

**SUSTAINABILITY REPORTING AT SOUTH AFRICAN
TRADITIONAL UNIVERSITIES**

BY

WONGANI CALVIN KAUNDA

STUDENT NUMBER: 227577906

DATE OF REGISTRATION: 15/01/2024

**SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF**

BACHELOR OF COMMERCE HONOURS

IN THE

FACULTY OF BUSINESS AND ECONOMIC SCIENCES

AT THE

NELSON MANDELA UNIVERSITY

STUDY LEADER: DR STORM WATSON

SUBMISSION DATE:

OCTOBER 2024

DECLARATION BY CANDIDATE

NAME: WONGANI CALVIN KAUNDA

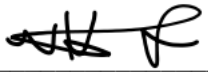
STUDENT NUMBER: 227577906

QUALIFICATION: BACHELOR OF COMMERCE HONOURS (BUSINESS
MANAGEMENT)

TITLE OF PROJECT: SUSTAINABILITY REPORTING AT SOUTH
AFRICAN TRADITIONAL UNIVERSITIES

DECLARATION:

In accordance with Rule G5.6.3, I hereby declare that the above-mentioned treatise is my own work and that I have not previously been submitted to another University or for another qualification



SIGNATURE

14/10/2024

DATE

ACKNOWLEDGEMENTS

I Wongani C Kaunda sincerely appreciate the contributions that several people have made towards the completion of this study. It is not possible to mention them all by name, but special recognition should go towards the following.

- The Head of the Department for Business Management, Dr Deliwe and my lecturers during the 2024 academic year: Dr Msuthwana, Dr Watson, Professor Smith, Professor Farrington and Professor Krüger.
- My study leader and Business research lecturer, Dr Storm Watson, for the profound guidance he provided towards the completion of this study.
- My family and friends, for providing emotional support during the 2024 academic year.
- Finally, God the Almighty, for providing me with the opportunity, as well as providing the right people and tools to enable me to excel in this chapter of my life.

ABSTRACT

The topic of this study is: Sustainability reporting at South African traditional universities. The purpose of the study was to bridge the research gap by providing an overview of sustainability reporting at South African traditional universities. The primary objective of the study was to systematically review sustainability reports of South African universities. The data collection used in this study was through desktop research, and the data collected from five traditional universities was analysed using the content data analysis technique. Major themes of sustainability were identified, as well as the major United Nations Sustainable Development Goals (UN SDGs) being reported by South African traditional universities.

It was found that the major themes being reported under sustainability include financial, social and environmental sustainability. The findings also revealed that the common UN SDGs under study include UN SDGs number four, six, seven, eight and nine. The study found that despite that all universities under study are reporting on sustainability, most of the activities being reported were merely their set targets. Several recommendations were made, including a call for further research stretched over a long period of time and further research that includes a large sample size of the universities in South Africa, both public and private. Finally, the study also recommended that universities adopt separate frameworks for reporting their progress on UN SDGs instead of reporting everything in their integrated annual reports.

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
ABC	Activity Based Costing
BI	Business Intelligence
CHE	Council of Higher Education
ESG	Environmental, Social and Governance
GRI	Global Reporting Initiative
JTI	Just In Time
HEIs	Higher Education Institutions
ISO	International Standardization Organisation
KPMG	Klynveld, Peat, Marwick, Goerdeler
NMU	Nelson Mandela University
STARS	Sustainability Tracking Assessment and Rating System
SASB	Sustainability Accountability Standard Board
SU	Stellenbosch University
TBL	Triple Bottom Line
UCT	University of Cape Town
UKZN	University of KwaZulu Natal
UN SDGs	United Nations Sustainable Development Goals
UP	University of Pretoria
UW	University of Witwatersrand

CHAPTER ONE**INTRODUCTION AND BACKGROUND TO THE STUDY****1.1 INTRODUCTION AND BACKGROUND**

Sustainability has become an increasingly popular term associated with global development, with the most popular strategy being the United Nations Sustainable Development Goals (SDGs) Vision 2030. Sustainability has been defined as the economic, environmental, and social viability of an organisation in the long term. Sustainability thus involves carefully examining the economic, environmental, and social practices that organisations and individuals undertake and how they impact the survival of the future generation (Herbert and Graham, 2022:147).

Calls for implementation of sustainable development have been made by different stakeholders i.e., the United Nations. To ensure that there is compliance with this call, there is a need for sustainability reporting. Sustainability reporting refers to the process through which organisations communicate how their activities impact the economy, the environment, and their social stakeholders (Bosire, 2014). Sustainability reporting gives organisations an opportunity to communicate to their stakeholders how their values and goals of the company are used in the attainment of a sustainable environment and how the organisation engages with other stakeholders in the pursuit of sustainable development (Brusca, Isabel, Labrador, Margarita, Larren and Manuel, 2018). Furthermore, Abeysekera and Indra (2022:2) stated that “sustainability reporting aims to demonstrate a contribution to sustainable development”.

Organisations such as universities are crucial in the agenda to promote sustainability. South African Universities in particular play a crucial role in the society by promoting adoption of sustainability i.e., through integrating sustainability modules in its educational programs and advancement of research in key areas. Brusca et al. (2018:348) states that sustainability reporting frameworks have been developed which can aid universities in how they report sustainability. Therefore, given its unique position, there is need to analyse sustainability reporting at South African HEIs (Brusca et al., 2018).

This chapter therefore introduces the background to the study as well as introduces the problem statement. Furthermore, the chapter introduces the research objectives and questions.

1.2 PROBLEM STATEMENT

The quest for sustainable development has called for collective action from both the private and public sector due to the devastating effects of climate change on the environment and their impact on economies and social systems. Further calls have been made for organisations to account for how sustainability is linked with their corporate governance, vision, and strategic management through sustainability reporting (Bosi, Lajuni, Wellfren and Lim, 2022).

Universities are organisations that hold a unique position in the society to promote sustainability through the promotion of knowledge and advancement of research. South African HEIs, have expressed the desire to support the government in pursuit of sustainable development as evidenced in their role of publishing annual sustainability reports (Awuzie and Emuze, 2017).

However, despite the call for increased adoption of sustainability reporting, there has been a recognised gap in knowledge on sustainability reporting at South African HEIs and how these universities address the United Nations Sustainable Development Goals (Brusca et al., 2018). It was stated by Bosire (2014:238) that there is need for additional research in the field of sustainability reporting in South African HEIs due to lack of knowledge on the matter.

Therefore, this study seeks to bridge the research gap by systematically reviewing the sustainability reporting at South African HEIs.

1.3 RESEARCH OBJECTIVES

This Section outlines the primary objective of the study, the secondary and methodological objectives are highlighted, and the research questions are stated.

1.3.1 PRIMARY OBJECTIVE

The Primary objective of this study is to systematically review sustainability reports of South African Traditional Universities.

1.3.2 SECONDARY OBJECTIVES

The study also outlines the following secondary objectives:

RO1: To Clarify key concepts related to sustainability reporting

RO2: To Assess the extent to which South African traditional universities address the UN

SDGs in sustainability reporting

RO3: Provide an overview of the current state of sustainability reporting at South African HEIs.

1.3.3 METHODOLOGICAL OBJECTIVES

MO¹: To conduct a literature overview on the nature and importance of sustainability reporting in South African HEIs.

MO²: To determine the best suited research methodology to address the primary and secondary objectives.

MO³: To collect data from academic journals that are relevant to the topic under investigation.

MO⁴: To analyse the collected data in accordance with appropriate methods.

MO⁵: To provide conclusions and recommendations for future research.

1.3.4 RESEARCH QUESTIONS

The following research questions have been developed:

RQ1: What are the common reporting trends adopted by South African traditional universities?

RQ2: What are the common SDG activities that South African traditional universities report on?

RQ3: What progress has South African traditional universities made in relation to sustainability reporting?

1.4 SIGNIFICANCE OF THE STUDY

It is expected that the results of this study and the recommendations will bridge the gap of knowledge and provide a roadmap for further research on the topic of sustainability reporting at South African traditional universities.

1.5 SUMMARY

Chapter one introduced the introduction and background to the study. The problem statement was also introduced in this chapter. Finally, the chapter introduced the objectives of the study.

CHAPTER TWO**LITERATURE OVERVIEW****2.1 INTRODUCTION**

In this chapter, a literature review is provided, beginning with an overview of sustainability and sustainability reporting. This chapter continues on chapter one, which introduces the background of the study, the problem statement and the research objectives. The following section will provide the frameworks of sustainability reporting. The next section will discuss an overview of South African HEIs. Thereafter, a review will be conducted on previous research on sustainability reporting in South African HEIs. Finally, the last section will provide an overview of sustainability reporting in South Africa by examining the financial, environmental and social sustainability of the universities. This chapter will, therefore, provide relevance to chapter one by providing more background information to the study.

2.2 OVERVIEW OF SUSTAINABILITY REPORTING

This section will offer a brief outline on sustainability by defining sustainability, the history of sustainability and the importance of sustainability reporting in organisations.

As outlined in chapter one, the quest for sustainable development has been on the increase for both nations and organisations. The term sustainability has been defined as the economic, environmental and social viability of an organisation in the long term (Herbert and Graham, 2022:147). Thus, to encourage transparency and accountability on sustainable development for organisations, there has been an increase in the requirement for sustainability reporting as will be discussed in the next section. Sustainability is defined as the ESG factors relevant to an institutions long term benefit to society (Bice and Coates, 2016:3).

2.2.1 DEFINITION OF SUSTAINABILITY

Table 1 below summarises the definitions of sustainability according to different authors to provide an overview of how the definition has evolved over time as well as identify key items in the definitions.

Table 1 Definitions of sustainability

AUTHOR	YEAR	DEFINITION
World Commission on Environment and Development	1987	Sustainability refers to practices that meets the needs of the present generation without compromising the ability of future generations ability to meet their own needs.
John Elkington's TBL	1997	Sustainability refers to a combination of three Ps: People, planet and profit and the organisation strategy to balance their economic growth and social programs.
World Business Council for Sustainable Development	2002	Sustainability refers to the strive towards economic growth, environmental quality and social equity.
ISO 26000	2010	Sustainability refers to the responsibility of an organisation for the impacts of its decisions and activities on society.
International Institute for Sustainable Development	2014	Sustainability refers to an organisations strategy of maintaining standards of living without damaging the environment.
United Nations SDGs	2015	Sustainability refers to a Universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.
United Nations Global Compact	2015	Sustainability encompasses managing economic, social and environmental impacts.

Source: Own compilation

Table 1 above outlines different definitions of sustainability spanning from 1987 to 2015. These definitions outlines different themes which can be categorised into the need for organisations to ensure their financial, environmental and social sustainability. The definition by the Brundtland Report (United Nations, 1987) is the most widely used definition by many organisations and authors. However, this definition is too broad to be used for this study as it clearly states “ the needs” without specifying what to include and what to exclude.

Therefore, for purposes of this study, the definition by the United Nations Global Compact (2015) will be adopted and used throughout the study. The global compact' definition narrows down the “needs” in the Brundtland definition into three aspects; economic, social and environmental impact that organisations must undertake. This definition will provide this study with a clear direction on what to focus on data collection, thus being the economic, environmental and social sustainability being reported by South African traditional universities.

2.2.2 DEFINITION OF SUSTAINABILITY REPORTING

Table 2 below summarises some of the definitions of sustainability reporting according to different authors to establish common themes and patterns through the evolution of the definition of sustainability reporting.

Table 2 Definitions of sustainability reporting

AUTHOR	YEAR	DEFINITION
John Elkington's TBL	1997	Sustainability reporting refers to a framework that incorporates the social, environmental and financial performance of an organisation.
ISO 26000	2010	Sustainability reporting is a framework that provides a direction to an organisation on how they can operate in a socially responsible manner.
Sustainability Accounting Standards Board (SASB)	2017	Sustainability reporting is defined as a framework that outlines how the organisation discloses their sustainability information that is important to the needs of their stakeholders.
UN Global Compact	2018	Sustainability reporting refers to the practice by organisation of measuring, disclosing and being accountable to their stakeholders.
Global Reporting Initiative (GRI)	2020	Sustainability reporting is a process which involves an organisation outlining their environmental and social impact, governance and ethical performance.

Source: Own compilation

Table 2 above outlines different definitions of sustainability reporting by different authors. The main themes of sustainability reporting definition include; elements that should be incorporated in sustainability reporting by organisation i.e. social, environmental and financial initiatives of the organisation. Furthermore, all definitions call for organisations to incorporate sustainability reporting as part of corporate governance and being accountable to their stakeholders, both internal and external. The diversity in the definitions outlined in the table 2 above, provides an understanding of sustainability reporting of organisations, basing on the framework that they choose to adopt.

2.2.3 THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Table 3 below outlines the Seventeen United Nations Sustainable Development Goals. These include common goals for all nations agreed upon which were discussed in the United Nations 2030 agenda report.

