Doctoral student attrition in Namibian higher education institutions

by

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DECLARATION

I, Esther Nuuyoma, Student Number: 17130574, declare that the thesis, which I hereby submit for the degree Doctor of Philosophy in Education Policy Studies at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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FACULTY OF EDUCATION
Ethics Committee

RESEARCH ETHICS COMMITTEE

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- Informed consent/assent,
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ETHICS STATEMENT

“The author, whose name appears on the title page of this thesis, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that she has observed the ethical standards required in terms of the University of Pretoria’s *Code of Ethics for research and the policy guidelines for responsible research*”.

DEDICATION

I dedicate this research to my late parents, **Johannes Iipinge Nuuyoma** and **Roswitha Muulyothina Ndemugwedha.** You were both anxiously anticipating my success with bated breaths, and I have no doubt that you would have been overjoyed to see me graduate as Dr Nuuyoma. May your dear souls continue to rest in eternal peace.

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ABSTRACT

The attrition of postgraduate students is a major concern researched on a global scale. This study aimed to investigate and analyse the factors contributing to high attrition rates among doctoral students at two selected higher education institutions in Namibia. Student integration theory provided a framework for this study. The study employed purposive and snowball sampling techniques to select participants. Semi-structured interviews were conducted to gather qualitative data from a sample of twenty-three doctoral students enrolled between 2013 and 2019. Data collection also included documents on the policies of the two institutions. Thematic data analysis of the interview data set revealed four primary themes. These themes include factors that lead to doctoral attrition, implications of delayed doctoral degree completion, experiences with institutional policies, structures and strategies and retention strategies for reducing doctoral attrition.

The study found that timeous completion of doctoral studies is hindered by various research supervision issues, including lack of support and feedback, limited knowledge of students' research topics, strained supervisor-student relationships and the heavy workloads of supervisors. Based on these, this study proposes potential strategies for retention that could limit attrition and encourage persistence toward attaining doctoral degrees. The study argues for the introduction and implementation of a Memorandum of Understanding to be agreed upon between students and supervisors. Additional factors that significantly hinder academic achievement include the added pressure of personal, work and family responsibilities and lack of financial resources. Therefore, the study recommends that a university postgraduate office be formalised with free and accessible student counselling services.

Doctoral students attributed the lack of interest and commitment shown by policy-makers, researchers and prospective participants in their studies as a contributing factor to attrition. The analysis of institutional policies revealed that, notwithstanding these documents' well-crafted and comprehensive nature, the implementation process by university authorities responsible for higher degrees is deficient. The study cautions that the poor state of doctoral education in Namibia as demonstrated by the high attrition of students will persist unless the government and universities work together to support its 2030 vision. The study recommends that legislators

should involve university managers and postgraduate students in policy formulation to enhance understanding, effective implementation and improved throughput rates.

Keywords: Attrition, doctoral students, doctoral studies, dropout, higher education, retention

LETTER FROM THE LANGUAGE EDITOR

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05 October 2023

LANGUAGE AND TECHNICAL EDIT

Cheryl M. Thomson

Doctoral student attrition in Namibian higher education institutions

Esther Nuuyoma, Student Number: 17130574

This is to confirm that I, Cheryl Thomson, executed the language and technical edit of the above-titled Doctoral thesis in preparation for submission to the University of Pretoria for assessment.

Yours faithfully

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LIST OF ACRONYMS

AAU	Addis Ababa University
AfDB	African Development Bank
ARWU	Academic Ranking of World Universities
AU	African Union
CHE	Council on Higher Education
CoP	Communities of Practice
CREST	Centre for Research on Evaluation, Science and Technology
ETSIP	Education and Training Sector Improvement Programme
EUA	European University Association
HEIs	Higher Education Institutions
ICT	Information and Communication Technology
ISCED	International Standard Classification of Education
IUM	International University of Management
KEs	Knowledge Economies
MBEC	Ministry of Basic Education and Culture
MHETI	Ministry of Higher Education Training and Innovation
NCHE	National Council for Higher Education
NDPs	National Development Goals
NHSEY	Namibia Higher Education Statistical Yearbook

NQA	Namibia Qualifications Authority
NQF	National Qualifications Framework
NUST	Namibia University of Science and Technology
OECD	Organisation for Economic Co-operation and Development
PhD	Doctor of Philosophy
PoN	Polytechnic of Namibia
SADC	Southern African Development Community
SDGs	Sustainable Development Goals
STEM	Science, Technology, Engineering and Mathematics
THE	Times Higher Education Index
UN	United Nations
UNAM	University of Namibia
UNESCO	The United Nations Educational, Scientific and Cultural Organisation
USA	United States of America
UWN	University World News

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"The function of education is to teach one to think intensively and to think critically. Intelligence plus character–that is the goal of true education."

-Martin Luther King Jr-

1.1 Introduction

The fundamental aspect of education is to endow individuals with the capacity to engage in independent thinking and arrive at well-reasoned judgments. The above quote suggests that the scope of education ought not to be restricted to the mere acquisition of knowledge but should encompass the cultivation of cognitive abilities that empower individuals to critically scrutinise, assess and synthesise information. From an academic perspective, individuals deemed to possess the capacity for advanced reasoning have attained the highest level of education, specifically at the doctoral level.

Concerns about the high rates of non-completion of research higher degrees and the protracted duration required to complete these degrees have been raised by various authors, as far back as the 1980s in countries such as Canada, the United Kingdom, the United States and Australia (Haksever & Manisali, 2000; Lovitts & Nelson, 2000; Martin et al., 2001; Elgar, 2003). Nevertheless, the global trend towards augmenting the output of doctoral degrees and introducing measures to reform masters and doctoral programs has been observed since the 1990s (Nerad, 2011). This assertion indicates the considerable interest that this phenomenon has generated among academics and policymakers alike. This particular phenomenon has been attributed to various factors, including the growing demand for highly skilled professionals in the knowledge economy, the need for research and innovation to address complex societal challenges, and the desire to enhance the competitiveness of higher education systems in the context of globalisation. Nerad's (2011) viewpoint highlights the importance of higher education institutions (HEIs) prioritising the creation of a supportive environment that encourages research and knowledge production. This can be achieved by ensuring a sufficient number of doctoral graduates is being produced.

Walker and McLean (2013) highlight the crucial role of universities in producing innovative ideas and generating knowledge that can improve the quality of life and

address societal challenges. In other words, universities play a significant role in knowledge generation and supporting doctoral students aligned with a vision for the growth and progress of the economy. According to Jowi (2021), several undesirable consequences arise from the inability of institutions to foster a new generation of academics capable of self-regeneration. These consequences include lack of qualified researchers, reduced research outputs, weakened institutional research capabilities and inadequate capacity for universities to effectively address the increasing societal challenges. Consequently, this situation has prompted increased scrutiny and raised pertinent questions regarding the social significance of these institutions. In support of this, McGrath (2010) and Oyewole (2010) highlight that it becomes evident that Africa's ability to capitalise on its potential hinges upon the development of an ideal environment for knowledge production and research. This necessitates the growth of human capabilities that are essential for advancing research and generating knowledge within the continent.

In recent years, there has been an apparent emphasis on the continual discourse surrounding the generation of an adequate number of doctoral graduates, spurred on by the need to address societal issues. However, the attrition of doctoral students is a notable concern in postgraduate education that affects HEIs globally, including those in Namibia. This issue has garnered attention due to its potential impact on academic institutions and the need for sustainable solutions. As such, this study aimed to explore the factors contributing to doctoral student attrition in Namibia and propose potential retention strategies to mitigate this challenge and encourage persistence toward attaining a doctoral degree.

This introductory chapter provides the necessary contextual background pertaining to the research problem. To foster a holistic understanding of the phenomenon within the context of higher education in Namibia, the chapter presents a brief landscape and overview of higher education in the country. The research problem, the purpose of the study, the rationale, research questions and objectives directing the study are also outlined in the chapter. The chapter further presents the rationale for the study, an overview of the research methodology and indicates the ethical considerations of the study. In addition, the chapter also explains the significance of the study definitions of key concepts and summarises the structure and outline of the study.

1.2 Contextual background of the study

The significance of postgraduate education cannot be overstated, as it plays a crucial role in enhancing academic and professional competencies in universities and beyond. This is particularly important in light of the rising demand for doctoral-level researchers in various industries (Motshoane, 2022). One of the targets of the United Nations (UN) Sustainable Development Goals (SDGs) by 2030 is to provide citizens with equitable and inclusive access to quality education that will contribute to their own sustainable development (SDG 4: Quality Education). UNESCO, the specialised agency for education under the United Nations, is tasked with leading and coordinating the Education 2030 Agenda, which plays a vital role in a global initiative to eradicate poverty by accomplishing 17 Sustainable Development Goals by 2030 (Rieckmann, 2017). Goal 4 of the United Nations' Sustainable Development Goals focuses on ensuring equitable and inclusive access to quality education for all individuals throughout their entire lives. According to the UN (2015), it is crucial to consider economic growth, social development and environmental protection when addressing the challenge of ensuring quality education for everyone. In addition, SDG 8 focuses on promoting decent work and economic growth. It recognises the increasing need for highly educated individuals in different industries, highlighting the significance of education and skill-building in driving economic development. The importance of postgraduate education in promoting sustainable development, reducing poverty and ensuring equal access to quality education is emphasised by these SDGs.

Likewise, Agenda 2063 developed by the African Union as a framework for Africa’s development, is a people-centered continental vision with 7 aspirations, each with its own set of goals. Its aim is to bring Africa closer to achieving its development vision by the year 2063. While Agenda 2063 rightfully emphasises the need for inclusive growth and sustainable development, it is crucial to recognise that achieving these goals is not possible without quality education and the establishment of inclusive institutions. One of the specific goals of this aspiration is to foster well-educated citizens and promote a skills revolution, with a strong emphasis on science, technology and innovation (Addaney, 2018). These systems should aim to produce well-educated individuals who possess a deep understanding of their environment and the aspirations for development and these individuals should be equipped with

the necessary skills and knowledge to actively contribute towards the realisation of these aspirations.

In Namibia, the government adopted Vision 2030 in 2004, a document that outlines the country's development programs and strategies for accomplishing its national objectives. Vision 2030 focuses on the following themes to realise the nation's long-term goals:

- Inequality and social welfare;
- Human resource development and institution-building;
- Macroeconomic concerns;
- Population, health, and development;
- Namibia's natural resources sector;
- Knowledge, information, and technology; and
- Environmental factors (Government of the Republic of Namibia, 2004).

The Namibian government aspires to transform from a literate society to a knowledge-based society. The aim is to continuously acquire, renew and apply knowledge to drive innovation and enhance the quality of life for its citizens, as outlined in Vision 2030 (Government of Republic of Namibia [GRN], 2004). As Nerad (2011) posited, natural resources are no longer considered the key drivers of economic growth and maintaining international competitiveness. Instead, in today's global economy, knowledge is regarded as a crucial resource for countries. The realisation of Namibia’s anticipated Vision 2030 is contingent upon producing graduates with doctoral degrees with the requisite skills, knowledge and expertise to propel the economy toward optimal growth and development. However, the issue of doctoral student attrition is becoming increasingly prevalent in Namibia and globally, as existing literature indicates that a significant proportion of postgraduate students, approximately 50%, fail to complete their programs (Council of Graduate Schools, 2017; Golde, 2000). Having said this, it is imperative that HEIs investigate and explore all facets of doctoral education, particularly the phenomenon of doctoral student attrition. Such an investigation is essential for countries to thrive in

knowledge-based economies, inspire, develop and foster a community of scholars with critical mindsets to create opportunities for growth and development.

The expansion of doctoral education has been notable in the late 20th century, coinciding with the massification of higher education and the emergence of the global knowledge economy (Grant et al., 2022; Nerad et al., 2022). One of the key features of the knowledge economy is an increased dependence on intellectual capacity as opposed to physical inputs or natural resources (Bratianu, 2017). Unmistakably, this places a significant emphasis on the necessity for researchers who can think independently and together as think tanks collaborate to contribute to the country's socio-economic transformation. Jellenz et al. (2020) support the argument that the successful implementation of Knowledge Economies (KEs) necessitates the presence of highly skilled and knowledgeable individuals, a dynamic innovation system, and cutting-edge Information and Communication Technology (ICT) infrastructure. This further requires the utilisation of knowledge to drive economic and social development such that the optimal development of these four pillars is crucial for achieving high levels of economic and societal growth.

Given that earning a doctoral degree could be personally and professionally beneficial (Maddox, 2017), most individuals across the academic and corporate world continue to enrol in doctoral programs with the firm belief that education promotes intellectual brilliance, moral rectitude and improved financial earnings and standing. Thus, the majority of these students enter doctoral programs with the full intention of persisting or continuing to choose to complete the doctoral degree (Tinto, 2012). Tinto's line of reasoning is that no one ever decides to enrol in a program with the intention of dropping out. However, it is widely acknowledged and recognised that the attrition rate for doctoral students is high.

Despite the promise of an increased earning potential, the merit of social recognition or the opportunity to seek job security and improved salary negotiations, the phenomenon of doctoral student attrition has emerged as a prevalent topic of discourse in contemporary educational institutions, nationally and globally, owing to a multitude of critical issues. Attrition is commonly referred to as the antithesis of retention (Morison & Cowley, 2017). Within this study, the term "attrition" refers to students who either did not complete their doctoral degrees within the designated

period of their candidature term or who withdrew from their studies before graduation. A considerable body of existing literature on doctoral studies indicates that a substantial number of doctoral candidates encounter difficulties in completing their studies and ultimately withdraw from the program before obtaining their degrees (Beck, 2016; Cakmak et al., 2015; Caruth, 2015; Shariff et al., 2015). Several studies depicted the pursuit of a doctoral degree as a phase characterised by high levels of stress and uncertainty for students, as well as subject to alarming rates of attrition, with an estimated 50% of doctoral students discontinuing their studies (Laufer & Gorup, 2019; Litalien, 2015; Rigler et al., 2017).

In light of studies highlighting the notable attrition rates among doctoral candidates, Duze (2010) and van Rooij et al. (2021) assert that even among those who complete their degrees, the vast majority take longer than expected. This argument is corroborated by Ampaw and Jaeger (2012), who found that 41% of doctoral candidates in the United States successfully obtained their degrees within seven years, whereas 57% of them took up to 10 years to complete their doctoral studies. This finding suggests that individuals pursuing postgraduate degrees face various challenges throughout their academic pursuits. Stevens et al. (2023) agree with this assertion by affirming that doctoral students face various unanticipated challenges, few distinct milestones and only minimal assurance of success.

