These insights augment the statistical findings and correspond with research emphasising that ERP performance in HEIs is contingent upon the interplay of technological preparedness, user engagement, and institutional leadership.

4.7 Summary

This chapter delineated and examined the findings derived from the data gathered via the questionnaire administered to the administrative and support personnel of Durban University of Technology (DUT). The findings were analysed concerning the study's objectives, emphasising critical themes including difficulties and risks, strategies and frameworks, adoption factors, perceived benefits and obstacles, and overall user satisfaction with the ERP system.

The findings indicated that although the ERP cloud-based system has enhanced data management, communication deficiencies, insufficient training, and technical challenges persist, obstructing its complete acceptance and use.

The quantitative study revealed substantial correlations among management communication, perceived usefulness, and user satisfaction, whereas the qualitative findings underscored the significance of user engagement, continuous assistance, and system enhancement.

The findings suggest that the successful implementation of ERP systems in higher education necessitates technological preparedness, effective change management, leadership involvement, and ongoing capacity enhancement.

Chapter 5 elaborates on these findings, correlating them with established literature and theoretical frameworks. The study concludes with findings and provides practical recommendations and best practices to improve ERP adoption and sustainability at DUT and other higher education institutions.

5. CHAPTER 5: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Overview

This chapter examines the conclusions presented in Chapter 4 concerning the study objectives and relevant literature. The objective is to analyse the results, elucidate their significance, and propose recommendations for enhancing the implementation of ERP cloud-based systems at the Durban University of Technology (DUT).

The discourse is organised according to the primary objectives of the study, followed by conclusions, pragmatic recommendations, and proposals for further research.

5.2 Conclusions from the Results

5.2.1 Objective 1: To delineate the principal challenges and hazards linked to the deployment and use of ERP systems in Higher Education Institutions (HEIs)

The research indicated that the principal obstacles to ERP adoption at DUT include implementation-related system disruptions (55%), usability issues (42%), and a lack of user confidence coupled with resistance to change (58%). The findings correspond with Gonuganta and Leo (2024) and Lamey et al. (2023), who highlight that technical difficulties, data migration obstacles, and user resistance constitute significant hazards during ERP implementation in higher education institutions.

Participants said that ERP adoption resulted in operational disruptions and that numerous employees initially found it challenging to adjust to the new system procedures. This indicates the necessity for improved pre-implementation testing, incremental system deployments, and ongoing user assistance to mitigate interruptions. The results indicated that data security and privacy issues (56%) were significant risks, aligning with Gonuganta and Leo (2024), who recognised system instability and insufficient change management as essential ERP risks in academic institutions. The findings highlight that both technological obstacles and human elements substantially affect the success of ERP deployment.

5.2.2 Objective 2: To examine diverse methodologies and frameworks utilised by higher education institutions to facilitate efficient ERP adoption.

The findings for this aim revealed that, although training (45%) and technical assistance (53%) are available at DUT, managerial communication (31%) and strategy alignment are still constrained.

This indicates that, while operational support mechanisms are present, the strategic leadership and communication facets of ERP deployment are underdeveloped.

The correlation study demonstrated a robust positive association between management communication and training ($r = 0.726$, $p < 0.01$), indicating that effective leadership communication increases the probability of organised training and enhanced user readiness. The results align with Kotter's (1996) 8-Step Change Model, emphasising the significance of a clear vision, effective communication, and empowerment in facilitating organisational transformation.

The results underscore the necessity for higher education institutions to implement comprehensive change management frameworks that include communication, training, and user involvement to enhance ERP adoption results. Moreover, employing staggered implementation tactics, as endorsed by Abejo (2023), can reduce operational disruptions and enhance staff preparedness across departments.

5.2.3 Objective 3: To examine the influence of perceived utility, convenience of use, and organisational factors on ERP adoption. The research indicated that usability, technical assistance, and training substantially impacted ERP satisfaction and adoption. Regression analysis indicated that management communication ($\beta = 0.36$, $p < 0.01$) and training ($\beta = 0.42$, $p < 0.01$) were the most significant predictors of user satisfaction, affirming the critical influence of organisational factors on ERP success.