Table 3 United Nations Sustainable Development Goals

UN SDG NUMBER	DESCRIPTION
1	No Poverty
2	Zero Hunger
3	Good health and wellbeing
4	Quality Education
5	Gender equality
6	Clean water and sanitation
7	Affordable and clean energy
8	Decent work and economic growth
9	Industry, innovation and infrastructure
10	Reduced inequalities
11	Sustainable cities and communities
12	Responsive consumption and production
13	Climate action
14	Life below water
15	Life on land
16	Peace, justice and strong institution
17	Partnerships for the goals

Source: (UN, 2015)

The Agenda 2030 is a plan of action for people, planet and prosperity which seeks to achieve the goals that were not achieved by the Millennium Development Goals. The seventeen SDGs provide a broad view of goals for Nations to achieve, which can then be aligned with national or organisational goals at the lower level i.e., financial, environmental and social sustainability goals.

The aim of the UN SDGs is to solve the global challenge for a sustainable future by 2030. The goals include ending poverty, achieving zero hunger and promoting good health, and well-being. Environmental sustainability is also outlined through the goals of sustainable cities, responsible consumption, climate change action and the protection of life below water and on land. Social sustainability goals in the seventeen SDGs include; peace, justice and partnerships (United Nations, 2023). Therefore, this study will investigate which of the seventeen SDGs are being reported by the South African HEIs.

2.2.3 HISTORY OF SUSTAINABILITY REPORTING

In response to development of environmental stewardship, special environmental pressure groups have over the years pushed for sustainability reporting. Milne and Gray (2008) observed

that fewer than 100 companies in 1993 worldwide reported on sustainability. Despite the increase in adoption of sustainability reporting by organisations in the last decade, the larger majority has been by larger organisations (Calitz, Bosire and Cullen, 2018:1187). A survey conducted by KPMG (2011) indicated an increase in adoption of sustainability reporting with a recorded 95% of the 250 global companies having adopted sustainability reporting.

2.2.4 IMPORTANCE OF SUSTAINABILITY REPORTING FOR ORGANISATIONS

The King IV report encourages organisations to adopt sustainable reporting frameworks, such as the ISO 14001 and the GRI standards (Institute of Directors for South Africa, 2016). The report states that adopting these standards enables organisations to report their impact on ESG in a transparent, ethical and credible manner, thus building trust in their stakeholders, including the investor's trust in the management of the company. Merkel and Litten (2007) state that as sustainability is about balance and risk reduction, HEIs are encouraged to report sustainability using financial data (income and expenditure), educational data (degrees and research), social data (enrolments) and economic data (impacts) .

The King III report, which encourages sustainability reporting, states that adopting integrated reporting helps an organisation attain their short and long term goals (Calitz et al., 2018: 1189). According to the GRI standards (2022), the objective of sustainability reporting is to provide transparency on how an organisation contributes or aims to contribute to sustainable development. The GRI standards (2022) also states that adoption of sustainability reporting enhances the global comparability and quality of reported information on the impacts, which supports information users in making informed assessments and decisions about the organisations impacts and contribution to sustainable development. Furthermore, Bosire (2014:8) states that sustainability reporting is important for good corporate governance.

2.3 FRAMEWORKS OF SUSTAINABILITY REPORTING

In this section, an overview of sustainability reporting frameworks is discussed and the adoption of sustainability frameworks by South African HEIs.

2.3.1. OVERVIEW OF SUSTAINABILITY REPORTING FRAMEWORKS

In order for organisations to effectively communicate sustainability reporting, there is need for adoption of a suitable framework (Pennington and Moore, 2010: 25-26). Examples of popular sustainability frameworks in use include the Global Reporting Initiative (GRI), ISO 14000,

ISO 14001, the Compass sustainability, the sustainability accountability standards board (SASB) and the UN sustainable development Goals (SDGs).

Pojasek (2009:85) has identified problems related with sustainability reporting, and they include, failure to focus on important risks and tendency of trying to cover many issues without adopting a system of ensuring effective coherence e.g. an integrated system. Bosire (2014) stated that processes employed in management accounting such as Activity (ABC) Costing and Just in Time (JTI) have failed to produce the expected results as a result of non-alignment with organisations strategies. Bosire concluded that sustainability reporting is deemed to fail if it is left to be viewed from a strategic viewpoint.

Table 4 below, summarises some of the sustainability reporting frameworks i.e. GRI, SASB and UN SDGs.

Table 4 Brief overview of sustainability reporting frameworks

FRAMEWORK	TARGET AUDIENCE	THEMES	ATTRIBUTE	BRIEF DESCRIPTION
Global Reporting Initiative (GRI)	Companies of all sizes and sectors	a)Economic performance. b)Environmental impact. c)Social Impact	a)Comprehensive frameworks. b)Stakeholder inclusiveness	Provides standards for economic, environmental and social impacts
UN SDGs	Government, Businesses and NGOs	a)Poverty eradication. b)Health and wellbeing. c)Education. d)Gender equality	a)Global goals and targets. b)Broad and inclusive scope. c)Sustainability	Universal set of 17 SDGs adopted by the UN.
SASBS	Investors and financial analysts.	a)Environmental impacts. b)Social capital c)Human capital	a)Industry specific standards. b)Financial materiality.	Provides industry specific standards

FRAMEWORK	TARGET AUDIENCE	THEMES	ATTRIBUTE	BRIEF DESCRIPTION
ISO14000	Organisations of all sizes and sectors.	a)Environmental management systems. b)Life cycle assessment. c)Environmental labelling.	a)Comprehensive environmental management guidelines. b)Voluntary standards.	Standards that help organisations minimize their environmental impact.
ISO14001	Organisations of all sizes and sectors.	Environmental policy.	Focuses on Risk based thinking. Continuous improvement cycle.	Specifies requirements for an effective environmental management system (EMS).
Triple Bottom Line (TBL)	a)Companies b)Investors	a)Social equity. b)Environmental quality. c)Economic prosperity	Three pillars: people, planet and profit.	Encourages organisations to commit to focusing on social and environmental concerns.

Source: Own compilation

Table 4 above provides a brief overview of sustainability frameworks namely; GRI, UN SDGs, SABS, ISO 14000 and the TBL. The table classifies the summary into four different parts namely; target audience, themes, characteristics and a brief description of the sustainability reporting framework. The frameworks share similar themes, as well as differences. The GRI and the TBL both share the themes of economic, social and environmental sustainability as aspects that organisations should report in their sustainability reports.

The UN SDGs provide a more broad scope, since it focuses on a global perspective and thus provide national goals and targets that can complement those already set by organisations through other frameworks i.e. GRI and SABS. The ISO 14000 and 14001 only focuses on the environmental aspects, thus it may provide a better guidance in respect to environmental sustainability since it is more detailed with aspects guidance for environmental sustainability. In summary, both of the Frameworks listed in table 4 above provides guidance on how organisations can report their sustainability initiatives. Since the frameworks have similar themes, more than one framework can be adopted that could complement the other.

2.3.2 ADOPTION OF SUSTAINABILITY REPORTING FRAMEWORKS BY SOUTH AFRICAN HEIs

HEIs play an important role in sustainable development through promotion of education. In the last decade, there has been an increase in HEIs adopting sustainability reporting (Brusca et al., 2018:347). Sun, Ip and Davey (2023:581) state that integrated reporting is popular in South Africa and that it is important for HEIs to communicate with a wide range of stakeholders about stories of a university's hope, success, failures and values.

The main driving factor in the development of integrated reporting in South African HEIs is the informal coercive pressures (Sun et al., 2023). In addition, Calitz and Zietsman (2018:174) state that South African HEIs have the norm to report on financial and social aspects, thus disregarding the environmental aspects. The two most relevant and common sustainability reporting standards for HEIs are the STARS and GRI frameworks (White and Keester, 2012).

2.4 OVERVIEW OF SOUTH AFRICAN HEIs

In this section, a brief overview of South African HEIs is provided, the relevance of sustainability reporting in the context of HEIs drivers for sustainability reporting in HEIs, Institutional motivations for engaging in sustainability reporting and lastly the stakeholder pressures and expectations influencing sustainability reporting practice.

2.4.1 RELEVANCE OF SUSTAINABILITY REPORTING IN THE CONTEXT OF HEIs

There are 26 HEIs in South Africa , each of those institutions can be classified into either traditional university, university of technology or comprehensive university as highlighted in Table 5 below.

Table 5 Description of HEIs in South Africa

TYPE	DESCRIPTION	TOTAL
Traditional Universities	Institutions that offer a broad range of general formative and professional programmes at both undergraduate and postgraduate levels	13
Universities of Technology	Institutions that offer a broad range of programmes that are vocational and/or profession oriented, primarily at the undergraduate level.	6
Comprehensive Universities	Institutions that offer the full spectrum of programmes, including vocational, professional and general formative programs at both undergraduate and postgraduate levels.	7

Source: Public Higher Education (2023).

The Council of Higher Education (CHE, 2021) in South Africa identifies that there are thirteen traditional universities which offer a broad range of professional programmes, six universities of technology that offer vocational/professional undergraduate qualifications and finally seven comprehensive universities that offer both vocation, professional and general programs.

Table 6 below, provides the specific division of these universities and stipulated by Council for Higher Education in South Africa.

Table 6 Classifications of South African HEIs by type

NUMBER	NAME OF UNIVERSITY	TYPE
1	Cape Peninsula University of Technology	University of Technology
2	Central University of Technology	University of Technology
3	Durban University of Technology	University of Technology
4	Mangosuthu University of Technology	University of Technology
5	Tshwane University of Technology	University of Technology
6	Vaal University of Technology	University of Technology
7	Nelson Mandela University	Comprehensive University
8	University of Johannesburg	Comprehensive University
9	University of Mpumalanga	Comprehensive University
10	University of South Africa	Comprehensive University
11	University of Venda	Comprehensive University
12	University of Zululand	Comprehensive University
13	Walter Sisulu University	Comprehensive University
14	North West University	Traditional University
15	Rhodes University	Traditional University
16	Sefako Makgatho Health Sciences University	Traditional University
17	Sol Plaatje University	Traditional University
18	University of Cape town	Traditional University
19	University of Fort Hare	Traditional University
20	University of KwaZulu Natal	Traditional University
21	University of Limpopo	Traditional University
21	University of Pretoria	Traditional University
23	Stellenbosch University	Traditional University
24	University of the Free state	Traditional University
25	University of the Western Cape	Traditional University
26	University of the Witwatersrand	Traditional University

Source: Vital Stats (2023)

The Council of Higher Education (CHE, 2021) in South Africa identifies the core functions of HEIs as teaching, learning, research and innovation and community engagement. This study will focus on the five traditional universities namely; University of Pretoria, Stellenbosch

University, University of Cape Town, University of the Witwatersrand and the University of KwaZulu Natal as highlighted in Table 6 above.

2.4.2 DRIVERS FOR SUSTAINABILITY REPORTING IN UNIVERSITIES

The king IV report for corporate governance has adopted the ‘apply and explain’ approach which guides organisations including HEIs to implement their activities throughout the year and later communicate how their impact on the environment was managed through the use of sustainability reporting framework (Institute of Directors of South Africa, 2016). Another driver for sustainability reporting is the commitment that HEIs in South Africa have made to support the government in attainment of sustainable development through adoption of sustainable ways of handling their daily activities (Awuzie and Emuze, 2017: 1176).

2.4.3 INSTITUTIONAL MOTIVATIONS FOR ENGAGING IN SUSTAINABILITY REPORTING

In addition to drivers for sustainability reporting, there are internal motivation for HEIs to engage in sustainability reporting. One of the institutional motivations is the business strategy which might require that universities engage in reputational building of the institution in order to attract investors in funding research projects. This ensures financial sustainability for the institutional as a going concern (University of Cape Town, 2022). In addition, the need for institutions to attain financial sustainability through diversification i.e. commercialisation of research units has led to universities adopting acceptable and recommended international standards i.e. Integrated General Initiative (GRI), in order to promote operational efficiency (University of Pretoria, 2023).

2.4.4 STAKEHOLDER PRESSURES AND EXPECTATIONS INFLUENCING SUSTAINABILITY REPORTING PRACTICE

The adoption of sustainability reporting by HEIs emerged as a result of pressures and expectations of their stakeholders. For example, the community expects organisations to engage in corporate social responsibility which has thus led to a social norm that organisation ought to be responsible in solving social problems in societies they operate in. This has thus pushed organisations to adopt social sustainability and report their activities so that community members as stakeholders are aware of their activities. In addition, another pressure group is legislation such as the National Environmental Management Act (1998) of South Africa, which provides guidance on issues of environmental sustainability (Awuzie and Emuze, 2017).