Numerous global studies have extensively documented the considerable challenges associated with the pursuit of a doctoral degree, particularly those about research supervision (Roach et al., 2019), financial constraints (Hurt et al., 2022; Botha, 2018), time constraints, family obligations, inadequate support and the impact on or absence of interpersonal relationships with significant others (Herman, 2011). Other significant challenges that doctoral students could face include the quality of institutional resources (Abiddin et al., 2013), feelings of isolation (Ali & Kohun, 2006) and stress (Lovitts, 2002). The subsequent chapter of this study provides a comprehensive elaboration on these factors.

In addition, numerous scholarly research suggests that effective supervision plays a crucial role in facilitating the timely graduation of research students (Jara, 2021; Masek & Alias, 2020). This assertion is in line with Bastalich's (2017) study, which critically reviewed several selected higher education journal articles on doctoral

supervision published in the past 20 years within the UK, Australia, Sweden and the Netherlands on the production of knowledge, specifically focusing on the content and context of doctoral supervision literature. The study revealed that in the current era of higher-degree massification, the quality and efficiency of doctoral supervision play a crucial role in facilitating the transition from factor-driven to knowledge-driven economies. Bastalich (2017) further asserts that the generation of novel knowledge in the context of doctoral studies is perceived to stem from an individual's developmental aptitude, which is most effectively nurtured through interpersonal connections, with supervision being the foremost among them.

In a related study, Ndayambaje (2018) investigated the impact of supervision on the timely completion of doctoral programs and identified three supervision issues that hamper the timely completion of doctoral studies. These issues included limited interaction between supervisors and supervisees, insufficient technical guidance provided by supervisors and poor or delayed feedback from supervisors. Ndayambaje further asserts that supervision is fundamental to doctoral education due to several challenges that students encounter throughout their academic journeys, including inadequate information and guidelines and insufficient knowledge of the research topic and methodology.

The empirical evidence presented in this study indicates that the attainment of a doctoral degree is constrained by a multitude of obstacles, which pose significant hindrances to achieving timely graduation. It can be inferred that the high attrition rates among doctoral students have adverse effects not only on the students themselves but also on HEIs and the country as a whole. This trend has the potential to result in a notable deficit of research and new discoveries, which could have contributed to both the social and economic spheres.

In Namibia, the country's poor doctoral degree attainment has attracted a lot of attention. For example, in his 2016 spring graduation speech at the Namibia University of Science and Technology (NUST), the President of Namibia, Dr Hage Geingob expressed his concern that Namibia has a low percentage of academics with doctoral degrees, low investment in research and development and low industry-academic collaboration (New Era Newspaper, 2016-10-18). The President's argument is pertinent in light of Namibia's Vision 2030 goal of becoming one of the

developed KEs. The realisation of this vision is contingent upon Namibia's capability to produce intellectuals who possess a propensity for critical thinking and the ability to facilitate development in all its aspects.

To attain the high skills demands of an emerging economy, serious interventions should be considered to increase the number and quality of doctoral graduates in the country. Without solid research focused on knowledge generation and education at the doctoral level, the Namibian government's envisioned goal is almost impossible to attain within the set timeframe of 2030. Therefore, doctoral studies are essential in responding to a country's economic needs through increased knowledge development that promotes innovation and long-term development. Since doctoral students are the next generation of academics and researchers, more research on their experiences and ways to prevent attrition is essential. Thus, this study aimed to investigate the reasons for doctoral student attrition, and its impacts and suggest potential retention strategies to enhance the timely completion rates among doctoral students at HEIs in Namibia. The study was based on the underlying assumption that addressing this issue would benefit the broader landscape of higher education.

1.3 Overview of the higher education landscape in Namibia

Namibia is situated on the western side of Southern Africa, surrounded by the Atlantic Ocean on the west, Angola on the north, Zambia on the northeast, Botswana on the east and South Africa on the southeast. The landmass of Namibia is approximately 824,292 km^2. The country is the world's second least populous nation in terms of population density (after Mongolia), with only 2.5 million people. Windhoek, located in the country's central region, is the country's capital city. Figure 1 illustrates Namibia with its neighbouring countries, international borders, national capital city Windhoek, province capitals, cities, villages, roads, railroads and major airports.

Figure 1. Map of Namibia showing regions and neighbouring countries

Source: Digital Atlas of Namibia (2001)

After the country gained independence in 1990, the government decided to make English the official language, even though only a small fraction of Namibians spoke English as their first language (Ferris, 2017). However, according to the Ministry of Basic Education and Culture (MBEC) Language Policy of 2003, the Namibian national languages also comprise Oshikwanyama, Oshindonga, Otjiherero, Silozi, Setswana, Thimbukushu, Rikwangali, Rumanyo, Ju|'hoansi, Khoekhoegowab (Nama/Damara) and Afrikaans. It is important to note that many teachers in Namibia were trained in either Afrikaans as a first or second language during the colonial era and as a result, introducing English as a medium of instruction posed a new challenge for the education system at that time. The policy statement *"Education for All"* paved the way for significant improvements in education transformation in Namibia (Ministry of Basic Education and Culture, 1993). Notable is the recognition of quality higher education as a critical component of achieving the long-term development goal in 2030 (Iipinge et al., 2020).

That being said, the Namibian population had a low level of education and many unskilled workers. As such, education became a priority in the country's new constitution only after it became independent in 1990. Following its independence, there was a significant demand to expand access to education at all levels to redress the neglect of the provision of quality education during the colonial period (Ministry of Education and Culture, 1993). In 2013, the World Bank's Knowledge Economy Index revealed that Namibia is ranked 89th out of 145 countries and was the 5th knowledge-driven economy in the African continent, with Mauritius leading at 62, followed by South Africa at 66, Tunisia at 81 and Botswana at 85 (World Bank, 2012).

Public higher education is mainly provided through two public universities, the University of Namibia (UNAM) and the Namibia University of Science and Technology (NUST). Established by the UNAM Act (Act 18 of 1992), UNAM started with 3 639 students in 1992 (National Council for Higher Education, 2021). To address the educational demands of a varied society throughout the country, UNAM maintains 12 campuses and 9 regional centres offering programs and carrying out research activities across all 12 National Qualifications Framework (NQF) fields of learning. Enrolment increased significantly from 2000 onwards when 19 506 students were admitted in 2014, of which 137 were accepted in doctoral programs.

Currently, UNAM is the country's largest university, with over 30 000 students enrolled, has an overall score of 3.5 stars according to student reviews on Study portals and is ranked 601 in the world by Times Higher Education. UNAM is ranked 1st in the country, 55th best on the African continent, and 102nd globally by Cybermetrics Lab (2018) of 11 994 institutions. UNAM is the only Namibian HEI listed in the Times Higher Education Index. With this status, the university has tremendous potential to contribute to human capital development capacity building.

On the other hand, NUST was established by the Polytechnic Act (Act 33 of 1994) and transformed into the NUST Act (Act No. 7 of 2015). NUST started with 2 938 students in 1994 as the Polytechnic of Namibia (PoN) and was granted university status only in 2015. The university focuses on the Science, Technology, Engineering and Math (STEM) fields which are offered in 4 out of 6 faculties (National Council for Higher Education, 2021). The university has campuses in Windhoek, Enhana and

Luderitz and centres in other regions of the country. NUST had 50 enrolled doctoral students in 2021 (Namibia University of Science and Technology, 2021).

Besides the two public institutions, Namibia has only one accredited private university, the International University of Management (IUM). IUM was established in 1994 as the Institute of Higher Education and was accorded its university status in 2002. It offers management, entrepreneurship and innovation programs, education and nursing science. The university caters to over 13 000 students at its four campuses in Windhoek, Walvis Bay, Nkurenkuru and Ongwediva. IUM had a total of 55 enrolled doctoral students in 2021 (International University of Management, 2021).

At present, UNAM, NUST and IUM are the only three HEIs with university status and stand out most prominently in the landscape of higher education in Namibia. Even though both these universities currently enrol students at doctoral levels, this study was conducted only at two of these institutions because of their long history of having been granted university status in the country. This research was prompted by the fact that despite having HEIs that have been accorded university status in the country for quite some time now, after more than 30 years of independence, the country is still experiencing low doctoral graduate outputs every year.

Upon closer examination of the education systems, as per the findings of the Education and Training Sector Improvement Programme (ETSIP) (Government of Republic of Namibia, 2007), it has been discovered that the standards of education in Namibia are below par and are not adequately contributing towards the establishment of a knowledge-based economy. However, Namibia's education and training system bia has been identified as a crucial mechanism for equipping individuals with the necessary skills to transform the country into a knowledge-based society, as outlined in Vision 2030. Therefore, it is imperative to carry out such a study for Namibia to generate a sufficient number of doctoral graduates who possess the ability to propel a knowledge-based economy similar to that of developed countries.

1.4 Research problem

The issue of low completion rates in doctoral education continues to be a persistent concern, and its implications for building the generation of academics are significant.

In Namibia, one of the objectives of the ETSIP is to improve the quality of education by responding to the call of Vision 2030 and facilitating the transition to a knowledge-based economy (Government of the Republic of Namibia, 2007). Consequently, Namibian HEIs are tasked with training, promoting human capital growth and development and providing essential skills to enable the government to accomplish its objectives. According to the literature, obtaining a doctorate is highly challenging (Hurt et al., 2022; van Rooij et al., 2021). As a result, the attrition rate for postgraduate studies, particularly doctoral programs, is estimated to range from 40–50% in many countries (Herman, 2011), including Namibia, an African country recognised for its growing academic landscape and significant commitment to higher education. For this reason, there has been an increasing focus on the issue of doctoral student attrition recently, with researchers attempting to understand and establish the factors that contribute to doctoral candidates prolonging or discontinuing their studies.

The current study focuses on Namibian HEIs, where the attrition rate of doctoral students remains a prominent concern, notwithstanding increasing yearly enrolment figures. Despite the government's efforts to enhance the output of postgraduate students in the country, the percentage of individuals graduating with doctoral degrees each year remains significantly low compared to the number of students enrolling in doctoral programs every year, as reported by the National Council for Higher Education (NCHE) in the Namibia Higher Education Statistical Yearbook (NHESY) of 2019. The NHSEY statistical data from 2013 to 2019 reveal that a mere 92 out of 1058 students were able to complete their doctoral program within the seven-year timeframe.

Furthermore, the NCHE is tasked with promoting a coordinated higher education system, promoting quality assurance and facilitating access to higher education institutions. To meet this requirement, NCHE carries out regular surveys at the national level to assess the status of graduates. The survey findings from 2012 to 2015 reveal a concerning trend of low doctoral graduate outputs in the country. For example, Namibia's doctoral degree attainment among doctoral graduates was low, with only 0.13% in 2012, 0.2% in 2013, no data was available for 2014 and 0.15% in 2015 (National Council for Higher Education, 2016). This completion rate of doctoral candidates at HEIs in Namibia is considerably inadequate, indicating a significant

dearth in the successful attainment of doctoral degrees. Thus, it is imperative for higher education policies to implement measures to support institutions and doctoral students alike, to enhance completion rates amidst the annual surge in enrolment.

Despite research indicating that individuals undertaking doctoral studies are often high-achieving and accomplished students, the completion rates for doctoral programs are indeed a cause for concern (Wollast et al., 2018). This argument suggests that HEIs are responsible for meticulously scrutinising the academic qualifications and personal characteristics of candidates to ensure a rigorous selection process. If this is the case, why do most doctoral students abandon or take too long to complete their studies? Are there any developments that take place after enrolment that lead them to abandon their studies or take too long to complete? What is the underlying reason for their withdrawal? Do HEIs play any role in students' decisions to withdraw? What measures are HEIs implementing to mitigate a high attrition rate among doctoral students? These inquiries contributed to the rationale for me to conduct this study.

The current shortage of doctoral awards in Namibia and the potential for expansion at the doctoral level have not been adequately documented or given sufficient attention in research, and as a result, there was comparably little research on doctoral student attrition in the Namibian context when this study was undertaken. For Namibia to achieve its anticipated Vision 2030 of cultivating a nation capable of generating novel knowledge, possibly aided by doctoral graduates, within the ultimate goal of improving the country’s socio-economic standing and joining the knowledge-based economies, it is important that HEIs in Namibia understand the potential challenges that may impede the realisation of this aspiration.

This study, therefore, aimed to address this gap and focused on establishing a sense of understanding of doctoral student attrition at HEIs in Namibia. The empirical research methods used made it possible for this study to explore various ways in which HEIs in Namibia could increase the number of doctoral graduates and enhance the number of doctoral scholars employed at the HEIs, thereby improving research outputs and policy support for postgraduate studies. It was anticipated that the study's findings would potentially inform and contribute to the transformation of HEIs

by adopting possible retention strategies to address the prevalent issue of doctoral student attrition in Namibia and beyond.

1.5 Purpose of the study

The purpose of this study was to investigate and analyse the factors that contribute to the attrition of doctoral students at HEIs in Namibia. The study aimed to identify the challenges that hinder the timely completion of doctoral programs that could result in attrition and further assessed the broader impacts of delayed graduation on students, their communities and the HEIs. It hopes to utilise the rich data collected and analysed to make recommendations that will inform policy on how to improve the attrition of doctoral students at HEIs in Namibia.

1.6 Research objectives

The main objective of this study was to explore and analyse the factors that contribute to doctoral student attrition at HEIs in Namibia. To accomplish this, the researcher conducted a series of interviews with doctoral students who exceeded the minimum duration of their studies and were still persistent in pursuing their academic goals. The purpose of this study was to gain a better understanding of the factors that contribute to prolonged doctoral studies or the withdrawal from the program. Furthermore, the study aimed to identify potential strategies for addressing this problem.

In addressing the main research objective, the following sub-research objectives were explored:

1. Firstly, the study aimed to investigate the factors contributing to doctoral student attrition at HEIs in Namibia and to relate them to the existing literature and higher education policies to determine if significant disparities need to be addressed.

2. Secondly, the study employed Tinto's (1993) student integration theory, which emphasises the significance of the belongingness of students as a study motivator. Thus, this study aimed to explore how doctoral students perceived their institution's policies, procedures and strategies aimed at supporting their academic success. This would highlight any gaps that need to be addressed.

3. Thirdly, the study aimed to evaluate the effectiveness of current policies, procedures and strategies in addressing doctoral student attrition.

4. Lastly, existing literature in higher education demonstrates that a multitude of doctoral students face several underlying challenges. This study aimed to develop potential retention strategies to enhance the successful completion of doctoral studies.

1.7 Primary research question

Research questions encompass a wide range of topics, but most are focused on participants' sense of understanding and social life in a specific context (Mohajan, 2018). To achieve the research objectives, the following primary research question was addressed:

What factors cause attrition among doctoral students at higher education institutions in Namibia?