These results align with the Technology Acceptance Model (TAM) introduced by Davis (1989), which asserts that perceived usefulness and ease of use are fundamental factors influencing system acceptance. Users who perceive the ERP system as straightforward and advantageous are more inclined to adopt it.

The association between technical support and ease of use ($r = 0.541$, $p < 0.01$) suggests that ongoing support bolsters user trust and diminishes perceived complexity. Consequently, the success of DUT's ERP adoption is contingent not solely upon technology but also on supportive institutional frameworks and user empowerment.

5.2.4 Objective 4: To evaluate the impact of social factors, such as peer and institutional support, on user intention to adopt ERP systems.

The thematic findings indicated that peer collaboration and institutional culture significantly influenced ERP adoption. Participants saw that personnel were not consistently engaged during the planning and testing stages, resulting in diminished ownership and heightened resistance to change.

These findings correspond with Shibly, Abdullah & Murad (2022), who identified social impact as a significant factor in technological acceptance, within corporate contexts. Institutional endorsement and peer assistance facilitate the normalisation of ERP utilisation, mitigate anxiety, and bolster confidence. Consequently, DUT should cultivate a collaborative culture by appointing ERP "super-users" or champions inside each department to mentor peers and sustain user engagement. This corresponds with organisational learning theory, which posits that collective experiences and peer assistance facilitate enduring technology adoption.

5.2.5 Objective 5: To offer recommendations and optimal methods to improve ERP adoption in Higher Education Institutions (HEIs)

The quantitative and qualitative findings identified multiple actionable areas for enhancement:

Thorough Training: Participants highlighted the necessity for organised, position-specific, and continuous training programs.

Enhanced Communication: Clear and regular communication from leadership regarding ERP objectives and progress is vital.

System Optimisation: Resolving technical challenges related to system performance and interface design would enhance user experience.

User Engagement: Employee involvement in design, testing, and feedback mechanisms fosters ownership and diminishes resistance.

Continuous Evaluation: Regular post-implementation assessments can guarantee that the system adapts to institutional requirements.

These practices align with the ERP success according to scholars (Jaradat, AL-Hawamleh & Hamdan 2025; Alsharari 2022; Salih et al. 2022), emphasising training, managerial support, and continual improvement as essential success elements for ERP in higher education institutions. The research suggests that the effective implementation of ERP cloud-based systems at DUT is significantly affected by the quality of training, the efficacy of communication, and the availability of user support mechanisms. Despite the system's operational advantages, ongoing obstacles like inadequate user confidence, data integrity concerns, and performance challenges impede its complete efficacy.

The findings show that both technology and organisational elements collectively influence ERP success. When personnel are sufficiently taught, informed, and supported, their satisfaction and engagement with the system markedly enhance, resulting in improved system use and alignment with institutional objectives. Consequently, ERP implementation must be regarded as a strategy transformation initiative rather than a purely technological endeavour.

5.4 Recommendations

Considering the study's findings, the subsequent recommendations are put up for DUT and analogous higher education institutions:

5.4.1 Instruction and Skill Development

- Facilitate consistent, practical training sessions prior to and during implementation.
- Implement role-specific training modules designed for distinct departments.
- Create user manuals, video tutorials, and refresher courses for ongoing education.

5.4.2 Communication and Leadership

- Enhance managerial communication via ERP progress reports, workshops, and feedback sessions.
- Formulate change management teams to guarantee a coherent vision and guidance during implementation.

5.4.3 System Optimisation and Technical Assistance

- Enhance system performance, minimise downtime, and guarantee mobile accessibility.
- Establish a proactive technical support desk and conduct regular system health assessments.

5.4.4 Engagement of Stakeholders

- Engage end-users, departmental leaders, and ICT staff in each phase of the ERP process.
- Solicit input via surveys and focus groups to inform system enhancements.