2.5 PREVIOUS RESEARCH ON SUSTAINABILITY REPORTING IN SOUTH AFRICAN HEIs

This section outlines the previous research conducted on sustainability reporting in South African HEIs. Five research articles have been sourced through google scholar in peer reviewed academic journals. An analysis on these five research articles will be conducted in order to identify the common trends and themes in the research on sustainability reporting in South African HEIs.

2.5.1 ANALYSIS OF PREVIOUS RESEARCH CONDUCTED ON SUSTAINABILITY REPORTING IN SOUTH AFRICAN HEIs

An initial research on the web on research conducted on sustainability reporting in South African HEIs revealed a shortage of research on the topic. The researcher utilised Google scholar and google in order to source previous studies with key search words ‘sustainability reporting’, ‘frameworks’ and ‘ South African HEIs’’. The results yielded a total of eight papers closely related to the search words, with majority of them being earlier than 2018. This presents a gap in knowledge on the topic.

Table 7 below thus summarises the studies conducted in the last ten years on five research articles by outlining major trends, themes, objectives, findings and recommendations of the research articles.

Table 7 Analysis of previous research on Sustainability reporting in South African HEIs

TITLE	AUTHOR	PROBLEM STATEMENT	PURPOSE OF THE STUDY	FINDINGS	RECOMMENDATIONS
Sustainability Reporting Framework for South African HEIs	Samuel M. Bosire. 2014.	There is lack of Sustainability reporting Frameworks for SA HEIs leading to weakness in governance and strategic planning in HEIS	To establish a framework for sustainability reporting	a)Governance in HEIs can be strengthened by improving reporting. b)Sustainability reporting is in its infancy in South African HEIs	Efforts should be directed at creating awareness and training staff on aspects that promote sustainability.
Sustainability Reporting by South African HEIs	Andre P. Calitz, Margaret D.M. Cullen & Samuel Bosire.2016	Limited research has been conducted regarding the integrated sustainability reporting practices in HEIs in South Africa.	Investigate the extent to which HEIs in South Africa implement Sustainability reporting in their institutions.	a)Reports show that environmental reporting is done at HEIs b)There is lack of integrated reporting. c)There is low maturity of Business Intelligence adoption in HEIs	a)Organisations should monitor their performances against set targets. b)Business Intelligence (BI) framework should be adopted for integrated reporting.
The Role of Business Intelligence in Sustainability Reporting for South African HEIs	Andre P. Calitz, Margaret D. Cullen & Samuel Bosire.2018	There is limited sustainability reporting frameworks developed for HEIs	To show that (BI) is a key component of a sustainability reporting Framework.	Factors such as management buy in and availability of BI are positively related to effective strategic planning.	HEIs ought to invest in BI technologies for use in sustainability reporting

TITLE	AUTHOR	PROBLEM STATEMENT	PURPOSE OF THE STUDY	FINDINGS	RECOMMENDATIONS
An Adapted Framework for Environmental Sustainability Reporting Using Mobile Technologies	Andre P. Calitz & Jaco F. Zietsman.2018.	There are currently no frameworks using mobile technologies to report on environmental data by South African HEIs	Proposes a framework for environmental sustainability reporting using mobile technology	a)Various systems and frameworks exist for sustainability reporting. b)Reports are in fragmented manner.	There is a need to promote sustainability and increase sustainability reporting practice.
From Ivory tower to a Storyteller of value creation:	Yanei Sun, Pui San Ip & Murrghesh Arunachala 2023.	Annual reporting by HEIs don't consider how the business model transforms multiple capitals, to create value.	Examine integrated reports of Japanese and South African Universities	Informal coercive pressure of South African Universities is a primary driving factor.	Special attention needs to be paid to the integration of information.

Source: Own compilation

Table 7 above provides a chronological order of studies conducted on sustainability reporting in South African HEIs. The studies range from the year 2014 to 2023 and the summaries are categorised into four sections namely; problem statement, purpose of the study, findings and the recommendations. In 2014, in a study by Bosire, it was stated that South African HEIs lacks frameworks for guidance in sustainability reporting. Other studies conducted include Calitz et al. (2018) who recommended that organisations should monitor their performances against set targets and that holistic perspectives of reporting should be adopted by organisations.

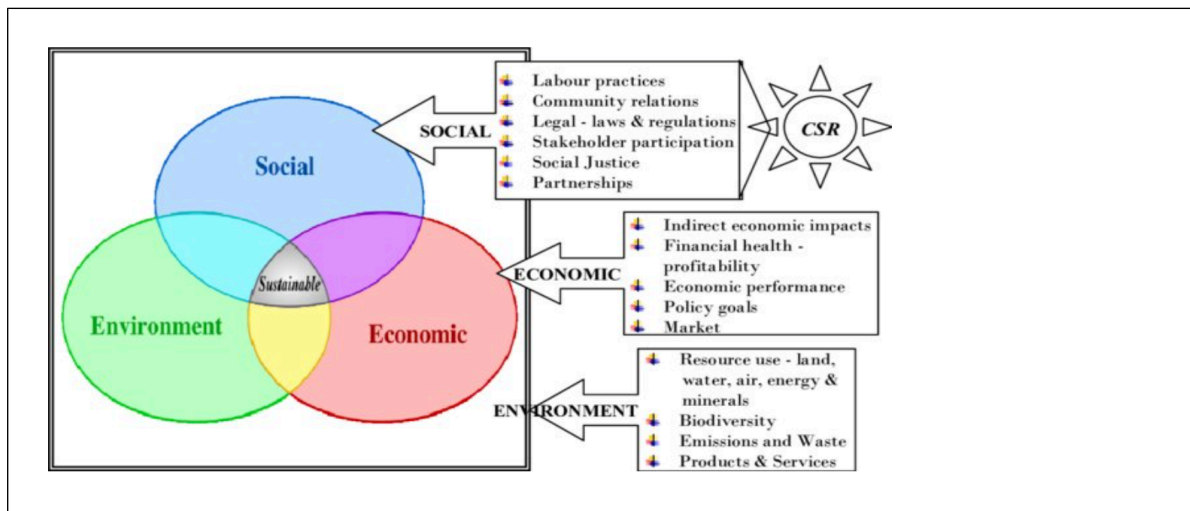
Sun et al.(2023) proposed a framework for environmental sustainability reporting using mobile technology. The 2023 study stated that as of 2023, There were little to no frameworks in South African HEIs using mobile technology to report technologies on environmental data by South African HEIs. Sun et al. (2023) recommended that organisations should promote sustainability and increase sustainability reporting practices. These studies represent a common problem of little to no frameworks developed that can guide sustainability reporting by South African HEIs.

2.6 OVERVIEW OF SUSTAINABILITY REPORTING IN SOUTH AFRICAN HEIs

This section will outline sustainability reporting in South Africa by focusing on the financial, environmental and social sustainability.

Figure 1 below summarises the aspects of sustainability that are commonly being reported in the studies conducted on sustainability reporting in HEIs. These aspects are; Economic (Financial), Social and Environmental sustainability.

FIGURE 1 FINANCIAL, SOCIAL AND ENVIRONMENTAL SUSTAINABILITY



Source: Rana, Platts and Gregory (2008)

(Struwig and Stead, 2023) define financial sustainability as a strategy that organisations uses in order to secure a long-term value growth of an organisation. The key themes of a financial sustainability strategy include; financial planning, asset and liability management and risk analysis. Therefore, financial sustainability ensures that organisations manage their resources efficiently to remain viable in the long term.

Hellberg (2023:461) states that social sustainability is related to indicators such as quality of life and health, equity, inclusion, access, social cohesion and participatory processes. Therefore, social sustainability emphasises that organisations have a moral obligation to provide these social roles, as well as commit to ethical practices in promoting social progress.

Environmental sustainability on the other hand is defined as the responsibility that organisations hold in lowering their human environmental impacts and promoting the protection of natural resources (Ziaul and Shuwei, 2023:6).

2.7 SUMMARY

Chapter two provided more background data to complement chapter one. The main specific areas discussed in this chapter included the following, an introduction to the chapter, an overview of sustainability reporting, frameworks of sustainability reporting, an overview of South African HESs and finally an analysis of previous research on sustainability reporting in South African HEIs.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

This chapter is a continuation of chapter two, which provided a background of the literature review through the analysis of sustainability and sustainability reporting, frameworks of sustainability reporting and previous research on sustainability reporting in South Africa HEIs. This chapter focused on the research methodology and design. The research design employed a systematic review which includes all the relevant information ranging from research design and methodology methods, data collection, data analysis, trustworthiness and rigor and ethical considerations. The analysis provided a link to the first two chapters of this study and outlined how the objectives stated in chapter one was solved.

3.2 DATA COLLECTION

In a qualitative research study, the data collection process is interrelated with the data analysis, which means that data analysis is conducted during and after data collection (Saunders, Lewis, and Thornhill, 2019:636). This study made use of both the primary and secondary data.

3.2.1 SECONDARY RESEARCH

Secondary data is information that was initially collected by other researchers for other purposes. Ajayi (2017) states that it is the primary data that was collected and is simply analyzed and interpreted in a current study. This study used the Nelson Mandela university Library's online databases i.e., SpringerLink, and other reputable sources i.e., google scholar to collect secondary data.

3.2.2 PRIMARY RESEARCH

Primary data is defined as authentic first-time data collected for purposes of a study (Saunders et al., 2019). This research study used the systematic review, which refers to a process that involves compiling and summarizing the findings of all studies on a certain phenomenon (Gummel, 2022:6).

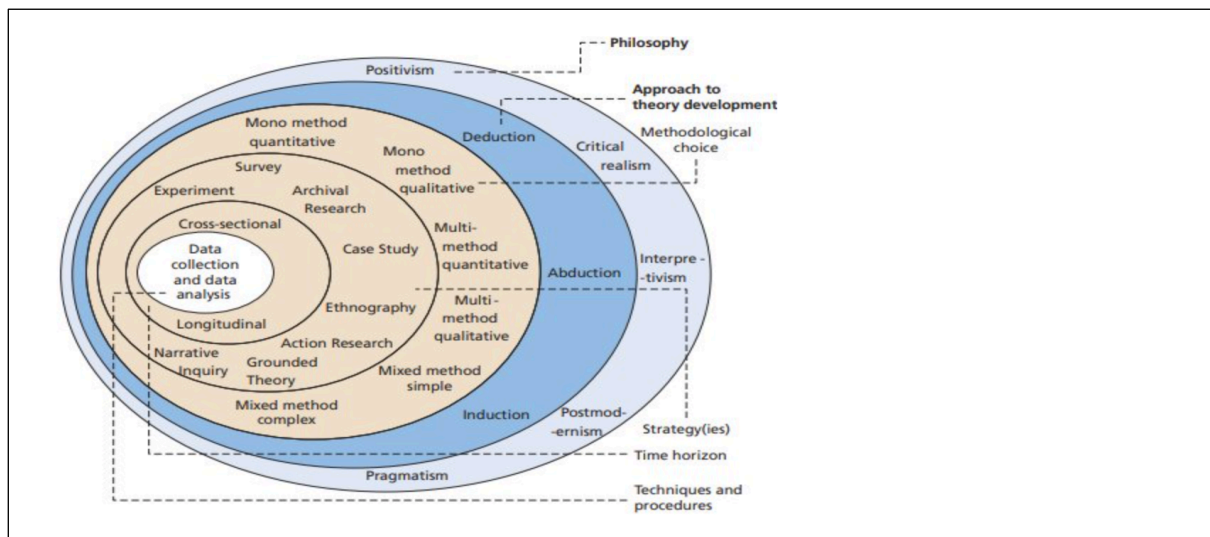
3.3 RESEARCH DESIGN AND METHODOLOGY

Research design and methodology refers to a general plan of how the researcher will go about answering the research question (Saunders et al., 2019:173). The component of the methodology includes the following elements: research philosophy/paradigm, approach to

theory development, purpose of the study, methodological choice, research strategy and the time dimension.

Figure 2 below from Saunders et al. (2019) is a research onion description of the research design methods that were adopted in this study.

FIGURE 2 RESEARCH DESIGN METHODS



Source: Saunders et al. (2019)

Figure 2 above shows the different kinds of research design methods according to Saunders et al. (2019), that can be adopted by researchers to aid them in answering research objectives. The following sections explain the different research design methods, according to the research onion in figure 2 above, that were employed in this study.

3.3.1 RESEARCH PHILOSOPHY/PARADIGM

A research philosophy/paradigm refers to the beliefs and assumptions about the development of knowledge. There are different types of philosophies, and this study used the interpretive paradigm. The interpretive paradigm is used when the researcher is interested in understanding the key meanings linked to the phenomenon (Saunders et al., 2019:148). This study aimed at systematically reviewing the sustainability reporting at South Africa HEIs; therefore, the interpretive paradigm was best suited for the study.