1.7.1 Research sub-questions

The following sub-questions were used to delve more deeply into the primary research question:

1. What are the reasons for the attrition of doctoral students at Namibia's Higher Education Institutions?
2. How do doctoral students experience their institution’s policies and strategies aimed at supporting the successful completion of their studies?
3. How do existing policies address the issue of doctoral student attrition?
4. What strategies would help doctoral students to successfully complete their studies?

1.8 Rationale for the study

The preceding discussion suggests that the issue of attrition among doctoral students has drawn significant attention worldwide. This study was stimulated by the lack of existing research and literature at a national level, coupled with the uniqueness of the research subject being investigated in the Namibian context. Namibia's aspiration to become a developed nation is contingent upon an effective education system that

produces the required human resources necessary to increase productivity and develop a knowledge-based economy (Government of Republic of Namibia, 2007). Thus, the country's expenditures on education, enrolment rates and educational institutions are steadily increasing (Kandjaba, 2018). This necessitates the production of a good number of individuals with doctoral degrees to drive the growth of the country's economy. According to Motshoane (2022), attaining a doctorate is associated with acquiring and generating higher-level knowledge. Leaders and policymakers at Namibian HEIs must therefore be attentive to cautionary signals such as declining doctoral graduates. This study aimed to address this knowledge gap by providing an evidence-informed understanding of the factors contributing to doctoral degree attrition so that the findings may assist Namibian policymakers and university managers to reflect on how to strategise better and support postgraduate students.

Furthermore, being a doctoral student myself, I found this investigation to be poignant and constructive because, as a born Namibian, I desire to see my country fulfil its higher education ambition and targets. Investigating factors that contribute to the attrition of doctoral students in the Namibian context, I found it advantageous to be able to give back to my country through a small contribution to knowledge on how Namibian HEIs may enhance, revise, reboot and ensure improved doctoral students throughput rates. The impetus behind this study was to augment the quality of postgraduate education in Namibia and ensure that doctoral students are provided with the necessary support structures and resources to complete their degrees successfully.

1.9 Research methodology overview

This section of the chapter briefly introduces the methodology the researcher utilised for this study. Focus areas include research paradigm, approach, design, target population and sampling, data collection and analysis. These elements are reported in great detail in Chapter 4. Ethical considerations, significance of the study, definitions of key concepts and structure and outline of the study form the last part of this section.

1.9.1 Research paradigm

This study is interpretive in nature as it enabled the researcher to gain an understanding of the meaning or nature of the experiences of others. The focus is on getting to know each individual and how they perceive the world around them. As such, the core principle behind the interpretivist paradigm is that reality is constructed by individuals (Bogdan & Biklen, 1998). The interpretivist paradigm involved social interaction between the researcher and the participants, which enabled data collection on doctoral student attrition from participants who were still actively engaged in their studies or had withdrawn from their studies to gain a deeper understanding of the phenomenon.

1.9.2 Research approach

This study exercised a qualitative approach because it explores and provides insights into real-world problems (Moser & Korstjens, 2017). This approach was explicitly used to gather evidence on what doctoral students say and do that enables them to make sense of their experiences regarding the investigated phenomenon. According to Leedy and Ormrod (2005), the researcher cannot be disassociated from the research participants in qualitative research because most of their data gathering is contingent on their personal interaction with them.

1.9.3 Research design

The study utilised a case study design to gain in-depth knowledge of the investigated phenomenon. Leedy and Ormrod (2005) state that a case study is appropriate for an in-depth understanding of a poorly understood or little-known situation. The design utilised in this study was deemed suitable as it allowed for an in-depth understanding of the personal experiences (Miles, 2015; Pearson et al., 2015) of doctoral student attrition within the Namibian context. In addition, it allowed the data to be generated in the natural setting of the participants (Hamilton & Corbett-Whittier, 2013; Priya, 2021). Moreover, a case study allowed multiple data collection sources and techniques (de Vos et al., 2005).

1.9.4 Target population and sampling

Purposive and snowball sampling was used to identify the target population of doctoral students who had enrolled at two selected HEIs in Namibia between 2013

and 2019 and had not yet completed their studies when this study was conducted. The two HEIs that were chosen were primarily selected due to their reputations as the first HEIs in the country to be granted university status. The study's participants comprised 61 doctoral students invited to participate in interviews, however, only 23 individuals expressed an interest in participating in the study. This sample size is deemed sufficient for a qualitative study but may not be appropriate for generalising the findings.

1.9.5 Data collection

Consistent with the qualitative approach and the case study design, the data was gathered through semi-structured interviews as the main data collection method. According to de Vos et al. (2005), using semi-structured interviews enables the researcher to pursue interesting revelations that emerge during the interviews while also allowing participants to provide a comprehensive depiction of their feelings and opinions on a given subject. The second step involved the analysis of official institutional documents, such as policies, procedures, and annual reports, among others. Due to the sensitive nature of the research subject matter, the institutions hesitated to disclose the identities of potential participants to the researcher. Consequently, with the support of the Registrars at both institutions, electronic messages were sent on behalf of the researcher to doctoral candidates within their respective systems, soliciting their voluntary participation in the study.

1.9.6 Data analysis

Data were analysed using Clarke et al. (2015) six-phase qualitative analytic approach of thematic analysis. To identify themes and narratives, the information from semi-structured interviews and document analysis was carefully examined. The literature and the data collected from the participants were compared to confirm the study's trustworthiness and credibility. Data from semi-structured interviews and document analysis were triangulated to determine any similarities or contradictions and similarities or contradictions, data from semi-structured interviews and document analysis were triangulated. Data from semi-structured interviews and document analysis were triangulated to identify any similarities or contradictions. This process allowed for a comprehensive analysis of the data gathered from both sources.

1.10 Ethical considerations

Given that the purpose of this study was to investigate and explore factors that contribute to the attrition of doctoral students at Namibian HEIs, the ethics procedures and protocols of the University of Pretoria were followed. Furthermore, the researcher was granted permission to conduct research at the two selected HEIs by the Ministry of Higher Education, Training and Innovation (MHETI). Permission was also sought from the institutions, and the researcher was provided with Ethical Clearance from each institution. The researcher made every effort to consult with participants via telephone calls and repeated follow-up emails to arrange for interviews. The purpose of the study was made clear to the participants, and they were informed of their right to withdraw from the study at any point if they felt uncomfortable. To maintain anonymity and confidentiality, all individuals who participated in the study used pseudonyms. Chapter 4 of this study provides an in-depth description of the ethical process.

1.11 Definitions of terms

The following terms are key and are explained to clarify the context and meaning of their use in this study.

1.11.1 Attrition

The concept of attrition is multifaceted, and defined differently by various scholars (Adusei-Asante & Doh, 2016). Ascend Learning (2012) described attrition as the act of leaving a program or experiencing a delay in successfully completing it. This phenomenon is also characterised by Gütl et al. (2014) as the decrease in the number of students who initially enrolled in a particular program of study by the program's completion.

Attrition, also known as student dropout, has been identified by scholars as a result of either voluntary withdrawal or academic dismissal. Spandy (1970) offered two operational definitions of college dropout: (1) students who leave a particular college in which they enrolled and (2) students who never receive a degree from any college. Sing's (2015) definition of student dropout includes three different scenarios: (a) institutional departure, where a student leaves one institution to continue their studies at another; (b) institutional stop out, where a student takes a short break from their studies but returns to the same institution; and (c) system departure, where a student

leaves the education system before completing their studies at any institution. The above definitions of student dropout were deemed relevant and applicable to the current study. However, in the context of this study, "attrition" refers to students who did not complete their doctoral degrees within the allotted period of their candidature term or who dropped out of their studies before completion and graduation.

1.11.2 Doctoral degree

According to the Namibia Qualifications Authority (NQA) (2006), a doctoral degree is the most advanced academic qualification conferred within the National Qualifications Framework (NQF). Doctoral degrees usually take a minimum of four years to complete, and the number of NQF credits necessary for fulfilment may differ based on the specific program. The NQA classifies doctoral degrees into three distinct categories. These include a pure research degree, commonly referred to as a Doctor of Philosophy, and a practice-oriented degree, such as Ed. D, and a degree that is based on coursework, examinations and dissertation. All of these doctoral degrees are classified under Level 10 of the NQF.

Furthermore, Bitzer (2016) highlights that attaining a doctorate is contingent on establishing synergy among all the fundamental components of doctoral studies. In the context of this study, a “doctoral degree” is referred to as the most advanced level of postgraduate academic degree conferred by universities to individuals who exhibited exceptional mastery and proficiency in their areas of specialisation. According to the NQA classification, this degree is pitched at level 10 with a cumulative sum of 360 credits on the NQF and requires a master’s degree on NQF at level 9 as part of the entry requirements.

1.11.3 Doctoral education

Doctoral education is defined by the International Standard Classification of Education (ISCED) as an advanced research qualification offered by research-oriented universities in both academic and professional fields and requiring the submission of publishable work that represents a significant contribution to the body of knowledge in a field of study (OECD, 2015). The European University Association (EUA) echoes this sentiment, noting that doctoral education is an individual journey and necessitates structures that support personal development rather than promote uniformity or predictability (AEU, 2010). Thus, doctoral graduates, according to Auriol

(2010), are uniquely trained for research, have attained the highest educational level, and are most qualified to generate, cultivate and disseminate knowledge and innovation.

1.11.4 Doctoral studies

Doctoral studies encompass various fundamental components, including but not limited to generating new knowledge, identifying gaps in existing knowledge, formulating research questions, constructing a conceptual framework, devising a well-defined research plan, selecting appropriate research methods, conducting practical fieldwork, presenting findings clearly and concisely, integrating theoretical perspectives, addressing research inquiries and formulating conceptual conclusions (Bitzer, 2016). The concept of "doctoral studies" in this study pertains to offering advanced research training to students, which entails creating and delivering original research work in the form of a doctoral thesis.

1.11.5 Higher education

Higher education includes a diverse range of institutions of higher learning, such as universities (Alemu, 2018). A university, according to Alemu, embodies the dual identity of being an institution of higher learning and a community of intellectual beings. It promotes high-level research and leads men and women to achieve high levels of intellectual development in the arts, sciences, and traditional professional disciplines. Moreover, it denotes a community of practice actively involved in study and research. Alemu (2018) further explains that a university teaches new generations, preserves and discovers information, and provides talent, ideas, guidance, and challenges to society. A “university” in this study refers to a research-intensive higher education institution offering higher degrees up to the doctoral level.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) defined higher education as a diverse range of educational alternatives intended for students who have completed secondary education, including academic, professional, technical, artistic, pedagogical and long-distance learning. These are provided by universities, technological institutes, teacher training colleges and other institutions with the ultimate goal of acquiring a title, grade, certificate or diploma, which is an outstanding achievement (IESALC, 2020). For this study, “higher

education” refers to education beyond high school, offering qualifications starting from NQF Level 4 to 10, expressly provided by universities.

1.11.6 Retention

It is crucial to have an accurate operational definition of retention, as it is frequently used in both the business and education domains (Mulhollen, 2021). According to Alsharari and Alshurideh (2020), retention in higher education refers to the process universities employ to identify student attributes as variables for monitoring the persistence and success of students over successive academic terms until graduation. In addition, Mason and Matas (2015) defined academic retention as students continuing their education in the subsequent academic year until they have satisfactorily met their academic requirements. In this study, "retention" is used synonymously with "persistence" and refers to the strategies employed by HEIs to increase the number of students who successfully complete their studies, culminating in graduation.

1.12 Structure and outline of the study

This study is organised into seven chapters.

Chapter 1 presents the contextual background for the study. The chapter briefly covers the landscape and overview of higher education in Namibia. The research problem, the purpose of the study, research questions and objectives are provided. This chapter also provides the rationale for the study, an overview of the research methodology, ethical considerations and the significance of the study. Before summarising the chapter, the definitions of key concepts, structure, and outline of the study are clarified.

Chapter 2 provides an overview of doctoral education, followed by its benefits. This study's primary subject, doctoral attrition, is then discussed next. The chapter examines doctorate attrition globally, regionally, and locally. In addition, the chapter discusses doctoral student persistence, supervisor experiences and other factors that contribute to doctoral attrition, as well as retention strategies that reduce attrition. The chapter concludes with gaps identified in the literature that call for future research.

The theoretical framework upon which this study was based is explained in ***Chapter 3***. The student integration theory's key elements are analysed and its relationship in

this chapter, which has three components. The first section explains student integration theory, and the second deliberates on the critique of this theory. Section three addresses how the theory has influenced the current study.

The research methodology that was used to gather data is detailed in ***Chapter 4***. This chapter discusses the research approach, paradigm and design. Additional details on methods used to select research participants, research site, sampling, and pilot study are also described in detail. Data collection instruments, mainly semi-structured interviews and document analysis, are also explained, followed by data analysis procedures and a description of the researcher's role and reflexivity. Finally, the chapter concludes with a synopsis of the ethical considerations that were adhered to during the study and an overview of the measures taken to ensure adherence to the study's quality control and research trustworthiness.

The study's findings are presented and discussed in chapters five and six. The study's research questions guide the reporting and incorporate the concepts emanating from student integration theory. These chapters also present the new knowledge that has emerged from the study.

In ***Chapter 5***, the study presents and discusses the first and second main themes derived from the data. The first theme focuses on the factors contributing to the attrition of doctoral students in Namibian HEIs. The second theme pertains to the effects of delayed doctoral degree completion and its implications for students, institutions and the broader society. The chapter also presents an account of the issues relating to strategies employed by students to cope with delayed completion.

In ***Chapter 6,*** the third and fourth main themes that surfaced from the data are presented and analysed. The third theme pertains to the experiences of doctoral students with institutional policies, structures, and strategies concerning doctoral studies at their respective institutions. The focus is primarily on how these policies, structures and strategies assist students in completing on time. The fourth and last theme from the data focuses on potential retention strategies aimed at mitigating attrition rates among doctoral students, thus facilitating timely graduation. The findings informing a thorough review of the official documents of two selected institutions are discussed in the last part of the chapter.

Chapter 7 concludes the study which includes broad summaries and conclusions about the findings. This is then followed by the limitations and delimitations of the study, the contribution of the study and the researcher's reflective journey. This chapter concludes with recommendations to inform future practice and suggestions for future research.

1.13 Chapter summary

This chapter covered the study's context and provided an overview of the higher education landscape in Namibia. The chapter also addressed the problem that was investigated, the purpose of the study and the research questions and objectives. It also provided a brief overview of the research methodology and ethical considerations, as well as the significance of the study. The chapter also explained key concepts underlying the study and the structure and outline of the study were provided before concluding with the summary of the chapter. The next chapter provides the literature review focusing on doctoral education with specific attention to the attrition of postgraduate students.