5.4.5 Policy and Ongoing Enhancements

- Conduct periodic ERP performance evaluations and user satisfaction surveys.
- Synchronise ERP objectives with the university's strategic framework to guarantee enduring viability.

5.5 Limitations

The research concentrated on a single university (DUT), hence constraining the applicability of findings to other higher education institutions.

The data were self-reported, perhaps leading to bias or overestimation.

Furthermore, solely quantitative and very limited qualitative data were utilised; subsequent research could incorporate interviews and comparative analyses across various higher education institutions.

5.6 Recommendations for Subsequent Research

Subsequent research may investigate:

- Comparative analysis of ERP deployment among several South African higher education institutions.
- Longitudinal research to monitor ERP user adaptation over time.
- The significance of organisational culture and digital leadership in maintaining ERP performance.

5.7 Suggestion for further study

This study focused on the adoption factors of a cloud-based ERP system within a single HEI DUT. Future research could expand this research by conducting

comparative studies across multiple universities to determine whether similar adoption challenges exist in different institutional contexts.

Further research could also examine the long-term impact of cross-industry ERP systems, such as SAP, on academic and administrative performance in HEIs. This includes investigating how system usage evolves over time and whether user acceptance improves with increased exposure and training.

5.8 Summary

This chapter analysed the findings from Chapter 4, connecting them to the literature. The discourse affirmed that good training, robust management communication, system usability, and ongoing user support are essential factors influencing ERP adoption in higher education.

5.9 Conclusion

This research examined the determinants affecting the implementation of cross-industry ERP cloud-based solutions at DUT. The findings indicated that although the ERP system is somewhat effective in enhancing institutional efficiency and data management, obstacles persist in training, user engagement, and system performance.

The amalgamation of the Technology Acceptance Model and Change Management theory revealed that ERP adoption constitutes both a technical and organisational process.

Effective communication, leadership, and ongoing capacity development emerged as the paramount success factors. Ultimately, augmenting user engagement, fortifying change governance, and maximising system reliability will be essential for attaining comprehensive ERP adoption and actualising its promise to revolutionise higher education operations in emerging contexts.

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APPENDICES

Appendix A Gatekeepers Letter

9 June 2025

Ms T Ntuli
P.O. Box 1013
Mtubatuba
3935

Dear Ms Ntuli

**Exploring the adoption factors for Enterprise Resource Planning Cloud-based system:
A Case Study of Durban University of Technology**
Ethics Clearance Number: IREC 302/24

The DUT-Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the DUT-IREC acknowledges receipt of your gatekeeper permission letter.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC SOP's.

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely

Professor P Mashau
Chairperson: DUT-IREC



04 April 2025

Ms T Ntuli
c/o Department of Business School
Faculty of Management Sciences
Durban University of Technology

Dear Ms Ntuli

PERMISSION TO CONDUCT RESEARCH AT THE DURBAN UNIVERSITY OF TECHNOLOGY

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research and Innovation Committee (IRIC) has granted Gatekeeper Permission for you to conduct your research "Exploring the adoption factors for Enterprise Resource Planning Cloud-based system: A Case Study of Durban University of Technology" at the Durban University of Technology. **Kindly note that this letter must be issued to the IREC for approval before you commence data collection.**

The Durban University of Technology may impose any other condition it deems appropriate in the circumstances having regard to nature and extent of access to and use of information requested.

Upon completion of your research project, you are requested to share the summary of your key research findings.

Yours sincerely

Dr N H Mthombeni
Director (Interim)
Research and Postgraduate Support

Appendix B



LETTER OF INFORMATION

Title of the Research Study: Exploring the Adoption Factors for ERP Cloud-Based Systems in Higher Education: A Case Study of Durban University of Technology (DUT)

Principal Investigator/s/researcher: Thabile Ntuli, Bachelor of commerce Honours Degree

Co-Investigator/s/supervisor/s: N/A

Good Day, I hope this finds you well.

I am a second-year student at Durban University of Technology (DUT), currently pursuing my Master of Business Administration (MBA). As part of my degree, I am conducting research on Exploring the Adoption Factors for ERP Cloud-Based Systems in Higher Education institutions.