3.3.2 APPROACH TO THEORY DEVELOPMENT

The inductive approach to theory development was used in this study. The inductive approach refers to a situation in which the premises of the study are known and are used to generate conclusions (Saunders et al., 2019). The inductive approach's main goal is to develop patterns

and common themes to a phenomenon. This study aimed at identifying common themes of sustainability reporting at South African HEIs; thus, the inductive approach fits perfectly.

3.3.3 PURPOSE OF THE STUDY

The descriptive study approach was adopted, and its main purpose was to understand and gain an accurate description of events, people or situations (Nassaji, 2015). Nassaji (2015:129) further states that a descriptive study approach is a tool used to define a research problem.

3.3.4 METHODOLOGICAL CHOICE

The mono method choice was adopted in this study. According to Saunders et al. (2019), the mono method assumes the use of a single research method of study, either quantitative or qualitative study. Creswell (2013) further stated that the monomethod methodological choice allows for collection of rich and detailed data.

3.3.5 RESEARCH APPROACH

There are two approaches to research, being the qualitative and quantitative research approach. This study employed the qualitative approach, which is useful when researchers want to study a phenomenon in its natural setting and when there is little research on the topic (Bello and Kamanga, 2017:5). Saunders et al. (2019) state that qualitative research normally deals in a non-numeric research data.

3.3.6 RESEARCH STRATEGY

A research strategy provides a link between the research philosophy and the choice of data collection and data analysis (Saunders et al., 2019:196). The systematic review strategy was adopted in this study, which Saunders et al. (2019) defines as a process of reviewing existing literature in a desktop study to identify, evaluate and analyze the findings to allow conclusions to be reached about what is known, and what is not known (Denyer and Tranfield, 2009).

3.3.7 TIME DIMENSION

The cross-sectional time dimension was adopted in this study, and it refers to a study that is carried out at once and results are presented for the point in time that the study was conducted (Saunders et al., 2019:196). The cross-sectional time horizon was employed because the study is academic in nature, with time factor being considered thus it will be conducted once.

3.4 DATA COLLECTION

Data collection is a process of collecting research information from various sources to solve a research question and objectives. The main methods involved in data collection includes

interviews, surveys, observations and document analysis (Creswell, 2014). This study adopted the document analysis because the information that was required for data analysis was already available in the public domain of universities, i.e. published sustainability reports.

3.4.1 TECHNIQUE AND PROCEDURES

The study made use of the desktop study which involves collecting existing information available online, such as academic journals, reports, articles and publications by the South African HEIs (Dudovskiy, 2022).

3.4.2 SEARCH STRATEGY: DATA INCLUSION CRITERIA

For purposes of this study, the data collected was from sustainability reports published on the official websites of the five selected South African traditional HEIs. The reports included were from the period 2022 onwards, to capture the most recent information.

3.4.3 SEARCH STRATEGY: SOURCES OF DATA

The USAF website was consulted to obtain a direct link to each of the university's official websites where annual reports and sustainability reports were downloaded.

3.4.4 SEARCH STRATEGY: SEARCH TERMS OF WORD STRINGS

The study made use of the following terms in the search criteria, social sustainability, environmental and financial sustainability.

3.5 TRUSTWORTHINESS AND RIGOUR

Trustworthiness is defined as the truth value of the research while research rigor refers to the care attributed in conducting research to ensure that validity, reliability and accuracy of the findings is achieved (Struwig and Stead, 2023:24). Lincoln and Guba (1985) provided four criteria's that must be adhered for trustworthiness and rigor in research to be attained, and they include credibility, dependability, confirmability and transferability.

3.5.1 CREDIBILITY

Credibility refers to the care taken in ensuring that the findings are true (Struwig and Stead, 2023). Credibility in this study was achieved through the adoption of acceptable and best suited research methods that helped in achieving the research objectives.

3.5.2 TRANSFERABILITY

Transferability refers to measures undertaken to ensure that the findings are useful in similar environments to that of where the study was conducted (Struwig and Stead, 2023).

Transferability in this study was achieved by ensuring the provision of background information to the study as well as explanation of key terms in the study.

3.5.3 DEPENDABILITY

Dependability in research answers the question; are the findings stable or consistent? (Struwig and Stead, 2023). To ensure that the findings of this study are stable/consistent, the methodology was extensively described so that any repetition of the study is possible.

3.5.4 CONFIRMABILITY

Confirmability refers to the findings being confirmed by the data sources, and this was achieved by providing a clear description of research methods that ensures integrity in the results of the study (Struwig and Stead, 2023).

3.6 DATA ANALYSIS

To collect primary data, this study made use of the content analysis technique, which supplements the systematic analysis of sustainability annual reports. Saunders et al. (2019:636) states that the interactive nature of data collection and analysis in qualitative research allows for important patterns, themes and relationship to be identified. Saunders et al. (2019), further states that content analysis is suitable for qualitative research as it is used to identify categories that the researcher is interested in, that is later used to develop a systematic coding scheme.

The summary of the data analysis in this study is highlighted in table 8 below, highlighting the phases of research process as was introduced by (Struwig and Stead, 2023).

Table 8 Phases of Research Process

Phase one	Data is collected and organized.
Phase two	Researchers carefully studies the data.
Phase three	Categories and themes are provided for the data collected.
Phase four	Data is coded.
Phase five	Data is interpreted.
Phase six	Alternative understandings of the data are sought.
Phase seven	Data is reduced to meaningful checks.

Source: Struwig et al. (2023)

Table 8 above explains how the data analysis process began with phase one, where primary and secondary data were collected. In phase two, a review was conducted to familiarize with the data collected. Phase three involved the researcher identifying common trends and themes in the data i.e., financial, social and environmental sustainability being reported by the South African HEIs. Phase four introduced coding of the data which involved grouping the data into

common themes and assigning codes and labels of meaning to the information collected. Phase five then involved interpreting the data by understanding the meaning and implications of the findings. Phase six involved the researcher seeking alternative explanations and meanings of the findings to ensure a comprehensive analysis. Finally, Phase seven involved writing the final report by providing all the information in a structured and coherent format.

3.7 ETHICAL CONSIDERATIONS

Ethics refers to the standards of behavior that set apart between acceptable and inappropriate actions (Nelson Mandela University, 2011). The researcher complied with the regulations of NMU by seeking consent from the ethics committee of NMU, through signing of the Form E (Ethics Form). Form E is attached in Appendix 2 of this study.

3.8 SUMMARY

Chapter three is a continuation from chapter two, the literature overview. This chapter provided information on research methodology, specifically on how the researcher went about achieving the research objectives identified in chapter one. The specific section in this chapter includes data collection methods, research design and methodology, data collection techniques, trustworthiness and rigor, data analysis and finally, the ethical considerations.

CHAPTER FOUR

FINDINGS AND INTERPRETATION OF DATA

4.1 INTRODUCTION

Chapter three explored the research methodology and approach that this study employed, and this is the content analysis of sustainability reports published by HEIs in South Africa. The research design and methodology chapter further detailed how the data was collected, the sample selected and how the data was analyzed. This chapter therefore analyzes in depth the data collected from the sustainability reports published by South Africa HEIs. Data collected was categorized according to financial, environmental and social sustainability, as well as projects being undertaken by South African HEIs on the seventeen UN SDGs. Themes and patterns were identified which facilitated the analysis of the data and ultimately achieved the primary and secondary objectives of the study identified in chapter one. This chapter therefore is a buildup on chapters one, two and three and provides a current outlook on the sustainability reporting at South African traditional universities.

4.2 THE SAMPLE USED IN THE STUDY

This study used the Nelson Mandela's University Library online databases, and a collection of twelve sustainability reports were found that closely matched to the string words, and the study period, being 2022 to 2024. The string words used in the search were social sustainability, environmental sustainability, financial sustainability and UN SDGs. The sustainability report publication date was thus used as a criterion for data extraction, as earlier reports (older than 2022) were disregarded to collect data on the most recent period. The title, author and publication date of the reports were listed and summarized in a table format in the following section.

4.2.1 SUSTAINABILITY REPORTS

The sustainability reports analyzed are abbreviated by 'S' and a numerical number was attached detailing the different kind of report from the other.

Table 9 below summarizes the sustainability reports used for purposes of this study. The author coded according to the abbreviation of the University; "UCT" for University of Cape town, "SU" for Stellenbosch University, "UP" for university of Pretoria, "UW" for University of Witwatersrand and "UKZN" for University of KwaZulu Natal.

Table 9 Sustainability Reports

NAME OF REPORT	YEAR	AUTHOR	SOURCE	CODE
Stellenbosch University Sustainability Report 2022	2023	SU	www.sun.ac.za	S1
Stellenbosch University Annual Integrated Report 2022	2023	SU	www.sun.ac.za	S2
University of Cape Town Annual Report 2022	2023	UCT	www.uct.ac.za	S3
University of Cape Town Sustainability and The SDGs 2021-2022	2023	UCT	www.uct.ac.za	S4
University of Cape Town Social Responsiveness Report 2022-2032	2023	UCT	www.uct.ac.za	S5
University of KwaZulu Natal Strategic Plan 2023-2032	2022	UKZN	www.ukzn.ac.za	S6
University of KwaZulu Natal 2022 Annual Report 2023	2023	UKZN	www.ukzn.ac.za	S7
University of Pretoria 2022 Sustainable Development Report	2023	UP	www.up.ac.za	S8
University of Pretoria Annual Report and Audited Financial Statement 2023	2023	UP	www.up.ac.za	S9
Wits 2023: A strategic Framework by University of Witwatersrand	2022	UW	www.wits.ac.za	S10
The Witwatersrand University Sustainability Strategy 2023	2023	UW	www.wits.ac.za	S11
Witwatersrand University Integrated Report 2022	2023	UW	www.wits.ac.za	S12

Source: own compilation

Table 9 above highlights the five traditional universities under study, the University of Cape Town, the university of Witwatersrand, Stellenbosch University, the University of Pretoria and the University of KwaZulu Natal. The table also shows the Sustainability reports published by the traditional universities, being twelve in total that were analyzed for purposes of this study

4.3 RESEARCH THEMES

The research themes were coded based on the themes identified in chapters one and two of this study. The abbreviation “T” was used in this analysis to represent a research theme, and a unique number was added after the abbreviation.

Table 10 below summarizes the coding of the research themes.

Table 10 Research Themes

RESEARCH THEMES	CODE
Financial Sustainability	T1
Social Sustainability	T2
Environmental Sustainability	T3
United Nations Sustainable Development Goals (UN SDGs)	T4

Source: Own compilation

Table 10 above shows the four major themes that were identified in the twelve sustainability reports analyzed for this study. The four major themes are financial, social and environmental sustainability, and the UN SDGs. The themes are coded as T1, T2, T3 and T4 respectively.

4.3.1 COMMON TRENDS ON FINANCIAL SUSTAINABILITY

From the data collected on the five universities, the following common patterns were identified under the financial sustainability being reported by the universities. The coding for patterns on financial sustainability was “F” followed by a numerical number to provide a unique identification.

Table 11 below summarizes the patterns on financial sustainability being reported.

Table 11 Financial Sustainability common patterns

FINANCIAL SUSTAINABILITY COMMON PATTERNS	CODE
Revenue Diversification	F1
Cost Management	F2
Endowment growth	F3
External Funding	F4
Corporate governance	F5

Source: Own compilation

Table 11 above further outlines the common trends on financial sustainability theme being revenue diversification, cost management, endowment growth, external funding and corporate governance. The coding for the common trends of financial sustainability is F1, F2, F3, F4 and F5 respectively.

4.3.2 COMMON TRENDS ON SOCIAL SUSTAINABILITY

This section outlines the common patterns from the research data on social sustainability that were identified.

Table 12 below summarizes these patterns, and they were coded with the abbreviation “S”, followed by the numerical number.

Table 12 Social Sustainability common patterns

SOCIAL SUSTAINABILITY COMMON PATTERNS	CODE
Community Engagement	S1
Sustainability in Education and Research	S2
Collaboration and partnerships for social Impact	S3
Health and well-being of the university's community	S4

Source: Own compilation

Table 12 above further outlined the common trends under the social sustainability theme which includes community engagement, sustainability in education and research, collaboration and partnership for social impact and finally the health and well-being of the university's community. The coding for the common trends of social sustainability was S1, S2, S3 and S4 respectively.

4.3.3 COMMON TRENDS ON ENVIRONMENTAL SUSTAINABILITY

The data collected on environmental sustainability contained similar patterns being reported by the universities under study on environmental sustainability.

These patterns are summarized in table 13 below and were coded with the letter "E" followed by a numerical number for unique identification.

Table 13 Environmental Sustainability Common patterns

ENVIRONMENTAL SUSTAINABILITY COMMON PATTERNS	CODE
Renewable Energy	E1
Water conservation and Management	E2
Waste Management	E3
Research on climate change and sustainability	E4

Source: Own compilation

Table 13 above outlined the common trends under environmental sustainability which includes renewable energy, water conservation and management, waste management and research on climate change and sustainability. The coding on the common trends of environmental sustainability was E1, E2, E3 and E4 respectively.