CHAPTER 2: LITERATURE REVIEW

“Literature is a comprehensive essence of the intellectual life of a nation.”

-William Shakespeare-

2.1 Introduction

In the preceding chapter, the background of the study and an overview of higher education in Namibia were presented. This was done to provide the context for the research problem, the research questions, and the objectives and significance that guided this study. This chapter presents a comprehensive review of the existing literature on doctoral student attrition, which has emerged as a pressing issue in higher education. The above quote by William Shakespeare implies that literature serves as a holistic embodiment of a nation's intellectual pursuits. This suggests that the written works of a society's researchers are indicative of the collective intellectual consciousness of that society. Hence, this chapter examines the contributions of various scholars and researchers to this field, highlighting important debates, key ideas and findings. Additionally, the chapter identifies specific challenges and gaps in the literature that call for future research.

The literature review is divided into 12 main sections. The chapter begins with a discussion of the historical background of doctoral education, followed by a discussion of the wider benefits of doctoral education. The next discussion looks into the notion of doctoral attrition, which serves as the main focus of interest in this particular study. The impact of doctoral student attrition on academic institutions and individual students is discussed next, followed by an in-depth review of doctoral attrition, exploring the issue from a global, regional and local perspective. The local perspective focuses on the Namibian context, emphasising students whose doctoral studies lasted longer than expected. However, it is essential to consider that relatively little research has been conducted on doctoral student attrition in Namibia. In addition to discussing doctoral student persistence and doctoral students’ experiences with their supervisors, this chapter also addresses factors attributable to doctoral attrition. It explores various doctoral student retention strategies that help limit attrition. The chapter concludes by addressing the gaps in the literature on doctoral student attrition. The key findings from the literature reviewed helped the

researcher to put together a theoretical framework presented and discussed in Chapter 3.

2.2 Doctoral education: A historical overview

The historical roots of doctoral education can be traced back to the 12th century, as evidenced by scholarly works such as those of Cox et al. (2011), Jones (2018) and Ruano-Borbalan (2022). According to Cox et al. (2011), the earliest conferral of doctoral degrees dates back to the 12th century in Paris, where degrees in theology (Th.D.), law (J.D.) and medicine (M.D.) were granted, and the first doctorate in philosophy was awarded at Berlin University in the early 19th century.

The professional doctorate emerged in the United States (US) during the second decade of the 20th century, about the same time as the Doctor of Philosophy (PhD) did in British universities, and was initially intended as a professional degree that granted students the licence to teach within their profession (Jones, 2018). Following that, there has been a significant increase in the number of universities granting doctoral degrees (Maddox, 2017). In the context of Africa, there has been a concerted effort by international organisations including the World Bank, and regional agencies, such as the African Union (AU) and the African Development Bank (AfDB), to revitalise African higher education since the early 2000s, with particular focus on aligning the system with the economic development needs and strategies of national governments (Altbach, 2013).

In recent times, the field of doctoral education has undergone a significant transformation, as indicated by various scholars. The literature has reported a discerning shift in the landscape of doctoral education, which has been characterised by a range of factors, including but not limited to changes in the nature and scope of research, involving expectations of doctoral students and faculty members and the emergence of new technologies and methodologies that revolutionised the way research is conducted and disseminated. As such, it is imperative that scholars and higher education practitioners alike remain attuned to these changes and their implications, to ensure that doctoral education continues to meet evolving needs of the academic and professional communities it serves.

Within the last two decades, doctoral education has experienced a notable transformation due to a range of factors, and the extensive amount of literature

produced annually on this topic presents a challenge for researchers to have exhaustive and critical insights into the topic (Cardoso et al., 2022). Most of the reforms and changes that have been implemented within the past two decades have been in response to challenges, coupled with a drive for innovation and a research workforce that is highly educated and well-informed (Grant et al., 2022).

The current state of internationalisation and globalisation in higher education is characterised by a clear division between a small number of research institutions, which account for only about 1 000 out of the approximately 17 000 universities worldwide in the last decade, and a much larger number of various types of HEIs (Ruano-Borbalan, 2022). Sehoole and Knight (2013) argue that internationalisation has transformed higher education in the last three or four decades and has undergone significant changes itself. Sehoole and Knight (2013) identify three dimensions that define the internationalisation of higher education. Firstly, it involves the mobility of students and teaching staff to other institutions in other countries, with the latter seeking career advancement. Secondly, it encompasses cooperation among HEIs in research projects. Lastly, it encompasses foreign countries establishing branch campuses and providing both distance and face-to-face education. Based on this premise, literature has indicated that the three dimensions are concurrently happening on a global scale in pursuit of enhancing the quality of higher education through internationalisation.

Furthermore, Altbach (2016) highlights that the most prestigious, visible and financially endowed research universities are also the most internationalised. This shows that the global higher education systems are becoming increasingly complex, thus providing intriguing opportunities for growth and development. It is also important to note that, due to globalisation, doctoral education has shifted from merely a gateway into academia to training candidates who aspire to or are already pursuing other professional career paths outside academia (Nerad, 2015). Given the significant importance of doctoral education, particularly in the context of the knowledge economy, it is evident that the involvement of Namibian doctoral graduates can be greatly beneficial. Hence, the current study attempted to investigate and explore the challenges faced by doctoral students at HEIs in Namibia throughout the pursuit of their doctoral programs and identify potential strategies that could be implemented to mitigate these challenges.

In their study, Louw and Muller (2014) assert that the 1990s experienced a surge of interest in the doctorate, a fact widely acknowledged in the field of education. This has prompted a multitude of researchers and scholars to engage in a plethora of investigations in doctoral education (Cloete et al., 2015; Herman, 2011). For example, in 2013, University World News (UWN) published over 30 articles about doctorate education (Cloete et al., 2015). These articles included a wide range of topics, including but not limited to the necessity for an increase or decrease in the number of doctorates, the significance of the doctorate in the knowledge economy, the intense competition for talented individuals, the global mobility of doctoral candidates and the evolving models of doctoral programs.

In addition, the transformation of higher education has brought about new opportunities for growth and development in doctoral education, notwithstanding the indirect impact of massification. This is because doctoral education plays a crucial role in shaping the human capacity necessary to lead information (Molla & Cuthbert, 2016) and knowledge-driven global economies (Cloete et al., 2015; Grant et al., 2022; Nerad et al., 2022). Yang (2022) asserts that knowledge plays a crucial role in economic development, serving both as an input and an output of the economy, which is why economic development is highly dependent on knowledge. This suggests that there are many possibilities for progress and development through the pursuit of knowledge and its application.

The prevalent view is that the attainment of a doctorate is of utmost importance in the production of knowledge. Nevertheless, this viewpoint is not universally embraced since certain scholars argue that the intent of doctoral education is not inevitably oriented toward generating knowledge for the industry. Higgins (2014) argues that the concept of the doctorate as a tool for producing outputs for the knowledge economy suggests that the underlying goal of higher education is to provide the labour market with particular expertise that meets the needs of the economy, thus promoting its growth. This argument posits that viewing the university exclusively as a provider of goods for the knowledge-based economy carries significant potential risks, as it effectively eliminates the diverse range of other crucial roles that the university should fulfil as an institution of public benefit. The argument necessitates a thorough analysis and investigation as it poses significant inquiries regarding the fundamental goal and collective obligation of a university. Furthermore, Boughey and

McKenna’s (2021) study underscores the potential risks linked to prioritising the university's responsibility in promoting economic development, specifically concerning the doctorate. They further argue that a limited concentration on a particular aspect may lead to the university being utilised solely for practical purposes, thereby hindering its potential to function as a place for creativity and social interaction. This assertion emphasises the importance of critically examining the various factors that shape the university's mission and purpose and the potential implications of such factors for the broader society.

Nonetheless, the popularity of doctoral education has been a significant factor in the increase in the number of people with doctoral degrees in some parts of the world. In many countries, this shift was driven by both worldwide and national competition aimed at augmenting the output of doctoral graduates with the ultimate goal of strengthening the knowledge-based economies of their countries. The trend of a significant rise in the number of individuals pursuing doctoral education has been notable since 2000 in several countries, including China, Brazil, Chile, Malaysia, Mexico and South Africa (Grant et al., 2022). Scholars such as Castelló et al. (2017) assert that there has been a considerable increase in the number of individuals who obtained doctoral degrees in Europe, with the number increasing from 72 000 in 2000 to 118 000 in 2011. This denotes a rise of more than 60% within 10 years and exceeds the change experienced in both the United States and Japan.

Similarly, Delamont et al. (1997) report that, between the years 1996 and 2001, there was a 38% increase in the number of doctorates awarded in the UK rising from 10 214 to 14 115 doctoral degree holders. Cloete et al. (2015) also reported an upsurge in the number of countries exhibiting a high level of doctorate production, including Germany, Canada, the United States, and the United Kingdom. The output in these countries has been observed to grow at a rate of approximately 5% or less. By contrast, fast-developing countries have shown a growth rate in doctoral output exceeding 7%. Notably, Mexico and China experienced a substantial increase of 17% and 40%, respectively, as illustrated in Figure 2.

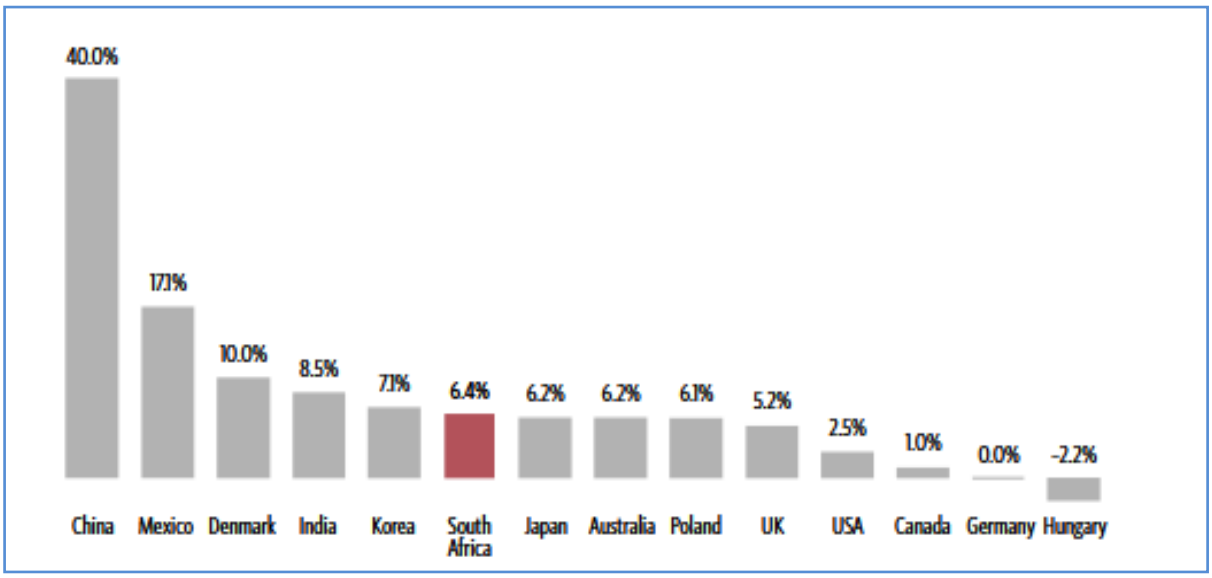

Figure 2. The rise of doctorate: Percentage growth in doctoral output (1998-2006)
Source: Cyranoski, et al. 2011

One of the key challenges faced in doctoral education is the issue of doctoral attrition, which is the primary focus of this study, which is elaborated on in subsequent sections. Doctoral student attrition is widely recognised to have adverse implications for students, academic institutions and the broader society. Ideally, an increase in the number of doctoral graduates is indicative of a nation's capacity for development. However, in Namibia, where this study was conducted, the rate of doctoral completion is exceedingly low and cannot be compared favourably to other countries. This could be attributed to the fact that when compared with other countries, the Namibian educational system is still in its infancy in terms of accessibility, educational quality, university rankings and academic institutions. This means that additional effort is required to augment the number of individuals who are attaining doctoral degrees at Namibian HEIs, to achieve the objectives of Vision 2030, which prioritizes the advancement of a knowledge-based society. The subsequent section below explores the wider benefits associated with doctoral education.

2.3 The wider benefits of doctoral education

It is widely acknowledged within educational settings that a well-educated workforce is a key factor in ensuring a nation's sustainability. The attainment of a doctoral degree is a significant milestone in one's academic journey, and it is widely

acknowledged that it bestows numerous benefits that extend beyond the confines of academia to encompass an individual's professional and personal spheres. This section explores the benefits, both professional and personal, that are associated with gaining a doctoral degree as depicted in Figure 3.

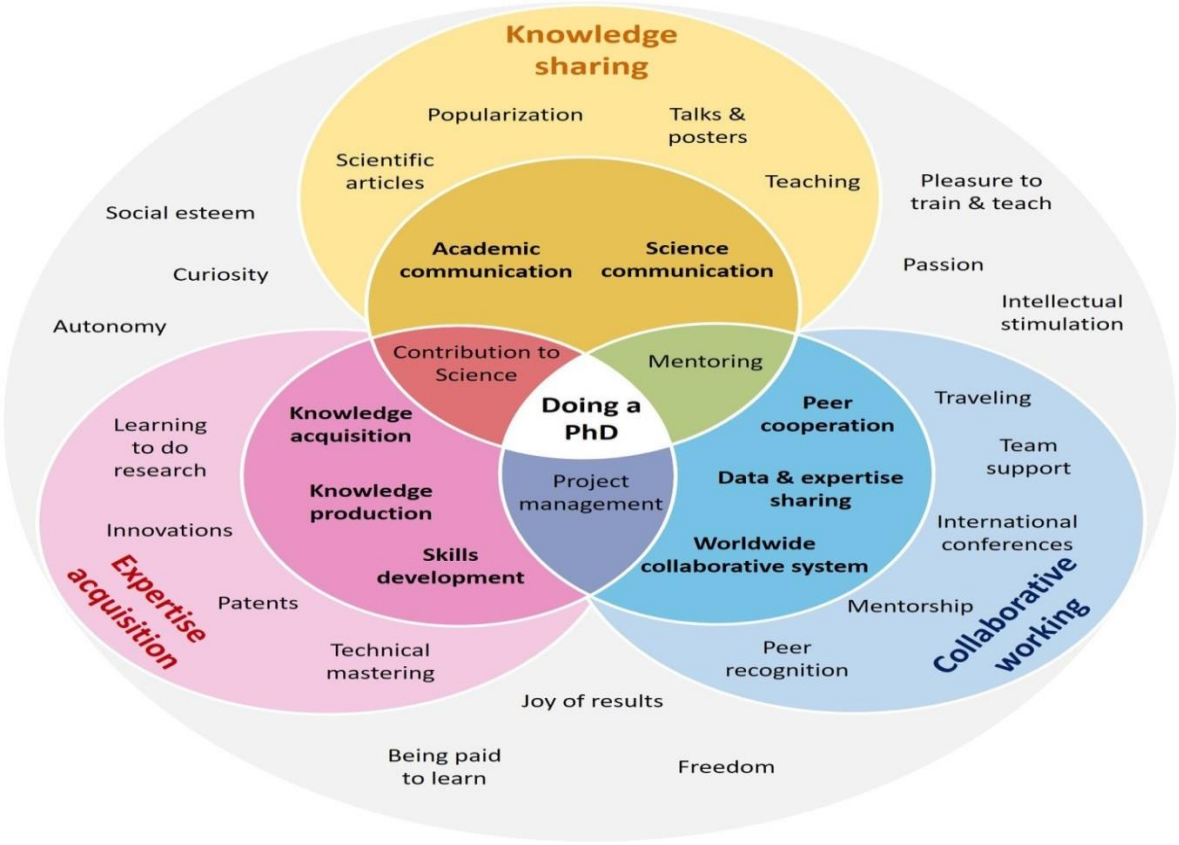

Figure 3. The positive aspects of doing a PhD

Source: Bernery et al. (2022)

(a) Personal benefits

Research has highlighted multiple personal benefits associated with earning a doctoral degree. As can be seen in Figure 3, in the scholarly work of Bernery et al. (2022), the authors discussed the three advantages of pursuing a doctoral degree for the individual.