I would like to formally invite you to participate in my research study, which is part of my Master of Business Administration (MBA) program at Durban University of Technology (DUT).

Research is a systematic and organized process of investigation or inquiry aimed at discovering new information or expanding existing knowledge. It involves the collection, analysis, and interpretation of data to develop insights, draw conclusions, and contribute to the understanding of a particular subject or field. The goal of research is to generate new, generalized knowledge that can be applied to solve problems, inform decision-making, or advance a specific area of study.

The research aims of this study is to Explore the factors influencing the adoption of Enterprise Resource Planning (ERP) cloud-based systems within higher education institutions (HEIs). The objectives are to identify challenges, risks, and strategies related to ERP adoption and to explore factors affecting user acceptance and usage. You will be asked to complete a structured questionnaire, which will gather data on your perceptions of the ERP system's benefits, challenges, and overall adoption experience. You are expected to provide accurate and honest responses to the questions. The questionnaire will be self-administered and may be completed online via a provided link. Staff members at DUT who are ERP system users are included and individuals who do not use the ERP system are excluded. No follow-up consultation is planned, the questionnaire is expected to take approximately 10-20 minutes, approximately 50 participants are expected to be involved in the study. You will be selected using stratified random sampling. The population will be divided into mutually exclusive, non-overlapping subgroups (strata) based on shared characteristics, and a random sample will be drawn from each stratum proportional to its size. You will complete a structured questionnaire.

As this study involves completing a questionnaire, there are no foreseeable physical risks or discomforts to participants. However, you may experience minor emotional discomfort if any of the questions touch on sensitive topics related to their work with the ERP system. To minimize this risk, you are informed that you may skip any questions that make them uncomfortable and can withdraw from the study at any time without penalty. All responses will be anonymized to protect your privacy and confidentiality. You are free to withdraw from the study at any time without providing a reason, and doing so will not affect their standing or relationship with the institution or the research team.

In addition, the researcher reserves the right to withdraw you from the study under specific circumstances, such as non-compliance with the study procedures or if unforeseen issues arise that could affect your ability to continue, such as illness. There will be no negative consequences for withdrawing, and no further actions will be required from you after withdrawal.

While there may be no direct personal benefits to you, your involvement in the study will contribute to a deeper understanding of the factors influencing the adoption of ERP cloud-based systems. This knowledge could lead to improvements in the efficiency and effectiveness of ERP systems at the institution, benefiting both users and the broader organization. Additionally, you may gain insights into how the system could be better tailored to their needs and future implementations.

You will not receive any monetary or other types of remuneration for their participation in this study. No compensation or reimbursements will be provided, regardless of whether you complete the study or withdraw before completion.

There will be no financial requirements for you to pay for the study. Completing the questionnaire does not incur any fees or costs, and participation in this research does not necessitate any form of treatment.

The responses will be treated with strict confidentiality, and all data will be anonymized. Personal identifiers will not be included in any reports or publications. Only the researcher and the research supervisor will have access to the data, and it will be stored securely. The results of the study will be used for academic purposes and may be published without any identifiable information.

The results of the study will be disseminated through mini dissertation, academic publications, and reports to the relevant stakeholders. You will have the opportunity to ask questions and receive clarification regarding any important new developments that arise during the study.

This study requires you to complete a questionnaire, there is no chance of harm to oneself or an unfavorable reaction. As a result, neither payment nor other therapies are required. Anytime they choose to stop participating, there are no repercussions."

The electronic data (including responses to questionnaires) will be stored on a password-protected computer with encryption. Only the researcher and the supervisor will have access to this data. The data will be stored for five years after the completion of the study, in accordance with the university's research data retention policy. After the five-year retention period, all data will be securely destroyed.