4.4 RESEARCH METHODOLOGY USED

The methodology used in this study was classified by a unique code "M" followed by a numerical number. The numerical value was attached differentiating the different methodology.

Table 14 below summarizes the coding of methodology.

Table 14 Research Methodology

METHODOLOGY	CODE
Qualitative Research	M1
Quantitative Research	M2
Mixed Methodology	M3

Source: Own compilation

Table 14 above outlined the different kinds of research methodology that can be employed as was portrayed in the research onion in chapter three above and these are qualitative research, quantitative research and mixed methodology. The coding for the research methodology was M1, M2 and M3 respectively.

4.5 DATA COLLECTION METHOD USED

The data collection method was classified as “D”, and a numerical number was attached to identify the different type of the method.

Table 15 below summarizes the data collection method.

Table 15 Data collection method

DATA COLLECTION METHOD	CODE
Document study	D1
Interviews/Focus group	D2
Online surveys	D3
Case study	D4

Source: Own compilation

Table 15 above outlined the different data collection method as was shown in the research onion in chapter three and they include document study, interviews/focus group, online surveys and case study data collection method. The coding for the data collection method was D1, D2, D3 and D4 respectively.

4.6 DATA ANALYSIS METHOD USED

Data analysis method was coded with the unique code name “A” followed by a numerical number.

Table 16 below summarizes the data analysis method coding.

Table 16 Data Analysis Method

DATA ANALYSIS METHOD	CODE
Content Analysis	A1
Systematic Review	A2
Thematic Analysis	A3
Narrative Analysis	A4

Source: Own compilation

Table 16 above shows the data analysis methods that can be employed as highlighted by the research onion in chapter three of the study and they include content analysis, systematic review, thematic analysis and narrative analysis. The coding for the data analysis was A1, A2, A3 and A4 respectively.

4.7 SECONDARY DATA COLLECTION RESULTS

Table 17 below outlines the findings from the previous sections. The summary includes report used, methodology used, data collection method, data analysis and the outcome of the analysis.

Table 17 Secondary Data Collection results

OUTPUT NUMBER	METHODOLOGY USED	DATA COLLECTION METHOD USED	DATA ANALYSIS METHOD USED	OUTCOME
S1	M1	D1	A1 &A2	T1, T2, T3 &T4
S2	M1	D1	A1 &A2	T1, T2, T 3 &T4
S3	M1	D1	A1 &A2	T1 &T3
S4	M1	D1	A1 &A2	T4
S5	M1	D1	A1 &A2	T2
S6	M1	D1	A1 &A2	T1, T2, T3 &T4
S7	M1	D1	A1 &A2	T1, T2, T3 &T4
S8	M1	D1	A1 &A2	T4
S9	M1	D1	A1 &A2	T1, T2 &T3
S10	M1	D1	A1 &A2	T1, T2 &T3
S11	M1	D1	A1 &A2	T4
S12	M1	D1	A1 &A2	T1, T2 &T3

Source: Own compilation

Table 17 above provides a summary detailing the twelve sustainability reports that were published by the five universities under study. The period of the reports used in this study was between 2022 and 2024, thus providing the recent information data on sustainability reporting at South Africa HEIs. The reports range from, Annual Integrated report, financial report and

report on sustainability. Only two universities under study, the University of Cape Town and Stellenbosch University, published separate reports detailing their progress on achieving the UN SDGs, i.e. S4 and S1, respectively. Other universities report their progress on UN SDGs either in their Integrated Annual report or the annual sustainability report, or both. Table 17 above also summarizes the type of data collection method used and the method of data analysis i.e. Content Analysis and Systematic review being A1 and A2 respectively. Finally, the table above outlines the research themes from each report i.e. T1, T2, T3 and T4. A further breakdown was made by the researcher to identify common patterns under each theme, and these were highlighted in tables 11, 12 and 13 above.

4.7.1 THEME ONE: FINANCIAL SUSTAINABILITY

Financial sustainability was analyzed according to the common trends identified in Table 10. S1, S2 and S3 outlined projects and activities that Stellenbosch University undertakes in pursuit of financial sustainability. SU has implemented several strategies to attain financial sustainability, and they include good corporate governance by governing the university in line with the Higher Education Act, ensuring accountability to safeguard their assets and investments. Furthermore, SU has made an initiative to explore external funding for their operation and other programs, which will ensure that their institution is treated as a going concern.

S3 provided data on the financial sustainability of UCT. UCT has also implemented several techniques and strategies that will ensure its financial sustainability. For example, S3 reports that UCT has pursued the agenda of university growth by pursuing projects that could increase its cashflow, reviews current investments to ensure alignment with their current strategy. In addition, UCT has developed a financial sustainability plan which guides them i.e. through checks and balances in risk assessments to ensure that they are on track.

S6 and S7 provided the data for financial sustainability of UKZN. The findings showed that UKZN had invested its efforts in income generation projects in order that human capital is maintained. Finally, UKZN has also focused on capital development initiatives, focusing on both external and internal i.e. bursaries and government grants.

S9 provided the data findings for financial sustainability of the University of Pretoria. UP has focused its attention in recognizing teaching excellence which is believed to attract external investors to the institution. In addition, UP has focused on partnerships that brings in shared value i.e. joint degrees. Finally, UP has pursued the strategic option of diversifying their

sources of finance i.e. through acquisition of foreign grants and investments in intellectual property development and commercialization.

Financial sustainability data for Wits university was sourced from S10 and S12. Common projects that Wits has undertaken so far to achieve financial sustainability include academic and research commercialization, diversifying and expanding income streams i.e. through foreign grants and intellectual property development and finally maximizing cost effective resource utilization, to reduce capital expenditure and therefore balance the cashflow of the institution.

4.7.2 THEME TWO: SOCIAL SUSTAINABILITY

Social sustainability was coded by the abbreviation “T2” in table 10 above. The data for social sustainability reporting by Stellenbosch university was sourced from the S1 and S2. The social sustainability initiatives being reported by SU include the following: promoting corporate citizenship through the social and business ethics committee, empowering learners in the community through literacy programs, partnership with communities to solve problems i.e. Kayamandi river cleaning project and finally striving to provide education access for all genders in the community.

The findings of social sustainability of UCT were sourced from S5. According to S5, the social sustainability projects being reported by UCT includes the following initiatives; partnering with communities to solve social problems i.e. free screening for cervical cancer project in Khayelitsha, developing effective covid 19 preventive and treatment measure to help the community, developing sustainable wastewater treatment hub for the local community and finally, establishing the gender, health and justice research unit focusing on research and free consultation for local community members.

The research data for social sustainability of UKZN was sourced from S6 and S7. S7 outlines the following activities being reported by UKZN on their social sustainability initiative; introduction of gender-based violence module in their curriculum to address physical, mental and emotional development, and increasing scholarships to enable economically disadvantaged students have access to higher education.

University of Pretoria’s social sustainability initiatives were reported in S9. The summary of the UP initiatives on social sustainability includes a focus on tackling low literacy skills in schools through partnerships with local high schools in Pretoria, establishing a laboratory

aimed at advancing societal transformation i.e. training women in home industries and finally training local farmers in the eastern cape on sustainable agricultural process.

Social sustainability of Wits university initiatives was reported in S10 and S12. The initiatives being reported by Wits university on social sustainability according to S10 and S12 include a key focus on social justice by addressing inequality in the society, advancing inclusive public health and finally, conducting research aimed at designing and eventually developing technologies that will foster societal advancement.

4.7.3 THEME THREE: ENVIRONMENTAL SUSTAINABILITY

S1 and S2 provided the data findings for the environmental projects being carried out by SU. It was found that SU has so far implemented the following initiatives in pursuit of environmental sustainability; adopted an environmental, social and governance reporting framework which is aimed at attracting investments, water conservation project through a feasibility study on the Welgevallen dam, conducting a research with the aim of producing a manual for waste and material standards and specific handling document and finally committing to a net zero campaign through projects with students and staff members e.g. using renewable energy.

UCT has also made progress in their agenda to contribute to environmental sustainability. In this study, document S3 provided research data for UCT's initiatives on environmental sustainability. The findings include the following: students receive basic trainings in environmental sustainability, UCT created a living lab experience aimed at identifying sustainability related research, UCT manages human wildlife conflict through a series of projects and finally, UCT is reducing energy consumption through adoption of renewable energy.

S6 and S7 provided research data on the findings of environmental sustainability for UKZN Projects being carried out by UKZN. These projects are: UKZN is promoting Biogas to energy project which promotes renewable energy, UKZN has made itself as a center of research on technology for renewable and sustainable energy research and finally UKZN has implemented a project known as "Freezing for the future" which is research on plant germplasm.

S10 and S12 provided research findings on initiatives being carried out by Wits on environmental sustainability. These initiatives include the following: a commitment towards net zero emissions through onsite renewable technologies, water consumption efficiency and finally implemented a waste management system.

S9 provided the findings on environmental sustainability initiatives by UP. The activities are as follows; UP encourages efficiency in construction to prevent refurbishment costs i.e. through well designed and planned infrastructure, manages energy and carbon footprints e.g. through installation of solar panels, designed and implemented a waste management system and finally, UP undertakes land management and biodiversity through a network of sporting fields and gardens.

4.7.4 THEME FOUR: UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (UN SDGs)

S1 and S2 provided the data for projects being implemented by Stellenbosch university on UN SDGs. S4 provide the data for UN SDGs projects being implemented by UCT. S6 AND S7 provides the data for UKZN and S8 and S11 provides the data for UP and Wits respectively on their initiative for the UN SDGs.

Table 18 below summarizes the number of UN SDGs initiatives that were reported by each university.

Table 18 UN SDGs initiatives being reported by SA HEIs

NAME OF UNIVERSITY	NUMBER of SDGs
STELLENBOSCH UNIVERSITY	17
UNIVERSITY OF CAPE TOWN	17
UNIVERSITY OF PRETORIA	12
UNIVERSITY OF KWAZULU NATAL	8
UNIVERSITY OF THE WITWATERSRAND	6

Source: own compilation

Table 18 above shows that SU and UCT are doing relatively well compared to the other universities as they are reporting on all the seventeen UN SDGs. The University of the Witwatersrand reported the least for their initiatives on UN SDGs as it was found that only 6 out of the seventeen goals were reported by them in the period 2022 to 2024. The specific projects/initiatives being undertaken by the universities are summarized in the data collection table in Appendix 4 of this study.

4.8 COMMON RESEARCH PATTERNS ANALYSIS AND LINK TO THE STUDY

Common patterns have been determined by the researcher from the general themes of the research. For example, in the financial sustainability theme, it was discovered that most universities are reporting on patterns bordering on the following common patterns; revenue

diversification for the university, cost management, endowment growth, seek external funding and pursue corporate governance.

Common patterns identified in the social sustainability initiatives being reported by the universities include the following common patterns: community engagement, sustainability in education research, partnerships with local communities and health and well-being of the university's community.

Common patterns identified in the environmental sustainability being reported by the universities included the following: pursuit for renewable energy, research on climate change, waste management and finally water conservation management.

Furthermore, the study also analyzed the common projects being reported by the universities on the UN SDGs. As reported in table 18 above, UCT and SU reported on all the seventeen UN SDGs while, UP, UKZN and UW reported on only 12, 8 and 6 UN SDGs initiatives respectively. The following patterns were identified from the findings in Appendix 4 below as being the common patterns being reported by the universities and they include the following; enhancing access to education through bursaries and new study centers on UN SDG 4, access to clean and safe drinking water on UN SDG 6, promotion of renewable energy on UN SDG 7, staff development and training on UN SDG 8 and finally promotion on innovation i.e. through projects on UN SDG 9.

4.9 FINAL DATA SYNTHESIS

From the data analysis, it can be concluded that UCT and SU are doing relatively well compared to the other universities with respect to reporting on their initiatives to achieve the UN SDGs. In addition, UCT and SU have made progress in producing separate reports on their activities on UN SDGs, which shows commitment to achieving the goals.

However, despite having these reports, most of the activities are strategies that they wish to achieve, thus this could be misleading as most of the information listed in the reports have not been achieved. This seems to agree with the findings highlighted in the literature review as well as chapter one of this study that most universities and organizations in South Africa merely produce reports as a means of satisfying a requirement or as a public relations strategy.

Thus, a gap in knowledge is quite evident that greater effort must be undertaken in the future to report more on projects being undertaken and not simply targets that the universities wish to achieve on sustainability.

Another determination that was encountered by the researcher in the process of analyzing the data was the lack of quantifiable data on the financial benefit of implementing sustainability initiatives by the universities.

Finally, the researcher identified the lack of comparison in the reports with industry benchmarks. The reports analyzed in this study simply reported what the universities in question are doing on specific sustainability aspects or what they wish to achieve in the future. The Universities did not make any efforts to benchmark their initiatives with other universities that are doing well in the reporting of their sustainability initiatives.