Firstly, Bernery et al. (2022) argue that one of the benefits of doing a doctoral degree is the attainment of specialised skills that enable one to become an expert in a particular field. They further posit that doctoral students acquire practical knowledge and essential skills required for self-sufficient research through their doctoral pursuits. Furthermore, doctoral candidates attain a comprehensive understanding of their subject matter, while also developing a range of transferable competencies and

engaging in diverse activities. These skills encompass autonomy, critical analysis, efficient organisation, strategic planning, adaptability, project development, leadership, and implementation. Doctoral candidates have the opportunity to dedicate a significant portion of their time to research projects that align with their personal interests. The doctoral experience is characterized by a unique sense of autonomy and self-direction. Regrettably, a proportion of doctoral students fail to benefit from the advantages of or possess knowledge regarding, such independence. Nonetheless, this should be a fundamental goal for all doctoral programs, and all doctoral students should endeavour to attain such autonomy. Attaining a doctoral degree entails a significant and prolonged period of academic accomplishment. There exist several stages in the process, including but not limited to acquiring proficiency in a particular methodology, conducting a sequence of experiments or fieldwork, or finalising the first draft of a written work, and it is imperative for the student to acknowledge and take pride in each accomplishment.

Secondly, Bernery et al. (2022) noted that the attainment of a doctoral degree can enhance an individual's ability to effectively operate within a collaborative setting. Furthermore, according to Bernery et al. (2022), achieving a doctoral degree can improve an individual's capacity to work effectively in a collaborative environment. Doctoral students sometimes engage in alternative projects that can enhance productivity, creativity, and teamwork in a research environment. These projects can facilitate collaborative authorship of scholarly articles as well. A potential method for enhancing one's management abilities is to oversee undergraduate students or recent graduates. Furthermore, academic conferences provide students with a valuable chance to connect with professionals and exchange ideas with peers who specialize in their respective fields. Attending academic conferences has the potential to stimulate new research areas or improve existing methodologies for addressing long-standing research questions.

Finally, according to Bernery et al. (2022), a doctoral degree offers the benefit of enhancing communication skills through sharing knowledge. Effective communication of findings is an essential skill for researchers. As part of their academic requirements, a doctoral candidate will need to present their research to other academics through talks or posters at various meetings and conferences. Thus, the student will begin to learn how to write academic articles. In addition, doctoral

students have numerous opportunities to impart their expertise and enthusiasm for their area of study. These opportunities include mentoring and teaching undergraduate and postgraduate students. Furthermore, individuals have the opportunity to participate in public outreach efforts and make meaningful contributions toward inspiring new interests or educating members of the community on specific subjects.

On the contrary, Auriol (2010) posits that despite the numerous personal benefits associated with attaining a doctoral degree, the pursuit of doctoral studies can be costly and lengthy encompassing expenses related to fees, basic needs and forfeited income. Auriol continues by emphasising that doctoral graduates encounter several challenges after graduation, such as intense competition from fellow graduates and the changing nature of research systems. As a result, several countries contemplated restructuring their doctoral programs to enhance the employability of doctoral graduates, primarily refining their management, teamwork, soft skills and fundraising abilities.

Other scholars also argued that doctoral degrees no longer offer the same benefits as they were in the past. Research shows that not all doctoral graduates can find jobs that match their expertise. Jones (2018) agrees with this assertion by stating that there has been a growing interest in re-evaluating the purpose of doctorate degrees, particularly among employers and students. This has been attributed to various factors, including the fact that opportunities for employment within academe are no longer as abundant or secure as they once were (Grant et al., 2022). Additionally, employers have become more selective as they are looking for specific skills and qualifications that are not included in the traditional doctoral degree; while government and society are demanding a research degree that is more relevant to the needs of business and the growth of the economy. The assertion by Jones (2018) implies that obtaining a doctoral degree no longer guarantees an easy path to a better life, as it is now accompanied by numerous challenges and demands. This may ultimately hinder one's aspirations of contributing to socio-economic development and self-betterment.

(b) Professional benefits

According to Franz (2015), the initial stage of a young researcher's career is shaped by doctoral education and training, which is an important priority for universities globally. In particular, doctoral degrees are designed to cultivate experts in higher education and student affairs administration (Maddox, 2017). The attainment of a doctoral degree results in the creation of a highly competent workforce that contributes to the development of intellectual and economic growth at both national and international levels, through academic and non-academic careers across disciplines (Herman, 2011; Pifer & Baker, 2016). In other words, doctoral graduates are perceived as possessing the capacity to improve the world in various aspects, such as their involvement in the economy, transmission of knowledge and technology and solving societal and environmental challenges. This suggests that individuals with doctoral degrees are recognised as experts in research in their specific areas of expertise owing to their extensive knowledge and experiences.

Literature indicates that with the increasing popularity of doctoral education, a considerable number of aspiring educators and researchers consider obtaining the highest academic accolades as an achievement with potential benefits such as promotion, self-actualization and a range of better career opportunities. Brill et al. (2014) stress that pursuing doctoral studies is deemed significant due to the potential benefits it offers in terms of career advancement, income growth, leadership development and overall improvement of one's quality of life. This resulted in an increasing number of determined and motivated individuals pursuing doctoral studies (Altbach, 2016). This trend can be attributed to the current era, where knowledge is recognized as the primary catalyst for progress in the 21st century. In the case of Namibia, doctoral education has the potential to serve as a pathway in facilitating the development of a knowledge-based economy in line with the objectives articulated in the country's Vision 2030.

Furthermore, Gao (2018) postulates that, in the contemporary world, education credentials are essential for those who seek social mobility by securing prestigious employment positions. Undoubtedly, possessing an advanced degree significantly impacts the job market's competitiveness, as employers prefer individuals with higher degrees over those with lower degrees. Thus, HEIs worldwide have increasingly prioritised the conferral of doctoral degrees due to their growing recognition and

value. Consequently, countries established policies and frameworks to facilitate the training of individuals at the doctoral level to drive the economy through knowledge creation and innovation. As noted by Masek and Alias (2020), the innovations and new knowledge would not be feasible without the contributions of researchers from around the world and as a result, industrialised nations are more advanced in practically every field of knowledge than emerging ones, due to the former's greater number of research personnel.

Sarrico (2022) also explains that some individuals may pursue a doctoral degree program solely for the sake of education and because they enjoy the academic lifestyle. However, over time, they may become less satisfied, less productive, and may be compelled to seek employment opportunities outside of academia that they had not anticipated. The reason for this phenomenon is that individuals possessing a doctorate encounter a dichotomy in their employment opportunities. Specifically, the current labour market is divided into two distinct categories of employment opportunities: those situated within the academic and research spheres, wherein their expertise and competencies are extensively acknowledged and leveraged, and those within the public and private domains, wherein the level of recognition accorded to their qualifications is generally less pronounced (Di Paolo & Mañé, 2016). Consequently, such an event may result in a restricted prospect of obtaining a favourable employment position after the attainment of a doctoral degree.

The following section discusses the notion of doctoral attrition within the context of higher education.

2.4 The concept of doctoral attrition

The literature offers a plethora of definitions of the concept of doctoral attrition, providing a wide variety of perspectives to explore. According to Maddox (2017), the investigation of doctoral attrition presents a challenge that necessitates the researcher to carefully consider the definition of attrition and the ways of accessing students who terminated their doctoral studies. Tinto (1993) also notes that there are still significant gaps in the understanding of the phenomenon despite the considerable amount of scholarly attention devoted to attrition.

Numerous authors attempted to define this concept. Ali and Kohun (2006) define attrition as the number of students, in this case, doctoral candidates who withdraw

from a program before degree completion. In addition, the concept of attrition, as defined by Tinto (2012), denotes a decline in student enrolment from the beginning to the end of a doctoral program, which is observed to occur at multiple stages throughout the degree program. The researcher found neither of these two definitions applicable to the current study and thus, within the context of this study attrition refers to students who either did not complete their doctoral degrees within the designated period of their candidature term or who withdrew from their studies before graduation.

The imposition of fixed timeframes for doctoral candidates to complete their degrees is a widely reported trend (Grant et al., 2022). Although doctoral program enrolment has increased in certain countries, attrition rates continue to be a significant concern, with 40–50% of students leaving their programs (MELS, 2013). Sowell et al. (2015), Cochran et al. (2014) and Golde (2000) all concur that between 40–60% of doctoral candidates do not complete their degrees. Rockinson-Szapkiw (2019) and Cassuto (2013) confirm this by stating that approximately 50% of students who begin a doctoral degree do not complete it, despite the time and effort invested. These assertions are consistent with the findings of Vassil and Solvak's (2012) study, which highlights the growing concern regarding doctoral student attrition rates. In particular, Solvak's study reveals that only 50% of admitted doctoral students complete their studies within the expected timeframe. This low number of earned doctoral degrees adversely impacts institutions and doctoral students who depart before earning their degrees (Caruth, 2015). Consequently, a nation's lack of doctoral graduates hinders the development of research and knowledge creation in a variety of sectors, affecting not only the education sector but also industry, government and businesses.

In addition, despite the significance of doctoral education as extensively reported in the literature, Caruth (2015) and Herman (2011) argue that the issue of attrition among doctoral students has become a growing policy concern and research topic on a global scale in recent years. Botha (2018) argues that there is a growing concern about the standard of graduate studies, the length of time it takes for graduate students to finish their degrees, the success rate of doctoral students, as well as the significant number of doctoral students who drop out of the system before graduating.

Even though certain parts of the world such as the United States, Germany, United Kingdom, India and Japan, among others, are renowned for consistently producing a significant proportion of doctoral degree holders (OECD, 2014), some countries continue to encounter challenges owing to the limited number of doctoral students produced by their institutions. The reason for this occurrence can possibly be attributed to the stringent demands of doctoral programs, which frequently contribute to students either prolonging or abandoning their studies, potentially compromising the quality of education and the international reputation of their academic institutions. Thus, more evidence is required to elucidate the reasons behind the abandonment of studies by certain students, as opposed to others who persist and successfully complete their doctoral degrees.

It is important to note that several students discontinue their studies due to academic dismissal, while others do so voluntarily through withdrawal. Spady (1970) and Tinto (1993) emphasise the importance of distinguishing between students who are expelled from academic institutions due to disciplinary issues and those who voluntarily withdraw. According to Tinto's (1993) estimation, a mere 15–25% of attrition can be attributed to dismissal, whereas the preponderance of attrition is voluntary in nature.

Gordon (2016) posits that institutions may perceive recruitment as a limitless asset that allows them to attract an unlimited number of students; however, the constancy of a linear relationship between the efforts invested in student recruitment and the resultant number of new students that attend or continue with their studies is not uniform. Gordon continues by emphasising that an educational institution that grants admission to a student bears a moral responsibility to facilitate the student's success. Thus, this study anticipated that the administrative personnel in higher education would engage to improve the utilisation of resources and implement measures to guarantee the timely completion of doctoral programs for a maximum number of candidates.

That said, Cuthbert and Molla (2015) posit that the predominant concern regarding doctoral education is inefficiency, which is primarily manifested in higher attrition rates and prolonged time to complete a degree. This issue of doctoral attrition has garnered significant attention within the framework of an evolving global higher

education setting. Empirical evidence has shown that the unfavourable impacts of doctoral attrition have far-reaching implications worldwide. The next section explores the impacts of doctoral attrition on HEIs and on individual students.

2.5 Impact of doctoral attrition

The attrition of doctoral students has been reported to be a serious problem due to its challenging and costly nature (Bair & Haworth, 2004; Beck, 2016; Skopek et al., 2020). This is known to have a significant and challenging effect on academic institutions, as well as on doctoral students, with social, psychological and financial ramifications. From an institutional perspective, attrition adversely affects human and financial investments made toward training doctoral candidates. The high rates of doctoral students who do not complete their programs pose significant challenges for universities, both in terms of competition and financial resources, as a considerable portion of a university's research output is reliant upon the contributions of doctoral students (Horta et al., 2018).

Styger et al. (2015) expressed a similar viewpoint by emphasising that a considerable amount of funding and human resources is being wasted on educating students who will not complete their studies. This leads to wasted time and financial resources due to the candidate's extensive training and supervision (Feldon et al., 2010), as well as loss of competitive advantage (Bourke et al., 2004). Herman (2011) also explains that doctoral attrition incurs costs and consequences, as government bodies, universities and faculties have invested significant time and resources in the students who have discontinued their studies.

Moreover, several studies indicate that the significant rate of doctoral student attrition has a notable effect on an institution's ranking. Thus, the number of doctoral graduates produced by an institution is a significant factor in determining the institution's ranking and the calibre of education it provides. This assertion is corroborated by Shin et al. (2018) who concur by stating that research performance is heavily weighted in the ranking and that competitive research is impossible without competent doctoral students and post-doctoral researchers. Similarly, Cloete et al. (2015) argue that a doctorate is not only a potential contributor to talent in the knowledge economy, but it is also regarded as essential for enhancing university system quality.