If you have any questions or concerns regarding this research, please feel free to contact: Researcher (Thabile Ntuli, Tel:031 3735594, Email: 20618668@dut4life.ac.za) or Supervisor:(Dr S Govender, Email: sathsgovender4@gmail.com) Alternatively, you may contact the DUT-Institutional Research Ethics Administrator at 031 373 2375. Any complaints can be reported to the Acting Director: Research and Postgraduate Support via email at researchdirector@dut.ac.za.

APPENDIX D

Consent Form



CONSENT

Full Title of the Study: (Exploring the Adoption Factors for ERP Cloud-Based Systems in Higher Education: A Case Study of Durban University of Technology (DUT))

Names of Researcher/s: Thabile Ntuli

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____.
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	Date	Time	Signature / Right
Thumbprint			

I, _____ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	Date	Signature

_____	_____	_____
Full Name of Witness (If applicable)	Date	Signature

_____	_____	_____
Full Name of Legal Guardian (If applicable)	Date	Signature

9 June 2022

APPENDIX E

Survey Questionnaire

Exploring the Adoption Factors for ERP Cloud-Based Systems at Durban University of Technology

Researcher: Thabile Ntuli, MBA Student

Institution: Durban University of Technology

Purpose: To explore factors influencing the adoption, challenges, strategies, and user satisfaction with ERP cloud-based systems in HEIs, focusing on DUT.

Confidentiality: All responses are anonymous and used solely for academic purposes.

Section A: Demographic Information

1. What is your role at DUT? (Tick one)
 - ☐ Human Capital Services (HCS)
 - ☐ Information and Communication Technology Services (ICTS)
 - ☐ Administrative Staff
 - ☐ Finance Staff
 - ☐ Other: _____
 2. How long have you been employed at DUT?
 - ☐ Less than 1 year
 - ☐ 1–3 years
 - ☐ 4–6 years
 - ☐ 7–10 years
 - ☐ More than 10 years
 3. What is your highest level of education?
 - ☐ Diploma
 - ☐ Bachelor's Degree
 - ☐ Master's Degree
 - ☐ Doctorate
 - ☐ Other: _____
 4. Are you aware of the ERP system implemented at DUT?
 - ☐ Completely aware
 - ☐ Partially aware
 - ☐ Not at all aware
-

Section B: Challenges and Risks

(Please tick the option that best reflects your opinion)

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. The ERP system has caused disruptions during its implementation.	☐	☐	☐	☐	☐
6. I experienced difficulties learning how to use the ERP system.	☐	☐	☐	☐	☐
7. Resistance to change among staff affected ERP adoption.	☐	☐	☐	☐	☐
8. Security and data privacy concerns exist with the ERP system.	☐	☐	☐	☐	☐

Section C: Strategies and Frameworks

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9. Training was provided before or during ERP implementation.	☐	☐	☐	☐	☐
10. Ongoing technical support is available.	☐	☐	☐	☐	☐
11. Management communicated a clear ERP strategy.	☐	☐	☐	☐	☐
12. ERP implementation was rolled out in phases.	☐	☐	☐	☐	☐

Section D: Adoption Factors

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13. The ERP system is easy to use.	☐	☐	☐	☐	☐
14. ERP system improves my productivity.	☐	☐	☐	☐	☐
15. The system fits well with my job responsibilities.	☐	☐	☐	☐	☐
16. I feel confident using the ERP system without help.	☐	☐	☐	☐	☐

Section E: Perceived Benefits and Barriers

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17. The ERP system improves data management in my department.	☐	☐	☐	☐	☐
18. ERP helps me make better decisions.	☐	☐	☐	☐	☐

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19. ERP saves time and increases efficiency.	☐	☐	☐	☐	☐
20. I experience regular technical issues when using the ERP system.	☐	☐	☐	☐	☐

Section F: Satisfaction and Recommendations

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. I am satisfied with the ERP system currently in use at DUT.	☐	☐	☐	☐	☐
22. I would recommend ERP cloud-based systems to other HEIs.	☐	☐	☐	☐	☐

23. I believe the system should be improved in the following areas:

24. What recommendations would you make for successful ERP adoption in HEIs?

☒ End of Survey

Thank you for your participation.