4.10 SUMMARY

This chapter outlined a sample size of twelve sustainability reports regarding sustainability reporting by South African HEIs. Thereafter, the coding process followed, resulting in the output of the data analysis. The data analysis produced four major themes which were analyzed to find common patterns among them. Finally, a final synthesis of data was conducted to make sense of the data analysis and to link the data found with the information highlighted in chapters one, two and three.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter introduced the research data collected, followed by the analysis and synthesis of the data. The purpose of this chapter is to provide recommendations and conclusions based on the findings in Chapter Four. The chapter will begin with a summary of the answers to the research questions formulated in chapter one. Thereafter, conclusions and recommendations will be made on the results for future research on the topic. Therefore, this chapter will link the previous chapters together to provide a conclusion to the study.

5.2 SATISFYING THE RESEARCH OBJECTIVES AND QUESTIONS

The primary objective of this study is to systematically review sustainability reports of South African traditional universities. To attain this primary objective, three secondary objectives were developed in chapter one.

Research questions were also developed in chapter one and the answers to these research questions are presented in table 19 below.

Table 19 Research Questions answered

RESEARCH QUESTION	ANSWER FROM RESEARCH	FOUND IN
RQ1	a) Financial sustainability Identified by the common themes in table 11. b) Social sustainability Identified by the common patterns identified in table 12. c) Environmental sustainability Identified by the common patterns in table 13. d) UN SDGs	Chapter 4
RQ2	a) SDG number 4 Enhancing access to education through bursaries and new study centers. b) SDG number 6 Access to clean and safe drinking water. c) SDG number 7 Promotion of renewable energy initiative d) SDG number 8 Staff development and training initiatives. e) SDG number 9	Chapter 4

RESEARCH QUESTION	ANSWER FROM RESEARCH	FOUND IN
	Promotion of innovation initiatives.	
RQ3	a) All universities under study are reporting on their sustainability initiatives through their annual reports and sustainability annual reports. b) Some universities i.e., UCT and SU have gone the extra mile to produce separate reports on their sustainability initiatives with regards to the UN SDGs.	Chapter 4

Source: Own compilation

Table 19 above shows the three research questions that were formulated in chapter one. The table also provides answers to the research question and the specific location in chapter four of the study where the questions were answered in the data analysis chapter.

In table 20 below, the objectives of the study are identified, and a discussion follows on how they were achieved in the study.

Table 20 Research objectives satisfied

OBJECTIVE	FOUND IN	HOW THE OBJECTIVE WAS MET
Primary Objective	Chapter 4	The objective was reached through; sampling twelve sustainability reports and systematically analyzing them to identify key themes, findings of previous research and finally identifying topics for future research on sustainability reporting.
RO1	Chapter 4	a) Chapter two identified key concepts related to sustainability being financial, social and environmental sustainability and the UN SDGs. b) Chapter 4 linked key concepts identified in chapter two to the results of this study and analyzed the data obtained to provide conclusions and recommendations on the findings.
RO2	Chapter 4	This objective was achieved by identifying the UN SDGs related activities being reported by the universities under study which includes UN SDGs number four, six, seven, eight and nine as the most common UN SDGs. Specific UN SDGs were also highlighted in Appendix 4.
RO3	Chapter 4	a) Chapter two analyzed the sustainability reporting in South Africa HEIs by analyzing five articles of current studies conducted in the last ten years. b) Chapter four also identified and provided recent data from five sustainability reports of this study.

Source: Own compilation

Table 20 outlines the three research objectives that were formulated in chapter one of this study. In addition, the table also highlights how the objectives were achieved including the specific answer through the data analysis in chapter four of this study.

5.3 CONCLUSIONS AND RECOMMENDATIONS

The study conducted a content analysis and a systematic review of sustainability reporting at South African traditional universities. The analysis highlighted four major themes of sustainability reporting which are financial, social and environmental sustainability and the initiatives being reported in pursuit of the UN SDGs.

It was found that UCT and SU are doing relatively well compared to other universities under study regarding initiatives being reported on the attainment of the UN SDGs. Furthermore, it was also found that despite the universities producing reports on sustainability, most of the activities being reported in the reports were merely targets set by the universities.

Finally, it was also found that there existed no financial data in the reports highlighting how the initiatives being reported financially contributed to the cash flow of the university. This, therefore, provides a gap in research and an opportunity for further research on the topic of this study.

This study makes the following recommendations.

- a) Since the study focused on a recent period, 2022 to 2024, further research should be replicated covering a large period, i.e. 2014 to 2024. This will provide an opportunity to identify the growth pattern of sustainability reporting in South African HEIs.
- b) This study focused on five universities. Therefore, future research on this topic should be replicated with a wide sample size, i.e. covering different provinces in South Africa and from both public and private universities.
- c) Further research should be conducted on the topic of sustainability reporting with a focus on analyzing the financial benefit of sustainability to the universities.
- d) Universities should adopt a separate reporting framework for reporting UN SDGs.
- e) Future research should also investigate the limits of reporting sustainability since sustainability is a diverse phenomenon.

5.4 LIMITATIONS OF THE RESEARCH STUDY

The research study was limited to twelve sustainability reports between 2022 to 2024. The study was also limited to five universities under study. This therefore means that, if the study

period was increased, and the number of study universities increased, the sample size could have gone beyond twelve thus providing a large pool of data to analyze.

5.5 SUMMARY

This chapter provided the conclusion and recommendations for content analysis and the systematic review on the sustainability reporting at South African traditional universities. The chapter also highlighted how the research objectives and research questions were answered. Finally, the chapter summarized the findings and offered recommendations for future research on the topic. Therefore, this chapter provided a conclusion remark on the information highlighted in chapters one, two three and four above.

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ETHICAL CLEARANCE

NELSON MANDELA
UNIVERSITY

FACULTY OF BUSINESS AND ECONOMIC SCIENCES
DEPARTMENT OF BUSINESS MANAGEMENT

ETHICAL CONSIDERATION FOR HONOURS TREATISE

INSTRUCTIONS

- Should be completed by study leader and student.
- Must be signed off by the student, study leader and HoD.
- Submit completed form to Ms Kim Alexander.
- Please ensure that a summary of the research methodology section of the treatise is attached to this form (*Complete Annexure A*).
- **Please note that by following this ethics route, the study will NOT be allocated an ethics clearance number.**

SECTION A – STUDENT ACKNOWLEDGMENT

- The student acknowledges that their research project is for academic qualification purposes only. As such, the research report or any sections thereof **may not be published**.
- The student also acknowledges that their research project **will be a desktop study** and will **make use of publicly available documents or secondary data**. No human subjects will be involved in the study as primary sources of data.

Secondary data, in this instance, refers to data that was collected and processed by someone else for some other purpose but is now being used by the researcher for another reason (Tripathy, 2013). Research utilising secondary data that both exists and has been collected in a public, academic database, for example Google Scholar, is considered desktop research, and generally does not require full ethical approval (Creswell & Poth 2017).

SECTION B – STUDENT AND RESEARCH PROJECT DETAILS

Student name & surname	Wongani Calvin Kaunda
Student number	227577906
Title of treatise	Sustainability Reporting at South African Traditional Universities
Qualification	BCom Hons (Business Management)
Department	Business Management
Study leader	Dr. Storm Watson

SECTION C – ETHICS CRITERIA

<i>(Please tick the appropriate block)</i>		YES	NO
1.	Is there any risk of harm, embarrassment of offence, however slight or temporary, to the participant, third parties or to the communities at large?		√
2.	Is the study based on a research population defined as 'vulnerable' in terms of age, physical characteristics and/or disease status?		√
2.1	Are subjects/participants/respondents of your study:		
2.1.1	Children under the age of 18?		√
2.1.2	NMU staff?		√
2.1.3	NMU students?		√
2.1.4	The elderly/persons over the age of 60?		√
2.1.5	A sample from an institution (e.g. hospital/school)?		√
2.1.6	Handicapped (e.g. mentally or physically)?		√
3.	Does the data that will be collected require consent of an institutional authority for this study? (An institutional authority refers to an organisation that is established by government to protect vulnerable people)		√
3.1	Are you intending to access participant data from an existing, stored repository (e.g. school, institutional or university records)?		√
4.	Will the participant's privacy, anonymity or confidentiality be compromised?		√
4.1	Are you administering a questionnaire/survey that:		
4.1.1	Collects sensitive/identifiable data from participants?		√
4.1.2	Does not guarantee the anonymity of the participant?		√
4.1.3	Does not guarantee the confidentiality of the participant and the data?		√
4.1.4	Will offer an incentive to respondents to participate, i.e. a lucky draw or any other prize?		√
4.1.5	Will create doubt whether sample control measures are in place?		√
5.	Do you wish to publish any research output (i.e. article) from this study?		√

Please note that if ANY of the questions above have been answered in the affirmative (YES) the student will need to complete the full ethics clearance form (MEOS REC-H application) and submit it with the relevant documentation to the Faculty RECH (Ethics) committee.

The student hereby certifies that he/she has given his/her research careful ethical consideration and full ethics approval is not required.

SECTION D – INFORMATION TO BE INCLUDED INTO THE RESEARCH REPORT

(The section below should be edited and aligned to the specifics of the study)

1. ETHICAL CONSIDERATIONS

This study will follow the ethical research considerations that apply to all research in the social sciences, which are defined as moral rules and professional codes of conduct to the collection, analysis, reporting, and publication of information about research subjects (Pietilä, Nurmi, Halkoaho & Kyngäs, 2020:49). The research will, at all times, adhere to the following ethical considerations:

1.1 Informed Consent

Where data is freely available on the Internet, books or other public forum, permission for further use and analysis is implied, however, the ownership of the original data must be acknowledged (Tripathy, 2013).

1.2 Anonymity and Confidentiality

To ensure privacy and to protect individuals or institutions within the secondary data, a privacy plan or protocol will be in place to protect the confidentiality of the users. This may include removing identifiable information, securely storing the data and removing any sensitive information prior to distribution of the outcome of the study (where needed).

1.3 Action and Competence of Researchers

The study will be undertaken in an ethically correct manner. Under no circumstances would the researcher in this study make judgments about data, falsify data or plagiarise.

1.4 Respect of Intellectual Property

Intellectual property is the creation arising from intellectual activity, and this study will acknowledge and reference all ideas and sources used in the study.

1.5 Beneficence

The study topic being researched is for degree purposes only and will not be published.

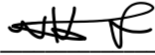
1.6 Non-Maleficence

Non-maleficence makes sure that what is being done is not harmful and that harm is not done by omitting care or treatment. This study will make sure that no harm will come to anyone connected to the study. This body of work and the documents consulted will also adhere to the Protection of Personal Information Act (PoPIA). POPIA governs the collection, processing and sharing of personally identifiable information (PII).

1.7 Applying for ethical consideration

The researcher will apply for ethical consideration from the *Department of Business Management* (Nelson Mandela University) to have the right to research within the intended domain. The research process, in particular data collection, may only be conducted once ethical clearance has been granted, i.e., the ethics form has been signed by the student, the study leader and the Head of Department.

SECTION E – SIGNATURES AND DATES



STUDENT

22/04/2024
DATE



STUDY LEADER

25 APRIL 2024
DATE



HEAD OF DEPARTMENT

25 APRIL 2024
DATE

LEARNING AGREEMENT



FACULTY OF BUSINESS AND ECONOMIC SCIENCES

LEARNING AGREEMENT BETWEEN STUDY LEADER AND POSTGRADUATE STUDENT FOR
BCOM HONS MINI -TREATISE QUALIFICATIONS

The aim of this learning agreement is to provide postgraduate students and their study leaders an opportunity to develop a sound and productive working plan. This document should be read in conjunction with the following Nelson Mandela University Policy documents:

- The General Prospectus
- Faculty of Business and Economic Sciences Prospectus
- University Code of Ethics Policy
- Policy on Intellectual Property
- Promotion of Academic Integrity and Prevention of Plagiarism

These documents are available on the Nelson Mandela University's website (<http://my.mandela.ac.za/default.asp?id=308&IRCno=>)

The Faculty of Business and Economic Sciences requires all postgraduate students and their study leader(s) to complete a learning agreement within **TWO** months of the commencement of the research degree programme. Postgraduate students and their study leader(s) should discuss the issues outlined in this agreement, to have clarity and consistency regarding the conduct of the Postgraduate student and study leader(s).

The postgraduate student and study leader should keep a copy of this learning agreement, including a copy send to Prof Shelley Farrington (Shelley.Farrington@mandela.ac.za).