In addition, the departure of doctoral students has been observed to also have various effects on individual students. According to Maddox's (2017) argument, a relatively low attrition rate can be healthy; however, various factors can pose challenges for a student who is withdrawing from the program. Failure to complete doctoral degrees timeously can result in heightened levels of stress (Feldon et al., 2010) and may result in adverse psychological consequences such as severe depression or suicidal thoughts (Lovitts, 2001). These assertions suggest that individuals who quit their studies do not simply abandon their aspirations and disregard their inability to complete the doctoral journey. Rather, it appears that consequential effects persist in the lives of individuals after quitting. For example, a survey conducted in Germany in 2019 on 2 500 doctoral students revealed that over 80% showed moderate to severe signs of depression, while almost 63% displayed a moderate to high level of anxiety (Olsthoorn et al., 2020).

Chrikov et al. (2020) report that a study conducted in 2020 by the US GradSERU consortium at the University of California Berkeley, with 8 500 doctoral students from nine public US research universities, found that doctoral students experienced major depressive disorders stress at a slightly higher rate of 38%, in comparison to undergraduates who reported a rate of 35%. Unfortunately, it is common for academic institutions to not pay attention to students who depart, as a significant number of them tend to do so quietly (Maddox, 2017). However, reported findings imply that HEIs need to focus on the mental wellbeing of such students, bearing in mind that in addition to academic support, they also need psychological support to aid them in persisting in their doctoral journeys.

Furthermore, Maddox elaborates that students who withdraw from doctoral programs before degree completion may incur substantial debt. Hardre and Hackett (2015) affirm that as the length of a program is extended, costs increase and financial obligations are incurred. This can be more difficult for those without funding to continue their studies (Holley & Caldwell, 2012), given that insufficient financial support is a significant factor contributing to the highest rate of doctoral withdrawal (Cornwall et al., 2019; van der Haert et al., 2014). Sing's (2015) argument supports these claims by stating that students who withdraw from their academic pursuits not only lose their initial financial investment but also tend to incur substantial debt from borrowed funds, have a greater probability of loan default, and face social

consequences such as reputational harm and a feeling of underperformance. As such, it is crucial to understand the underlying factors that contribute to students prematurely discontinuing their doctoral studies or exceeding the standard length of their candidature. This awareness can help policymakers, leaders of HEIs and prospective doctoral students to identify and address these challenges, thus decreasing the likelihood of high attrition rates among doctoral students.

The next section discusses the trends and issues surrounding doctoral attrition from an international perspective.

2.6 International trends in doctoral student attrition

The following section provides an in-depth review of attrition rates among doctoral students in different countries. This review focuses on doctoral education's historical origins and current status in several developed countries, including the United States of America, Canada and Netherlands. The subsequent examples serve to illustrate the challenges and trends encountered in higher education, specifically in the domain of doctoral education. These countries were considered because they already have high levels of doctoral output that is growing at around 5% or less. Furthermore, the impact of globalisation on doctoral education in these countries is explored in terms of its transformative effects and its ability to reduce doctoral attrition, ultimately leading to improved completion rates at the doctoral level.

2.6.1 The United States of America

HEIs have a long history of over three centuries in North America, as Gao (2018) reported. According to Franz (2015), the United States is a prominent global leader in the attainment of doctoral degrees. This is evidenced by the fact that the country ranks among the top nations worldwide in terms of the absolute number of doctoral degrees awarded, as well as in terms of the relative proportion of its population that holds such degrees. While there are over 400 institutions that confer doctoral degrees, the majority of doctoral education is concentrated within a select number of major research universities that award over 50% of all doctoral degrees in the United States (Franz, 2015). The United States places significant emphasis on graduate education, as it is crucial for fostering innovation, generating knowledge and enhancing global competitiveness (OECD, 2013). The enrolment in doctoral programs increased significantly to 64% between 1998 and 2010 (OECD, 2013) and

it is now the world’s second-largest producer of doctoral degrees after China (Cloete et al., 2015).

Notwithstanding the increasing number of enrolments, previous studies revealed low degree completion rates in doctoral programs across the United States. Recent national averages indicate that 60% or less of students from all disciplines and racial/ethnic backgrounds successfully complete their doctoral studies (Leijen et al., 2016; Posselt, 2018). Throughout the last few decades, literature has documented a persistent trend of high attrition rates ranging from 40–50% in doctoral programs across the United States (Bowen & Rudenstine, 1992; Lovitts, 2001; Sowell, 2008).

Gardner's (2009) survey yielded several findings with policy and practice implications, based on an analysis of student and faculty attrition attributions in high and low-level doctoral programs in the United States. The researcher discovered evidence indicating that the faculty lacked knowledge regarding the specific factors that led to the withdrawal of students from their respective programs. Additionally, the students did not attribute their departure to any shortcomings on the part of the faculty or department. Furthermore, the survey findings indicate that students often impose more responsibility on faculty, academic departments and higher education institutions. According to Gardner's (2009) research, it is probable to anticipate that there will be significant attrition rates among doctoral students unless academic institutions and departments take steps to identify the root causes of student departures from doctoral programs. Insufficient research exists to inform program decisions and policies that may lead to higher completion rates for doctoral programs, as noted by Stallone (2004).

2.6.2 Canada

Williams (2005) posited that the landscape of doctoral education in Canada has been significantly impacted by the phenomenon of globalisation. This multidimensional and complex phenomenon is characterised by several factors, including but not limited to the emergence of the new economy, the growing number of multinational corporations, heightened international mobility, a revolution in communication technology, increased production, and intensified economic competition on a global scale.

The statistical data from Statistics Canada (2014) suggests that there exists a positive correlation between educational attainment and income in Canada. In addition, the research indicates that individuals who pursued advanced degrees, such as master's and doctoral students, are more likely to report that their employment aligns with their educational credentials. The observed 57% increase in doctoral program enrolment between 1998 and 2010, as reported by OECD in 2013, may be deemed as a valid justification for the increase in the enrolment of doctoral programs in Canada. Specifically, there was a significant increase in enrolment in doctoral programs in Canada, between 1998 and 2010, with a rise of 64–57% respectively.

Among the 15 research-intensive Canadian universities (U15) and among students who entered doctoral programs in 2001, 70.6% of students across disciplines took nine years to complete their programs (Tamburri, 2013). Almost a decade spent in a doctoral program is a long time that prevents students from being functioning members of society, advancing their careers and contributing to their families and communities, which leaves them fatigued, depleted and at risk of dropping out.

2.6.3 Netherlands

Mattijssen et al. (2020) assert that the primary motivation for starting an academic career among the majority of doctoral candidates in the Netherlands is their initial passion for research. According to van de Schoot et al. (2013), the completion rate of students in the Netherlands is relatively low, with just 10% successfully completing their degree within the standard four-year timeframe. On average, it takes students five years to complete their degree. Inadequate funding, a prolonged completion process, and a high rate of non-completion have all been identified as challenges in doctoral education in Netherlands (Gunnarsson et al., 2013).

Scholars such as Groenvynck et al. (2013) and Wright and Cochrane (2000) acknowledged and emphasised the importance of financial support in achieving a doctoral degree. However, even in countries known for their progressive approach to doctoral education, like the Netherlands, where most doctoral candidates are granted the status of employees and earn a salary, achieving this prestigious degree within the usual four-year timeframe remains an elusive feat for a mere fraction of individuals. This current trend indicates that it takes longer than expected to complete

a doctoral degree, with an average duration of about five years (van de Schoot et al., 2013). These arguments posit that the availability of funds for doctoral degree completion is not the sole determinant of students' progress, suggesting the presence of additional factors influencing their academic journey. In considering the factors that contribute to student integration within HEIs, it is important to acknowledge the psychological and social complexities and a sense of belonging. Tinto's (1993) student integration theory highlights the significance of these factors, suggesting that they play a crucial role in promoting student success and retention.

In the African context, it is important to note that Molla and Cuthbert (2016) observed that before the discussion on the knowledge economy, African governments were discouraged from investing in their higher education systems for decades. The following section provides an in-depth analysis of the prevailing trends and issues related to doctoral attrition in Africa, with a regional focus on Ethiopia and South Africa.

2.7 African trends of doctoral attrition

This section provides an in-depth analysis of doctoral attrition in Africa, highlighting the experiences of Ethiopia and South Africa. These countries were selected based on the literature indicating that they have been the most prolific producers of doctoral students in Africa and have made significant progress in the field of doctoral education relative to other countries. The examples of issues and trends surrounding the attrition of doctoral students can serve as a model for other African countries to improve their completion rates among doctoral students. This would enable them to contribute to a knowledge-based society, similar to other developed countries that have become integral to knowledge economies due to their significant production of doctoral students.

2.7.1 Ethiopia

According to Tamrat and Fetene (2022), the inception of higher education in Ethiopia dates back to 1950 when the University College of Addis Ababa (now known as Addis Ababa University) was established, making it approximately 70 years old. It has been emphasised that Ethiopia has experienced a significant increase in the production of individuals holding doctoral degrees over the past decade. This growth has been driven by the recognition of the crucial role played by human resources in

catalysing economic development, as well as the institutional demands resulting from the rapid expansion of the country's higher education sector. As noted by Yigezu (2013), Ethiopia's number of PhD graduates, both locally and internationally trained, remained relatively low throughout the entirety of the 20th century, with a total of 4 000 individuals successfully completing their doctoral studies. This evidence suggests that the given situation is relatively deficient particularly when compared to prevailing circumstances in Africa.

A recent study by Fetene and Tamrat (2022) aimed to bridge a research gap and explore the completion rate of doctoral programs, factors influencing degree completion time and the coping strategies of students at Addis Ababa University (AAU) - Ethiopia's premier university found that students took an average of 6.18 years to finish their PhD studies. The study further revealed that the duration of stay among 276 students who completed their doctoral studies in 2020 in 16 different colleges or faculties at the university, ranged from three to thirteen years. Fetene and Tamrat (2022) noted that the AAU's assertion that the quality of its academics and resources needed to run doctoral programs are improving is worrisome, considering the increasing trend of delayed studies. However, their findings from the interviews conducted with doctoral students at the university suggest this may be attributable to the quality of students admitted to the programs.

2.7.2 South Africa

The origins of the doctoral degree program in South Africa can be traced back to the year 1899, when the renowned University of Cape Good Hope, now known as the University of Cape Town, established doctoral programs (Breier & Herman, 2017). The African continent has witnessed a notable increase in the production of doctorates, with South Africa emerging as one of the leading countries. In addition, the country's National Development Plan (NDP) has set forth several recommendations, including the increase of postgraduate students' outputs, with a particular emphasis on the doctoral level. The NDP has further posited that a rise in research outputs is imperative for the higher education system to align with the country's research and development plan, as per the NDP's recommendations (National Planning Commission, 2013). However, it has been reported that the pace of this growth has been comparatively slow (OECD, 2014).

Isike (2018) reports that the prevailing rates of doctoral output in South African universities are generally low, even among academic staff who are striving to get their own doctoral-level qualifications. However, according to the findings of research conducted by the Council on Higher Education (CHE), the length of time it takes students in South Africa to get their doctoral degrees and the high percentage of students who withdraw from their studies before completion is a significant point of concern (CHE, 2022). In addition, Mouton et al. (2015) reported that the doctoral student completion rate in South Africa was 46% in 2014. This shows that there is a need for the betterment of doctoral outputs to be on par with the global average.

The statistics in the CHE report (2022) reveal that data collected from one of the more prominent universities in South Africa, doctoral students who first registered in 2014 for a particular cohort, 19% dropped out after five years. Another university had a 22% dropout rate also over five years. The report further indicates that the dropout rate fluctuates, but it's still high, which is concerning. Few doctoral students are reported to finish in two years, while others might take up to six years for full-time and seven years for part-time studies. The CHE report advises institutions to have strategies and policies that include careful selection of doctoral students, implementing supervisor-student agreements, monitoring student progress, providing adequate supervision, mentoring and supporting supervisors, and managing quality before submitting theses for assessment. The report by CHE serves as a call for action for all stakeholders in the higher education sector to work together in addressing this critical issue and ensure that South African doctoral students are given the best possible opportunity to succeed.

Even though the majority of HEIs have policies and procedures governing the completion term for doctoral students, the majority of them appear to fall short of attaining their goals. Mouton (2007) and Mutula (2009) explained that a doctoral degree typically takes between two to six years to complete, with an average of four years, which is the standard for the majority of HEIs worldwide, including Namibia. In South Africa for instance, the country's total number of doctoral holders reached 34 per million of its population in 2014 (Herman & Sehoole, 2018). Nevertheless, this number is still relatively low when compared to those of other developing countries like Brazil (UNESCO, 2015).

An analogous trend can be found in Namibia, where one of the HEIs selected for this study enrolled a total of 1486 students for doctoral studies from 2011 to 2020. However, only 104 of those students graduated, as indicated in Chapter 1 of this study, which poses questions regarding the factors that may have contributed to the relatively low graduation rate. This points out the importance of investigating the causes of the low attainment rates of doctoral degrees in Namibia, and the necessity of implementing targeted interventions to address this specific problem. This assertion is founded on the premise that the low completion rates of doctoral programs in Namibia may have far-reaching implications for the country's human capital development and could hinder its ability to compete in the global knowledge economy. Therefore, it is imperative to conduct further research to identify the underlying factors that contribute to this phenomenon and to devise effective approaches to enhance the effectiveness and efficiency of doctoral education in Namibia.

A study by Kotecha et al. (2012) revealed that only South Africa and Mauritius have a doctoral qualification rate of above 0.3 PhDs/FTE/year; all the other countries have rates lower than 0.1 PhDs/FTE/year. Similarly, Motseke's (2016) study on reasons for the slow completion of master's and doctoral degrees by adult learners in a South African township revealed that research skills, stress, supervision concerns and employer's workload contributed to the incapacity of adult learners to complete their degrees on time. Likewise, Motshoane (2022) asserts that 50% of doctoral students experience challenges that result in either a delay in completing their studies or dropping out altogether. Motshoane identified multiple factors that contribute to this phenomenon. This includes the fact that in the South African context, a limited number of individuals have an opportunity to pursue full-time postgraduate studies and the expectations of completing such studies within a three-year timeframe pose a considerable obstacle. Thus, only a few make it within the stipulated timeframe for completing a doctoral degree.