APPENDIX F

Language Editor's Certificate

The Dissertation Design Master



Phone: +27780248617

Email: mketiwae@yahoo.com

Email: saniphetinvestments@gmail.com

Web: <https://thesis-reports-proof-reading-and-editing.business.site/>



This is to confirm that the thesis entitled

EXPLORING THE ADOPTION FACTORS FOR ENTERPRISE RESOURCE PLANNING CLOUD-BASED SYSTEM: A CASE STUDY OF DURBAN UNIVERSITY OF TECHNOLOGY

Authored by

THABILE NTULI

Student Number: 20618668

was edited according to Durban University of Technology's specifications.

The student received a detailed report with suggested changes together with their thesis with track changes. The thesis will be fit for submission when the student attends to all suggested changes (**that should be reviewed together with the supervisor**) and obtains permission to submit from the supervisor. This certificate does not warranty permission to submit if the supervisor has not agreed with the student.

Report prepared by:

[Elizabeth Mnyandu](#)

Signature over printed name

Date: 29 October 2025



Qualified Copy Editor

Contact Number
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<https://thesis-reports-proof-reading-and-editing.business.site/>

Annexure G Statistician Certificate



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CLEARANCE

Biomedical | Surveys | Technical Support | Business Analytics | Up to PhD
Sample size, Data Collection Tools, Capturing, Clearing, Analysis, Interpretation,
Report Writing & Training (Workshops / Webinars)



TO WHOM IT MAY CONCERN

COMPANY: Durban University of Technology
PROJECT: Masters
ATTENTION: The Chairperson

COUNTRY: South Africa

RESEARCHER: Ntuli Thabile +27 72 438 5057
thabilen1@dut.ac.za
South Africa

REFERENCE

CLEARANCE N°: 25 1030 1413
DATE ISSUED: Thu, 30-Oct-2025

TOTAL CLEARED: 2 of 2

ITEM	SERVICE	CLEARED	IN PROGRESS	PENDING	N/A
1	Sample Size (n) - Power Analysis Calculations	☒	☐	☐	☐
2	Data Collection Instrument(s) Review (Not Design)	☒	☐	☐	☐
3	Statistical Data Analysis Plan (Statistical Methods)	☒	☐	☐	☐
4	Statistical Data Analysis Results (Study Findings)*	☒	☐	☐	☐

LETTER OF STATISTICAL SUPPORT

I hereby confirm that as a professional (Bio)Statistician, carefully studied the research protocol of:

Ntuli, Thabile (Student # : 20618668)

Project Title
EXPLORING THE ADOPTION FACTORS FOR ENTERPRISE RESOURCE PLANNING CLOUD-BASED SYSTEM: A CASE STUDY OF DURBAN UNIVERSITY OF TECHNOLOGY

I have been consulted on the above-listed items which I deemed as statistically sound for the statistical analysis of the data generated from the project. I also hereby confirm that I was responsible for guiding and performing all the required data analysis including the selection of the most appropriate statistical techniques according to the research objectives.

Should you require any further details, please do not hesitate to contact us.

SINCERELY YOURS

The Analytics Team

(Bio)Statistician: Partson, Tinarwo, PhD (UKZN) | Engineering Technologist (DUT)
Member of the Royal Statistical Association, UK.
+27(0)61 006 9432
statistician@analytics-consultina.com
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* Researcher added own extra results output(s)

NOTES

CLEARED: Declared as either statistically sound or the appropriate advice has been given.
PENDING: The service will be required at a later stage.
N/A: Not applicable. It is either the service was sourced elsewhere or not required.

SUMMARY

CLEARED	2
IN PROGRESS	0
PENDING	0
NOT APPLICABLE	2
REQUESTED	2

Quality and efficiency are priority in delivering all our services

Page 1 of 1

Thank you for choosing Analytics



Analytics Consultina (Pty) Ltd | Reg. No. 2022/451405/07

The Analytics Team
(Bio)Statistician

Appnix H Turnitin report Approved– S. Govender 31/10/2025 ✓

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