PART A: DETAILS OF THE POSTGRADUATE STUDENT, STUDY LEADER(S) AND QUALIFICATION

NAME & SURNAME:	WONGANI CALVIN KAUNDA
STUDENT NUMBER:	227577906
QUALIFICATION:	BCOM HONS (BUSINESS MANAGEMENT)
FIRST YEAR OF REGISTRATION:	2024
DEPARTMENT:	BUSINESS MANAGEMENT
STUDY LEADER:	DR STORM WATSON

PART B: ROLES AND RESPONSIBILITIES OF THE POSTGRADUATE STUDENT AND STUDY LEADER(S)**POSTGRADUATE STUDENT:**

As a postgraduate candidate, the student is expected to apply him- or herself to meeting the following reasonable responsibilities.

The postgraduate Student accepts and undertake the following responsibilities:

DESCRIPTION	INITIAL
Complete all the required components of the academic programme as stipulated.	WCK
Plan and execute the research study as agreed to with the guidance of the study leader (and co-study leader, where applicable).	WCK
Ensure that the research proposal (Chapter 1-3) is submitted at the stipulated date.	WCK
Adhere to the principles of accepted safety and health standards, ethical research practice as per Nelson Mandela University Code of Conduct for Researchers (IRC 404.01), Policy on Research Ethics (IRC 404.02), specific codes of the discipline (where applicable) and conventions regarding plagiarism as per Nelson Mandela Policy for the Promotion of Academic Integrity and Prevention of Plagiarism (IRC 305.04).	WCK
Make regular appointments with study leader(s) to update study leader(s) on progress or any difficulties encountered in executing the academic project as planned to ensure timeous remedial action where required.	WCK
Keep written record of supervision sessions and the decisions agreed to.	WCK
Submit regular outputs from the academic project to ensure effective guidance and input by study leader(s).	WCK
Ensure that written work submitted has been proofread and of an acceptable academic standard.	WCK
Ensure that the necessary amendments or revisions decided upon with study leader(s) are made regularly and resubmitted as agreed for further guidance.	WCK
Take responsibility for the final production of the treatise for examination and final submission at specified dates.	WCK
Submit a manuscript to the study leader prior to the time of the approval of examiner reports (for purpose of awarding the doctoral degree).	WCK
The postgraduate student has read all the relevant strategic and policy documents related to their relevant qualification.	WCK
The postgraduate student has familiarised him- or herself with the internet-based plagiarism detection service; Turnitin software.	WCK
The postgraduate student endeavours to partake in workshops and training related to the research project	WCK

STUDY LEADER / CO- STUDY LEADER:

The responsibilities outlined below are reasonable expectations of academics or any other persons who are undertaking the supervision of candidates.

The study leader(s) accepts and undertake the following responsibilities:

DESCRIPTION	INITIAL
Clarify respective roles of student, study leader, and co-study leader (where relevant) to ensure that student and study leader(s) are clear about channels of communication as well as expectations. Preferably such clarification should be contained in a supervisory or learning agreement.	SW
Confer or make contact with the student regularly (minimum once a month) to provide academic guidance to ensure the development of research skills and competencies relevant to the discipline and the specific study, and to ensure adherence to university requirements and/or discipline standards.	SW
Monitor progress of the student and submit reports on student progress as required by the university and by relevant scholarship funding bodies.	SW
Keep a record of supervision sessions and provide feedback, within the timeframe agreed upon, to enable student progress.	SW
Study leaders must maintain an adherence to accepted safety and health standards, as well as ethical research practice as per Nelson Mandela University Code of Conduct for Researchers (IRC 404.01), Policy on Research Ethics (IRC 404.02), specific codes of the discipline (where applicable) and	SW

conventions regarding plagiarism as per Nelson Mandela Policy for the Promotion of Academic Integrity and Prevention of Plagiarism (IRC 305.04) and advise their students to maintain these standards as well.	
Provide the relevant information to the student so that the candidate submits the treatise for examination and final submission on the correct date and format.	SW
The study leader (s) to consult Turnitin report submitted by the student to the internet-based plagiarism detection service; Turnitin software.	SW

PART C: TERMS OF LEARNING AGREEMENT


FREQUENCY OF COMMUNICATION		
The contact details of the study leader (s) were provided to the postgraduate student.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Specify frequency and communication channel for meetings (i.e. telephone, email, face-to-face).	Face to face and online meetings	
In case of the appointment of a co- study leader (s), how will meetings and communication between all be organised?	N/A	
Specify who is responsible for scheduling meetings and how far in advance these meetings should be scheduled.	Student is responsible for scheduling meetings	
Specify the procedure for changing the meeting date and time.	Email must be sent out prior to the meeting.	
Specify frequency and duration of meetings (approx.).	30 – 90 minutes	
Specify who will set the agenda and take notes.	N/A	
Clarify whether there will be any expectation regarding regular email communication.	Student to update study leader every second week on their progress	
Indicate the availability of communication of study leader during period of research and/or ordinary leave.	The study leader will inform the student prior to leave and guide the student on the availability of communication	
List the roles, responsibilities of study leader, co- study leader (s) and student.	As per the module outline	
Comments:		
RESEARCH PLAN / TIMEFRAME		
Specify the research plan and timeframe	Final due date: 30 September 2024	
Specify how changes to the research plan / timeframe will be dealt with.	Via email	
Was the postgraduate student informed of the timeframes?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Specify remedial action if schedule is not adhered to?	Student will be unable to finalise the treatise before due date and will result in the student being unable to graduate.	
Comments:		
SUBMISSION OF WRITTEN MATERIAL AND FEEDBACK		
Specify how often written work should be submitted to the study leader (s).	Every two weeks or as per agreement otherwise	
Specify the timeframe for feedback.	10 days	
Specify remedial action if feedback agreement is not adhered to?	Reported to the treatise coordinator	
ETHICS APPROVAL		
	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
The postgraduate student was informed that all research projects require ethical approval?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The postgraduate student was informed that it is his/her responsibility to apply for ethics?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments:	Form E was completed	
INTELLECTUAL PROPERTY		
	YES	NO
The postgraduate student was informed that all intellectual property resulting from research conducted for postgraduate degrees, including all publications, is governed by the Intellectual Property Policy (IRC 401.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The student was informed that the intellectual property rights resulting from a postgraduate’s research shall vest in the University	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments:	N/A	

The **STUDENT** and the **STUDY LEADER** confirms that:

1. They have read and understood this Learning Agreement,
2. They agree to accept its content for the duration of the study period as per the qualification stipulated above.

SIGNATURES:

Mr Wongani Kaunda Student	
Dr Storm Watson Study Leader	<i>SWatson</i>

DATA COLLECTION

UNIVERSITY	FINANCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	SOCIAL SUSTAINABILITY
SU	<p>University council governs the institution in line with the Higher Education Act.</p> <p>Council ensures accountability as it safeguards assets and investments.</p> <p>Employs integrated sustainability reporting and treats the university as a going concern.</p> <p>Council established and investment committee responsible for ventures such as securing external funding for research and other programs.</p>	<p>Net Zero campaign through projects with students and staff.</p> <p>Environmental, social and governance (ESG) reporting to attract investment in research.</p> <p>17 SDGs as it aims to develop a framework on addressing eight of the 17 SDGs.</p> <p>Water conservation through a current feasibility study being conducted on the Welgevallen dam.</p> <p>Waste and material standards and specific handling document.</p>	<p>Social and business ethics committee which promotes corporate citizenship.</p> <p>Empowering learners in the community through literacy project.</p> <p>Kayamandi river partnership aimed at keeping Stellenbosch rivers clean.</p> <p>7 SDGS i.e., education for all and social and gender justice.</p>
UCT	<p>Identified projects that will enable the University grow.</p> <p>Reviews current investments to ensure alignment with current strategy.</p>	<p>Students receive basic trainings in environmental sustainability.</p> <p>Created a living lab experience aimed at intensifying sustainability related research.</p>	<p>Screening for cervical cancer project in Khayelitsha.</p> <p>Developed effective Covid 19 preventive and treatment measure to help the community.</p> <p>Sustainable wastewater solutions through water treatment hub for the community.</p>

UNIVERSITY	FINANCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	SOCIAL SUSTAINABILITY
	<p>Develops a financial sustainability plan spanning a period of 10 years from 2019.</p> <p>Conducts risk assessments and reports to stakeholders through annual reports.</p>	<p>Committed to ensure that corporate governance becomes part of operations.</p> <p>Manages human wildlife conflict through a series of projects.</p> <p>UCT is reducing energy consumption through adoption of renewable energy.</p>	<p>Gender, Health and Justice Research unit which focuses on research and free consultation.</p>
UKZN	<p>Income generation by increasing the current levels of surpluses.</p> <p>Capital development funded from both internal and external sources.</p> <p>Targeting staffing investments in areas of growth.</p> <p>Strengthening revenue diversification.</p>	<p>Biogas to energy projects promoting renewable energy.</p> <p>Centre of research on technology for renewable and sustainable energy research.</p> <p>Freezing for the future: research on plant germplasm.</p>	<p>UKZN strives to be fully compliant with all laws applicable to HEIs.</p> <p>Introduced a gender-based violence module in order to address physical, mental and emotional development.</p> <p>Increase offer of scholarships to enable economically disadvantaged students have access to higher education.</p>
UP	<p>Recognition of teaching excellence which attracts investors.</p> <p>Stakeholder engagements through partnerships.</p>	<p>Well designed and planned infrastructure to prevent refurbishments costs.</p> <p>Manages energy and carbon footprints e.g., through installation of solar panels.</p>	<p>Tackles low literacy skills at schools by collaborating with local high schools.</p> <p>Living laboratory for societal transformation through training women in home industries thus promoting SGD, quality education.</p>

UNIVERSITY	FINANCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	SOCIAL SUSTAINABILITY
	<p>Diversification of revenue funding sources.</p> <p>International Grants</p> <p>Intellectual Property development and commercialisation.</p>	<p>Waste management system.</p> <p>Land management and biodiversity through a network of sporting and fields and gardens.</p>	<p>Training farmers in the eastern cape satisfying SDGs goals; zero hunger, good health. Decent work and industry innovation.</p>
WITS	<p>Academic and research commercialization.</p> <p>Treating the University as a going concern through asset protection.</p> <p>Diversifying and expanding income streams.</p> <p>Maximising cost-effective resource utilisation.</p>	<p>Net Zero emissions through onsite renewable technologies.</p> <p>Water consumption efficiency.</p> <p>Waste management systems.</p> <p>Replace Universities vehicles with green energy vehicles.</p>	<p>Social justice and addressing inequality in society.</p> <p>Advancing inclusive public health.</p> <p>Research to design technologies for societal advancement.</p> <p>Develop a learning voice on issues relating to the advancement of knowledge in South Africa.</p>

SDG REPORTING

	UCT	SU	UP	UKZN	WITS
SDG1	<p>a) UCT Bertha centre for social innovation and entrepreneurship which provides food kitchens to feed the hungry.</p> <p>b) UCT Postgraduate funding office provides several support options to students i.e., meal allowances.</p>	<p>a) small business and start up support by providing an affordable work space.</p> <p>b) Offers financial support for enrolled students.</p>	“-”	“-”	“-”
SDG2	<p>a) Food parcels to students in need i.e., 500 parcels/month in 2022.</p> <p>b) The nourished child project which conducts research with policymakers.</p> <p>c) The seed and knowledge Initiative research centre working with smallholder farmers to improved and develop sustainable seeds.</p>	<p>a) Food security initiative in place to ensure no student is burdened by food shortages.</p> <p>b) Pantry project where students donate non-perishable food items.</p> <p>c) Southern Africa Food Lab which spreads knowledge on factors affecting farming and food production.</p>	<p>a) Food garden at UP Mamelodi Campus feeds and trains the local community with the aim of raising awareness about the SDGs.</p>	“-”	“-”
SDG3	<p>a) Staff wellness program i.e., independent counselling and advisory services for staff and their families.</p>	<p>a) The move Food Drive which has raised more than R1.4 million since 2018.</p> <p>b) The university has implemented a student's mental health plan to</p>	<p>a) Employee well-being-UP offers dedicated efforts to enhance physical and emotional health and well-being of employees.</p>	<p>a) Has campus health clinics which attends to student and staff emergencies.</p> <p>b) Has a disability support unit which</p>	“-”