In a similar vein, Motseke (2016) asserts that the minimum time required to earn a doctorate in South Africa is 2 years of full-time study and three consecutive years of part-time study; students are not allowed to register for the doctoral degree for more than five years without the special permission of the Senate. However, this seems to be not the case given that most of the students would complete after the 6th year

while some would actually give up on their studies. Skakni (2018) explained that it is not adequate to rely solely on one's intellectual ability to be successful in doctoral studies. It is clear that the majority of doctoral students who do not finish their studies or take too long to finish encounter difficulties that HEIs need to be mindful of and devise strategies to combat these predicaments to increase the number of doctoral graduates produced by any given institution of higher learning. To address this gap, this qualitative study aimed to explore what factors cause attrition among doctoral students at HEIs in Namibia and beyond. The following section explores the trends and issues surrounding doctoral attrition from a local viewpoint, specifically focusing on Namibia, where this study was conducted.

2.8 Local trends of doctoral attrition: Namibia

This section presents a comprehensive overview of doctoral attrition in Namibia. Despite encountering comparable challenges in higher education, Namibia has not been exposed to extensive academic scrutiny. The literature on the phenomenon of attrition among doctoral students was found to be limited and inadequately documented at the time of conducting this study.

The output of doctoral students in some parts of the world where HEIs started way back is reported to be increasing compared to some countries whose HEIs are still in the infancy stage, like Namibia. Namibia’s long-term strategy for industrialisation, known as "Vision 2030," demonstrates the country's aspiration to join the KEs by the year 2030. This objective is evident in the plan's formulation and implementation. An in-depth analysis of doctoral student attrition in HEIs is critical for academics, administrators, policymakers, students and other stakeholders concerned with issues of quality, diversity, learning and transparency in higher education. Most HEIs worldwide have policies, strategies, and procedures in place to ensure that particular objectives are achieved. In contrast to similar settings, the academic setting in Namibia is distinct in that academic research is sparse on the issue of doctoral student attrition, even though the number of doctoral students who successfully complete their studies is significantly low.

According to Jellenz et al.’s (2020) report, the Academic Ranking of World Universities (ARWU) ranked the top 1000 universities globally in 2020, as per the Shanghai ranking. The ranking of universities was determined by evaluating their

educational standards, faculty quality, research productivity and per capita performance. Regrettably, none of Namibia's universities met the criteria to be included in that year's top one thousand universities worldwide. This assertion suggests that HEIs in Namibia face a deficiency in producing an adequate number of doctoral graduates, despite the output of high-quality doctorates, according to Kavei (2022).

While it has been reported that a significant proportion of doctoral students, ranging from 40–60%, do not complete their studies, instances of persistence among this population are also reported. The following section looks at the determinants that contribute to the persistence of doctoral students, culminating in their successful completion of a doctoral program.

2.9 Doctoral students' persistence

To better understand the increasing trend of doctoral students leaving their programs, it is helpful to gain insight into the factors that contribute to the persistence of doctoral students (Maddox, 2017). Such insights have the potential to inform effective strategies and interventions that are geared toward encouraging the retention and success of doctoral students. Studies conducted in the last four decades indicate a low level of persistence among doctoral students (Holmes & Rockinson-Szapkiw, 2020). Doctoral student persistence rates in traditional academic settings range from 40–60% as reported by various authors (Cassuto, 2013; Council of Graduate Schools, 2008; Lovitts & Nelson, 2000). In contrast, distance education persistence rates are typically 10–20% lower than those in traditional education settings (Frankola, 2001; Terrell, 2005). This finding is indicative of a significant disparity between the two modes of education which calls for further exploration and analysis.

The influence of social, cultural and institutional factors in explaining several aspects of the doctoral experience and the likelihood that these experiences will lead to a timely and successful doctoral outcome has received a significant amount of research attention (Cantwell et al., 2015). These factors may be taken into account from both institutional and student perspectives.

The phenomenon of student attrition is found to be associated with academic factors such as quality of teaching, dissertation challenges and program structure (Ruud et al., 2018). Boone et al.’s (2020) study uncovered additional elements that suggest

that faculty members employ various methods to motivate students, including establishing faculty-student relationships, offering personalised guidance, making university resources available and providing clarification on program requirements. The current study elucidates the complex nature of motivational strategies employed by faculty members and underscores the significance of recognizing the unique aspects of these approaches in encouraging student achievement. The multifaceted nature of these strategies, as evidenced by the various elements, points to the need for a detailed and context-specific approach to promoting student success.

Several personal factors are believed to play a role in the persistence of students in pursuing a doctoral degree. In their study, Spaulding and Rockinson-Szapkiw (2012) analysed the factors associated with the persistence of doctoral studies and emphasized the importance of personal factors, such as the motivation behind pursuing the degree, the reasons for persisting and the strategies employed to complete the dissertation. Additionally, they highlighted the role of personal experience, including personal sacrifice, delayed expectations and challenges encountered during the dissertation process.

In a similar study, Boone et al. (2020) investigated the persistence and progression of doctoral students and found that students are motivated by various factors, including support from family, friends and religious beliefs. Furthermore, the study revealed that students persist in their doctoral studies based on the support they receive from fellow doctoral students and faculty members. In addition, Ampaw and Jaeger (2012) and Ruud et al. (2018) noted that the perceptions and expectations of individuals regarding their future employability and potential career earnings can positively contribute to their persistence.

Prior research has also indicated that the persistence of graduate students is influenced by the amount and type of financial assistance they receive (Ruud et al., 2018). Ampaw and Jaeger (2012) analysed data from 2 068 doctoral students at one institution. They found that students with research assistantships are considerably more likely to complete all phases of their doctoral programs than individuals with any other type of funding. This implies that a research assistantship holds the potential of affording doctoral students distinct prospects for participation in research activities,

perfecting critical thinking abilities, and cultivating professional relationships that may serve to advance their academic and career paths.

Prior studies have demonstrated the importance of a relationship between students and supervisors, as noted by Ruud et al. (2018). Golde (2000) conducted a study that investigated the reasons behind the attrition of three doctoral students from their respective programs. The study's findings indicated that the supervision relationships of these students were problematic, which ultimately led to their decision to drop out. Similar to the research conducted by Golde, various prior studies explored numerous factors that play a role in the attrition of doctoral candidates. Notably, supervisory issues are salient. To gain a better grasp of the phenomenon of attrition among doctoral students, it would be beneficial to explore the perspectives of supervisors about their experiences in supervising doctoral students. The section that follows explores the experiences of supervisors in the supervision of doctoral students.

2.10 Experiences of supervisors in the supervision of doctoral students

This section pertains to the experiences of supervisors who have undertaken the responsibility of supervising doctoral students. This issue is of paramount significance as it illuminates the challenges and opportunities that supervisors face when providing mentorship and guidance to doctoral students. The documented prominence of research supervision in the successful completion of a doctoral degree and its potential impact on the persistence of doctoral candidates toward graduation is important to note. Thus, conducting an in-depth review of the experiences of supervisors can yield significant findings regarding the factors that influence the effectiveness of the doctoral supervision process. Therefore, an extensive investigation of the experiences of supervisors is necessary for gaining extensive knowledge of the dynamics of doctoral supervision.

The contemporary era of the "knowledge economy" has led to a surge in student enrolment and an increased emphasis on knowledge as a driver of economic growth. Consequently, there has been a marked focus on postgraduate supervision, as highlighted by Devos et al. (2017) and Motshoane (2022). This trend demonstrates the critical importance of effective supervision in facilitating the acquisition and dissemination of knowledge, particularly in the context of advanced academic pursuits. The study conducted by Jones (2013) revealed that 15% of doctoral

research investigates the relationship between students and their supervisors. The significance of adequate supervision in doctoral education cannot be overstated, as it confers a multitude of advantages to increasing scholars, including but not limited to professional progression, opportunities for creating relationships, enhanced job satisfaction, and high income (Goldman & Goodboy, 2017).

The extant literature has directed its attention toward exploring the experiences of supervisors in the context of their supervision. The study conducted by Lessing and Schulze (2003) demonstrated that students often hold unrealistic expectations and that the supervisor's involvement in their research can significantly impact their success. This assertion posits that the overreliance of students on their supervisors for the attainment of academic success may serve as a hindrance to their advancement.

A similar study was conducted by Akala (2021) and explored various challenges that doctoral supervisors face in their interactions with doctoral students at South African universities. The study's findings indicated that supervisors encounter a multitude of challenges. According to the study, supervisors are often burdened with an overwhelming workload due to the need to manage multiple tasks simultaneously. These tasks may include conducting research, teaching, and administrative duties. Excessive workload can result in burnout and stress, ultimately negatively affecting the quality of supervision provided to doctoral students. The study has also revealed that supervisors often encounter time constraints, which can be attributed to their limited availability for supervision due to other commitments. A rushed approach to supervision and a lack of attention to detail can negatively impact the quality of supervision provided. The study has brought to light that doctoral students possess a wide range of academic characteristics, such as varying academic backgrounds, research interests, and levels of motivation. These differences can present a challenge for supervisors. The implications of these findings are significant in terms of developing effective strategies to address the challenges and maximise the supervisory process.

It is important to note that, despite the number of studies that have documented challenges associated with research supervision that hinder the progress of doctoral students, there are also studies that reported experiences where supervisors of

doctoral students encounter challenges attributable to the students they are supervising. As previously deliberated, a majority of individuals who undertake doctoral studies do that on a part-time basis. The reason behind this is based on the notion that individuals should be provided with a suitable environment that allows them to engage in their studies alongside their demanding jobs and caring responsibilities (Nasiri & Mafakheri, 2015). Henceforth, the challenges encountered in supervising postgraduate students remotely originate from the spatial and temporal distance and disconnection between the supervisor and the student. The timing aspect of the supervisor-student relationship may present a significant obstacle, as the geographical separation between the two parties could potentially extend over vast distances. This could result in difficulties in determining an optimal and mutually advantageous time for engaging in a productive interaction. Thus, it is likely that both the supervisor and the student may encounter a lack of mutual personal understanding. This phenomenon has the potential to shift supervisory discussions towards a more structured framework, thereby impeding the cultivation of a relaxed atmosphere conducive to informal conversations.

Furthermore, as higher education becomes more accessible to the masses, there is a growing emphasis on improving the relationship between students and educators. While this may require some administrative regulation, skill improvement, or emotional management, it presents an opportunity for positive change in the education system (Bastalich, 2017). Many studies have shown that supervision challenges are a hurdle to obtaining doctoral degrees, but with perseverance and support, these obstacles can be overcome. Doctoral supervisors have the opportunity to make a positive impact on the completion rates of doctoral candidates. This has encouraged scholars and researchers to explore the experiences of doctoral supervisors, providing valuable insights into their experiences of supervising doctoral students.

The above discussion conclusively demonstrates that the supervision of doctoral students is a crucial determinant that significantly influences the academic success of students. Notwithstanding the considerable efforts invested in supervising doctoral students, supervisors with previous supervisory experience in this area have identified a range of challenges that impede the successful supervision of these students. In addition to the experiences of research supervisors in supervising

doctoral students, existing literature identifies additional underlying factors that impact the completion rate of doctoral degrees. The following section explores the factors that inhibit the potential of doctoral students to effectively complete their academic pursuits on time.

2.11 Factors associated with doctoral attrition

This section explores the underlying factors that influence completion rates within HEIs, in addition to issues related to research supervision. As previously stated, doctoral education is of great significance due to its role in promoting the development of a knowledge-based society and industrialized nation. As a result, several researchers have undertaken studies on doctoral education in general (Cloete et al., 2015; Golde, 2000: Herman, 2011), uncovering diverse factors that contribute to attrition among doctoral students within HEIs. These factors may force students to either withdraw or extend their duration of studies at the institution. Several factors have been identified as potential hindrances to achieving global success in doctoral degree education. Those include personal, institutional or environmental, psychosocial, and supervision-related factors, among others. The subsequent sections discuss each of these factors.

2.11.1 Personal factors

Several studies have identified certain personal factors that may contribute to lower completion rates among doctoral students. Various factors such as time or financial limitations, family responsibilities, lack of a support system and the impact on or lack of relationships with significant others can impede the progress of students (Herman, 2011). This assertion is substantiated by Sverdlik et al.'s (2018) argument that a considerable proportion of doctoral students attempt to balance their studies with their family and social responsibilities, which entails making challenging decisions regarding prioritisation and allocation of resources.

Furthermore, Abiddin et al. (2013) observed that doctoral program students exhibit diverse backgrounds, levels of preparedness, expectations, motivations and responsibilities. Abiddin and colleagues elaborate that the academic journey of doctoral students often entails accumulating debt, competing for funding, managing demanding program requirements, experiencing isolation, balancing family and employment responsibilities and worrying about post-graduation career prospects

and quality of life. This implies that students are confronted with a multitude of personal setbacks, resulting in an excessive burden of responsibilities that detract from their academic pursuits.

Lack of financial support has been identified as another factor associated with low completion rate towards doctoral studies. In his study, Botha (2018) found that student output at the University of Ghana has decreased over time due to, among other things, financial difficulties. In most cases, doctoral students are working-class individuals with full-time jobs. However, they are required to fund their own studies in addition to their other responsibilities, such as family obligations and other personal commitments.

Thus, the substantial workload that doctoral students undertake is a crucial aspect that institutions must consider to enhance their doctoral completion rates and the satisfaction of their doctoral students (van Rooij et al., 2021).

2.11.2 Institutional factors

According to Golde's (2000) perspective, the reasons behind the departure of doctoral students and the institutional factors that contribute to attrition are subjects of debate, despite the significant number of students who leave their studies. The prevailing perspective posits that students who graduate are deemed "successful," whereas those who do not complete their studies are considered "unsuccessful."

Existing literature has identified institutional factors that may pose challenges to the success of a doctoral degree. In their study, van Rooij et al. (2021) identified the research climate as a crucial factor influencing the intention of doctoral candidates to leave their program. Their study establishes a relationship between research climate and various factors, including experienced workload, the quality of the academic and personal relationships with the supervisor, a sense of belonging and the degree of freedom granted to doctoral candidates for conducting their research project.

Abiddin et al. (2013) observed that many factors contribute to doctoral students failing to complete their studies within a given period and that the primary concern is related to the quality of the institution's resources including access to appropriate equipment and computers (Jones, 2013). Virtanen et al. (2017) assert that the area of discipline or the field of study is a significant determinant of the academic

achievement of doctoral students. Fabian et al. (2013) found that psychology, pedagogy, social sciences, and engineering have the highest doctoral candidate attrition rates, with approximately 25% of candidates leaving each field. Wright and Cochrane (2000) suggest that STEM doctoral students are perceived to have higher success rates than their counterparts in humanities.

Saari and Moilanen (2011) reported that doctoral students in the fields of bio and environmental sciences exhibit lower levels of interest in their studies, lower satisfaction with their postgraduate studies and supervision and a greater chance of discontinuing their studies than their humanities counterparts. Elgar's (2003) research supports the idea that disciplinary area plays a significant role in completing doctoral studies in Canada. The completion rates varied across different fields, ranging from 45% in arts and humanities to 70% in life sciences. It was observed that science completions often fell in the high 60% range.