	UCT	SU	UP	UKZN	WITS
	<p>b) UCT lifestyles challenge i.e., staff support from a dietician.</p> <p>c) Student wellness offering psychological support for students.</p>	<p>safeguard the mental health of their students.</p> <p>c) SU offers world class sporting facilities and gyms that are open to students, staff and members of the public.</p>		<p>provides disabled students with diverse access to funding and assistive devices, human support and benefit from technology.</p>	
SDG4	<p>a) UCT centre for extra mural studies offer free Saturday summer school outreach program to community members.</p> <p>b) Centre for Innovation in Teaching and Learning offering 23 open access courses online.</p> <p>c) Bridging resource access using open textbooks.</p>	<p>a) SU makes a substantial contribution to bursaries from its annual budget contributing R103 million in 2021.</p> <p>b) Education outreach programmes e.g. The Division for social Impact runs a number of outreaches and education programmes within communities.</p>	<p>a) Enhancing capability and providing support for academic success e.g., providing quality teaching and learning opportunities.</p> <p>b) Student well- being e.g., through student counselling and student health services.</p>	<p>a) Built a new institute for teaching and learning to support teaching quality methods.</p> <p>b) UKZN offers research based teaching to create a transformative student experience</p>	<p>Strives for academic excellence by placing people at the centre, enabling a space for collaboration across disciplines and encouraging innovative ways of approaching the curriculum and knowledge production e.g. diversifying assessment methods.</p>
SDG5	<p>a) Building a cohort of black women researchers in human evolution studies.</p> <p>b) Local Government Women's Leadership Development Programme which supports women in council to enhance their leadership capacity.</p>	<p>a) Discrimination and equality policies unit which implements SUs policies on unfair discrimination and harassment.</p>	<p>a) Women in agriculture programme which recruits 35 female entrepreneurs from Gauteng each year and trains them.</p> <p>b) Developing women entrepreneurs with the Cherie Blair Foundation for women</p>	“-”	“-”

	UCT	SU	UP	UKZN	WITS
	c) Support for women in STEM by offering scholarships.				
SDG6	<p>a) Fertilizer producing urinals at UCT research developed.</p> <p>b) Stormwater ponds for sustainable and water resilient cities.</p> <p>c) Khusela Ikamva project-creating a no drop wasted campus.</p>	<p>a) SU ensures that all students have access to safe drinking water.</p> <p>b) SU management is involved in establishing special water stations across their campuses to provide safe drinking water.</p> <p>c) new buildings are constructed in way that minimises water use i.e., using the Green Star building practices.</p>	<p>a) Sustainable water uses i.e., rainwater harvesting project.</p> <p>b) Waste management i.e., upgrading of the compost production facility on the Hillcrest campus thus reducing cost of transporting garden refuse to landfills.</p>	“-”	<p>Conducts water consumption audits for all buildings to identify areas of inefficient consumption and any leaks that need to be investigated e.g. rainwater harvesting and ground water and waste water treatment</p>
SDG7	<p>a) Building Capacity in emerging markets through infrastructure investments.</p> <p>b) Energy systems research group that combines a modelling of energy and economic systems to impact policy of South Africa and the region towards a net zero future.</p>	<p>a) SU supports expansion of renewable energy by funding and conducting research using new technology.</p> <p>b) SU is transitioning to renewable energy sources i.e., led light bulbs and motion sensor lights which reduces energy use.</p>	<p>a) Managing energy and carbon footprint i.e., installation of photovoltaic panels to improve energy and increase utilisation of renewable energy.</p>	<p>a) completes key feasibility studies relating to shared savings schemes for water, waste and energy services.</p> <p>b) Utilisation of renewable in a technical assessment considering campus wide solar installations to offset rising energy costs.</p>	<p>a) Maximising renewable power generation technologies</p> <p>b) Deploying transition power generation technologies e.g. gas generation</p> <p>c)Introducing energy storage technologies</p>

	UCT	SU	UP	UKZN	WITS
				c) A project for inverter battery storage systems was initiated to provide energy security.	
SDG8	<p>a) Supporting and expanding South Africa’s informal economy.</p> <p>b) Ensuring decent livelihoods in post-mining economies i.e., a project to remediate degraded mining land and produce bio-products from the land.</p> <p>c) The labour market intelligence research programme which establishes a credible institutional mechanism for skills planning.</p>	<p>a) SU is committed to the fair compensation of all employees.</p> <p>b) SU provides trainings and career mentorships to improve the economic standing of its surrounding community.</p> <p>c) SU supports the small business academy at SU campus to help grow businesses that in turn stimulate job creation.</p>	<p>a) Staff development and capacity building i.e., supervisory programme to improve managerial and supervisory skills introduced in 2022, with 84 employees participating.</p> <p>b) Employee relations and engagement i.e., UP has adopted an alternative dispute resolution process which is non punitive tool.</p>	<p>The Integrated Talent Management (ITM) aims to facilitate and promote the attainment of institutional objectives through a process of identifying, attracting, nurturing, developing and retaining talent across ukzn.</p>	“-”
SDG9	<p>a) Research contracts and innovation office which protects and patents their inventions.</p> <p>b) African centre for cities hub at UCT that conducts research into issues faced by cities in the Global south i.e., African Infrastructure future conferences.</p>	<p>a) SU contributes to innovation within the University and the wider region by funding start-ups.</p>	<p>a) Innovative teaching i.e., the EMS faculty actively pursues inclusive pedagogies that provide diverse and learning styles.</p>	“-”	<p>a)Development of charging stations in support of electric vehicles and buses</p> <p>b) campus improvements to be more bicycle and pedestrian friendly</p> <p>c) Development of research programmes for</p>

	UCT	SU	UP	UKZN	WITS
					hybrid/electric vehicle or bicycle technology.
SDG10	<p>a) Income comparison tool developed to help people see how income is distributed from the poorest to the richest in South Africa.</p> <p>b) UCT offers support for the next generation of black South African leaders in academia.</p> <p>c) Diversifying the professoriate.</p> <p>d) Inclusive education for children with disabilities.</p>	<p>a) SU admissions policy guarantees that all admissions to study will be considered without any discrimination.</p> <p>b) SU conducts projects i.e., Grad Me which addresses the financial needs of students.</p> <p>c) The disability access policy outlines the university's commitment to providing students with access to learning facilities.</p>	“-”	<p>Enactus UKZN's project, MyDigi Tutor (MDT), launched the NSFAS application programme to assist students from disadvantaged backgrounds in applying for NSFAS funding onsite and online.</p>	“-”
SDG11	<p>a) Addressing urban cities in the global south research hub that conducts research to understand urban cities.</p> <p>b) Recording and preserving cultural heritage through an array of notebooks, drawings and photographs.</p>	<p>a) In 2018, Colesville primary school received an electrical performance certificate thanks to energy saving technology from GreenX Engineering, an SU spin out company.</p>	“-”	“-”	“-”
SDG12	<p>a) Khusela Ikamva: Integrated food water energy project which seeks to develop a campus system based on anaerobic digestion of organic waste.</p>	<p>a) SU's zero waste strategy (2020-2025) outlines their goals regarding waste reduction e.g., a three-bin system on their campus.</p>	<p>a) Destination marketing and tourist behaviour research i.e., developing of marketing management which provides a range of visitor profiles to their</p>	<p>The aim of providing sustainable and affordable animal protein to meet the dietary needs of Africa's growing</p>	“-”

	UCT	SU	UP	UKZN	WITS
	b) Research into construction and plastic waste regulations offering incentives for reducing, reusing pervasive commodity.	b) Food waste from campus is composted and used in the university's gardens. c) Recyclable waste is handled at the recycling facility on the SU campus and sold to processing plants to be reused in manufacturing.	desired experiences thus providing insights into the challenges faced by emerging nations.	population, innovative stem cell and skeletal muscle research emerging from the laboratories of biotechnology plays a key role in releasing chicken meat.	
SDG13	a) African climate and development initiative hub which conducts research and offer trainings to help solve Africa's climate challenges.	a) SU's school for climate studies which conducts research on climate and coordinates curriculum development. b) The centre for renewable and sustainable energy studies provides free resources to school teachers to teach students about renewable energy with the aim of raising awareness.	a) Business schools for climate leadership Africa which aims to make a meaningful contribution towards helping leaders tackle climate crisis.	In response to the devastating floods in April 2022, UKZN developed a community based flood early warning system.	a)Upgrading of the existing recycling facility to increase capacity b)Roll out of appropriate category bins so separation of waste can be done at source
SDG14	a) Fitzpatrick Institute of African Ornithology which developed the approach of using bottles to identify main sources of litter in marine systems.	a) The Kayamandi River partnership is joint project between SU water institute and the local schools where learners are given water monitoring kits.	“-”	“-”	“-”

	UCT	SU	UP	UKZN	WITS
	b) Lies Beek river clean by staff and students	b) The shark safe barrier ltd deals with technology transfer, entrepreneurial support which are eco-friendly methods of separating sharks and humans in the ocean.			
SDG15	A) Khusela Ikamva project which involves monitoring of wildlife and rodents on campus with motion sensitive cameras to better understand UCTs relationship with nature. b) Wildfires: anticipating a global increase of extreme fires project. c) Rediscovering plant species believed to be extinct project.	a) Biodiversity management at SU offering several programs including the limbovane project that has trained more than 13,000 local school learners in biodiversity since its inception.	“-”	“-”	“-”
SDG16	a) Protecting academic freedom by establishing a committee. b) Democratic governance and rights unit working towards access to justice and fair justice systems.	a) SU leads by supporting institutions and conducts research on law e.g. Pro Thuli Madonsela Justice M-plan program which aims to accelerate the end of poverty and to equalise opportunities by 2030	a) Anti-discrimination and social justice policy which offers guidance towards creating a safe and inclusive study and work environment for all people.	“-”	“-”
SDG17	a) Partnering to create sustainable aviation fuels through partnerships with	a) In 2021, SU had 317 partners in 64 different countries and more that	a) UP influences global policy and strategy i.e., the Department of Taxation	Supports unique cultural institutions by working closely	a)Partners with other universities to strengthen the academic project on

	UCT	SU	UP	UKZN	WITS
	<p>Germany’s Helmholtz company.</p> <p>b) Pioneering a mobile TB diagnostic clinic by partnering with the department of health.</p> <p>c) Partnering with local community film makers to develop educational program.</p>	<p>2,900 international students, thus potentially increasing their connections further.</p>	<p>and the African Institute at UP are well recognised for their evidence-informed influence of regional and global policy i.e., in 2022, Pro Anet Oguttu of UP presented a report commissioned by the United Nations.</p>	<p>with the city’s provincial leadership to identify joint cultural partnership such as libraries and museums to create effective bridges between university and the public.</p>	<p>the continent and in the Global south</p> <p>b)Using their campus and academic resources to work with communities to address climate sustainability, inequality, public health and social justice.</p>

AI DECLARATION

GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN WRITING PROCESS –
USAGE DECLARATION

According to Nelson Mandela University's Institutional Position Statement on the use of Generative Artificial Intelligence (D_71_24_ (2024-02-07), the following are considered recommended uses and unacceptable uses of AI by students and staff.

Recommended uses:

- Search engine
- Enhancing understanding
- Gaining insights
- Gathering information
- Clarifying concepts
- Critically evaluating information

Unacceptable uses:

- Copy and paste generated intellectual work.
- Claiming a generated product (text, image, creation) as your own.
- Generating information for assessments, projects, and assignments, unless this is explicitly instructed by the academic, who has provided clear guidelines in the form of permissions and prohibitions as to the appropriate use thereof as part of an assessment designed around the use of AI.
- Used for unfair advantage – when you are determined to deceive and do not use something in an appropriate manner.
- Making use of AI and not appropriately referencing the sources represented in the generated text, image and/or other product.
- Makes use of AI and does not ensure that the sources represented in the generated text, image and/or other product are accurate and represent the actual work of existing sources.
- Generating information via AI that may or may not represent the intellectual work of another person, people or AI and thereafter making further use of AI to disguise this information and then present it as one's own.
- When you do not follow permissions and prohibitions provided in assessment guidelines.

- When you are not transparent about its use, do not reference and acknowledge your sources.

Student declaration:

During the undertaking of preparing and writing this mini treatise,

I Wongani Calvin Kaunda, with student number


227577906, declare that I have not used AI in an unacceptable manner as described by Nelson Mandela University's Institutional Position Statement on the use of Generative Artificial Intelligence.

I further declare that I have used ChatGPT in order to assist in identifying key literature topics related to sustainability reporting at HEIs in South Africa. The prompt used was: "Research paper topics on sustainability reporting at HEIs in South African".

The output from ChatGPT was used as a starting point for exploring key potential research topics on the literature. I reviewed the generated content critically and conducted additional research through sourcing the relevant research papers published in reputable academic journals, to develop the arguments of my paper in the literature section.

I also acknowledge that I am ultimately responsible and accountable for the contents of this mini treatise.

SIGNATURE STUDENT:



DATE:

14/10/2024

[**NOTE**: Students must declare in their mini treatise the use of AI and AI-assisted technologies in the process of writing their treatise by completing this declaration statement. This statement must be included as an Appendix/Annexure in their mini treatise. AI and AI-assisted technologies do not include basic tools for checking grammar, spelling, references etc. Should AI and AI-assisted technologies not have been used in the process of writing, *not applicable (N/A)* can be entered where the NAME of the AI and the REASON used is requested. Using AI and AI-assisted technologies in their mini treatise without completing this declaration amounts to academic dishonesty. Students should note that the use of AI is detected by Turnitin and in addition to this declaration a Turnitin report is required as an Appendix/Annexure to their mini treatise.