Bourke et al. (2004) argue that the generally accepted view that doctoral candidates in science disciplines complete their degrees more quickly than those in humanities disciplines should be re-evaluated. This re-evaluation should be based on analysing the relationships between completion times and the Broad Field of Study classification system, which categorises different academic disciplines. The authors expounded that Arts, Humanities and Social Science candidates exhibit a longer elapsed time due to the higher likelihood of them being part-time candidates; however, their candidacy time is not extended beyond that of Science candidates.

2.11.3 Psychosocial factors

To enhance the doctoral experience in its entirety, it is crucial to focus on psychosocial factors such as integration, socialisation and support within the context of doctoral education. This approach can yield valuable insights and contribute to the general improvement of the doctoral journey. According to Tinto (1993), there are two distinct forms of integration in higher education: academic integration, which pertains to formal aspects of the educational experience and social integration, which pertains to informal aspects of the educational experience. Within the doctoral context, academic integration pertains to engaging in professional activities and opportunities, collaborating with researchers, maintaining regular contact with colleagues, integrating into the departmental community and obtaining as well as providing

academic assistance from fellow doctoral students and staff (Bair & Haworth, 2004; Lovitts, 2001). Literature has documented relationships between different aspects of academic integration and the attainment and progress of doctoral degrees (Golde, 2000; Rockinson-Szapkiw, 2012).

On the other hand, social or informal integration is the quantity and quality of socialising with colleagues outside of work and/or over non-academic topics (Golde, 2000). According to Shin et al. (2018), a positive relationship exists between social integration aspects and completion rates, academic progress, and overall student satisfaction. The phenomenon of social isolation can have a notably adverse impact on doctoral students, as evidenced by research indicating a deficiency in positive affect resulting from an absence of participation in rewarding extracurricular activities, which is associated with decreased levels of both intrinsic academic drive and motivation (Tanaka & Watanabea, 2012).

2.11.4 Supervision-related factors

Given the complexity and ambiguity of the research process, the supervisor's role in directing students through unfamiliar territory becomes crucial (Nygaard & Savva, 2021; Zhao et al., 2007). In addition, Roach et al. (2019) argue that graduate-level research supervision has remained a daunting task with low completion rates. This suggests that the role of research supervisors is to guide and support research students throughout their academic journey, thus promoting the development of their research skills and attitudes and ultimately ensuring the production of research of outstanding quality. In so doing, students will have a sense of self-assurance in their research, develop the sense of learning and creating knowledge, and develop research skills needed for their life-long learning.

Roach et al. (2019) investigated the importance of different supervisory functions to Australian postgraduate students and their results revealed the following two factors as important. Firstly, students valued academic integrity, constructive feedback, open communication, and bonding as the most preferred supervisory attributes. Secondly, students preferred supervisors who fostered caring and supportive relationships over those who focused more strictly on instrumental functions. They pointed out the significance of supervisor support as an essential component in the success and contentment of doctoral students and concluded that supervisors and training

programs should prioritise the interpersonal aspects of supervision and attend to the psychosocial needs of students.

Ali and Kohun (2006) contend that during the dissertation phase, students often work alone with only occasional interaction with their advisor or faculty member. They emphasised that this isolation can lead to self-doubt about student progress and the ability to finish the dissertation. This can contribute to the high attrition rate in doctoral programs as students can become confused by the lack of communication between themselves and their supervisors, leaving students to complete the write-ups as a solo project. This could also compromise the quality of research outputs by students given the minimal support supervisors provide. In addition, a study by Lovitts and Nelson (2000) also reported that the relationship with the supervisor fostered the most critical element for completion and that students who finished the program were twice as likely to indicate satisfaction with their supervisors. This is supported by Stock and Siegfried (2014) who explain that higher completion rates are seen among students whose supervisors are not only available but also take the initiative to have regular meetings with students.

Caruth (2015) states that providing students with feedback is essential for learning since it gives a clear picture of what was done successfully, identifies what was not done well and provides constructive comments and recommendations for future work. Caruth further emphasises that the feedback provided by supervisors is essential in assisting doctoral students in developing the skills necessary for academic research. Similarly, Weidman and Stein (2003) argue that the degree to which students are content with academic advising, faculty availability and the quality of their interactions with faculty, doctoral students, in particular, depend heavily on a close working relationship with faculty.

The arguments above do not imply that students should be “spoon-fed,” however, students should be reminded that they are in charge of their research write-ups and should be able to develop into critical thinkers and outstanding researchers. Likewise, supervisors should not assume that their students can become fully self-sufficient and should instead assist them with the necessary research skills to become more independent. According to Sverdlik et al. (2021), since the supervisor's primary goal is to assist the student in developing into an independent researcher, students who

constantly accede to deadlines, prepare for meetings, demonstrate openness and respect for feedback and show their abilities in their work are likely to keep their supervisors satisfied in the working relationship.

According to Inouye and McAlpine (2017), the student's engagement with the supervisor's feedback is crucial to developing a research project and demonstrating a growing scholarly identity. This responsibility is central to doctoral work and allows students to develop critical thinking, written communication, and discipline knowledge with the guidance of their supervisor, as noted by Cardilini et al. (2021). With flexibility, iteration, regular feedback, and constructive criticism, the supervisor can effectively train the student with investigative skills in this teaching-learning process (Deshpande, 2017; Mahlangu, 2021).

The factors mentioned above suggest that earning a doctoral degree is a difficult task without the intervention of HEIs to better the situation. Therefore, HEIS must provide support to doctoral students to facilitate their academic progress and aid them in overcoming the typical challenges that are associated with obtaining a doctoral degree. Consequently, HEIS must acknowledge these challenges and take necessary measures to ensure that doctoral students are well-informed about their role in potentially hindering the efficient and prompt progress of their studies. The subsequent section explores the retention strategies employed by various HEIs, owing to their capacity to enhance graduation rates and diminish doctoral dropout or prolonged studies.

2.12 Doctoral student retention strategies

The issue of doctoral attrition has attracted attention in numerous countries across the globe, prompting strategies aimed at reducing this phenomenon while improving the global success rates of doctoral students. Pursuing doctoral degrees is often troubled with challenges that can hinder successful attainment. However, scholars have identified several key strategies that can be employed to ensure successful completion and reduce doctoral attrition. These strategies have been extensively researched and documented in the literature and are essential for any doctoral candidate seeking to navigate the complex and demanding terrain of doctoral studies.

Lepp et al. (2016) highlight the impact of contemporary economic and educational reforms on institutional performance metrics. The reforms have created a pressing need for institutions to enhance their graduation rates and reduce the average time students take to complete their degrees. The study highlights the significance of these metrics in the current educational landscape and the need for institutions to prioritize them to meet the evolving demands of the education sector. The observed phenomenon impacts the revenue accruing to the institution from the fees paid by the students. Burke (2019) emphasises that the income generated from student tuition and fees is a significant source of revenue for institutions, making it crucial for them to consider the impact of student persistence on their financial planning.

Despite the increasing popularity of doctoral education, many students do not complete their doctoral degrees, and very little information is available about such students in Namibia. Although there is limited research on the phenomenon of doctoral attrition in Namibia, it has been extensively studied in various countries across the globe. According to Thammasiri et al. (2014), researchers have formulated theoretical and analytical and comprehensive models to tackle student retention in higher education over the past few decades. Several scholars and academics have reported on the effective retention strategies employed by HEIs globally. Through the implementation of these strategies, the problem of doctoral student attrition in Namibia's higher education system could be resolved. These strategies are discussed in detail below.

2.12.1 Admission of high-quality doctoral students

It has been suggested that the admission of low-quality students contributes to the attrition of doctoral students (Beck, 2016). Given the significant financial investment universities make in doctoral students, there has been a concerted effort to address this issue by focusing on the quality of students admitted to doctoral programs. It is important to note that the augmented admission criteria have not significantly impacted the attrition rate, as evidenced by the studies conducted by Lott et al. (2010) and Lovitts and Nelson (2000). This proposition implies that the attrition rates, which remain consistently high, cannot be attributed to the quality of graduate students alone.

2.12.2 Personal attributes to successful completion

Given the strenuous nature of the doctoral journey, students must possess the fortitude to persevere through challenging circumstances. Therefore, it is imperative for students enrolled in these programs to possess a high level of self-motivation and determination to persevere through challenging circumstances. According to Devos et al. (2017), a crucial factor in achieving success in doctoral studies is for students to have a clear understanding of the trajectory of their research, including the intended aim and direction of their study, as well as the desired outcomes they hope to attain upon completion. According to these scholars, doctoral students must be genuinely interested in the research topic at hand, as the involvement of supervisors alone may not suffice. Failure to do so often leads to disengagement and eventual abandonment of the research project.

2.12.3 Financial support

As previously indicated, the financial implications have been identified as a significant challenge linked to doctoral attrition. Given the challenges HEIs face in doctoral student attrition, some institutions are now focusing on improving attrition and retention rates by offering financial support, professional development and mentoring programs (Holley & Caldwell, 2012). Nonetheless, despite these interventions, high attrition rates remain within HEIs. This is an indication that institutional policies governing higher education at the doctoral level are not effectively and efficiently implemented.

2.12.4 Improved implementation of teaching and research policies

The intention of any university to offer graduate degrees is to produce high-quality human capital and to foster meaningful economic growth through skilled personnel. On this basis, as argued by Mutula (2009), postgraduate programs, especially at the doctoral level are considered channels through which universities develop research capacity and generate the high-end skills needed for a functioning economy and for addressing complex issues such as the current global financial recession, climate change and poverty alleviation. Hence, HEIS must improve on implementing policies geared towards the success of teaching and research that will alleviate the challenge of fewer doctoral degree outputs within their institutions.

2.12.5 Program support strategies

Hill and Conceição (2020) relate program strategies to the delivery of an effective curriculum and practical support for adult doctoral students. According to Hill and Conceição, the literature suggests that program retention efforts, program characteristics and preparedness, research support, assistance with completing the final project, and social support all contribute to the degree completion of students. Changes involved reducing the time required to finish a thesis, providing specific training to develop competencies related to scientific productivity and promoting interdisciplinary and international mobility.

2.12.6 Supervisors' regular communication with students

Holley and Caldwell (2012) found that students in doctoral programs were more likely to complete the program and were more satisfied when they had meaningful interactions with their advisors. According to Posselt (2018), students have varying expectations regarding the support they receive from their supervisors, which extends beyond purely academic assistance. The scope of challenges doctoral students encounter is extensive, encompassing various areas such as skills in academia, organisational and psychological obstacles, and the planning of present and future professional pursuits (Bekova, 2020). The resolution of these matters exceeds the capacity of a single individual, namely the supervisor. Louw and Muller (2014) support the notion that numerous universities view the supervisor as a mentor to the doctoral candidate, in addition to serving as a research advisor. In this context, a mentor is considered an individual who guides the thesis study, advises on career paths post-graduation, and offers support and advice during difficult times.

2.12.7 Academic and social integration

Lovitts (2002) investigated a sample of 816 doctoral students enrolled at two universities which indicated that 511 of these students successfully completed their degrees, while 305 did not. The study's findings indicate that individuals who completed their academic program exhibited a higher degree of academic and social integration than those who withdrew from the institution before graduation. Lovitts (2002) contended that academic integration holds greater importance than social integration, a notion that aligns with the inherent characteristics of graduate education. According to Tinto's (1998) view, both forms of integration hold

importance; however, academic integration plays a crucial role in determining the persistence of students.

As evidenced by the preceding discussion, this section elucidates that several factors are imperative for attaining a doctoral degree. The above insight can potentially enhance the existing strategies and processes utilised in doctoral programs in Namibia. The following section addresses the gap in the literature on the attrition of doctoral students.

2.13 Gaps in the literature on the attrition of doctoral students

The current study aimed to expand on existing knowledge and provide further insights into the factors contributing to doctoral student attrition. Their research has revealed that a significant proportion of doctoral students, ranging from 40–60% fail to complete their studies successfully (Beck, 2016; Cochran et al., 2014; Herman, 2011; Jones, 2013). Moreover, some individuals tend to take more time than the stipulated timeframe to earn their degrees (Duze, 2010; van Rooij et al., 2019). This study sought to address theoretical, contextual and methodological gaps identified in the literature reviewed. By addressing these gaps, the current study provided valuable insights into this complex issue and proposed practical strategies to reduce attrition rates among doctoral students globally.

Despite a wide range of international research and African studies on doctoral studies, only a limited number of studies have delved into the unique experiences of doctoral students in the Namibian context. In addition, despite the significance of the existing studies in the context of doctoral education, they fail to go deeper into the complex issues surrounding the encounters of doctoral students in implementing policies in Namibia, and thus neglecting to do so could potentially lead to a weakened implementation of doctoral education policies and hinder their success.

Moreover, the present body of literature reveals that the current study on attrition in doctoral education has primarily focused on the challenges faced by part-time doctoral students, which elucidates their heightened attrition rates. Unfortunately, there is a shortage of understanding regarding the challenges encountered by doctoral students who are studying full-time.

The relevance of this study, thus, resides in its emphasis on the Namibian milieu, replete with its unique challenges, and in the review of the HEIs' encounters, all with the aim of enlightening policymakers. Most importantly, reviewing policies in doctoral studies bears a significant potential to reveal the understanding and knowledge of HEIs regarding implementing such policies. It also has the potential to bring to light the areas of underperformance in HEIs' coping mechanisms within an ever-evolving higher education landscape and make valuable contributions to the theoretical underpinnings of doctoral studies, particularly within the unique context of Namibia.

2.14 Chapter summary

In this chapter, the significant findings of reviewed literature on doctoral student attrition in higher education were discussed, citing important debates, key ideas and findings in the current literature, specific challenges and gaps that call for future research. The literature highlighted the historical background of doctoral education, followed by a discussion of the broader benefits of doctoral education. It further discussed the notion of doctoral attrition, which serves as the primary area of investigation for this particular study. The chapter further discussed the impact of doctoral attrition on academic institutions and individual students. It also provided an in-depth review of doctoral attrition, exploring the issue from a global, regional and local perspective. In addition to discussing doctoral student persistence and the experiences of supervisors, this chapter also explored various student retention strategies that may help to limit attrition. The chapter concluded by addressing the gaps in the literature on doctoral student attrition.

The key findings and principal conclusions from the literature led to the theoretical framework, discussed in the next chapter.

CHAPTER 3: THEORETICAL FRAMEWORK

"Facts alone, no matter how numerous or verifiable, do not automatically arrange themselves into an intelligible or truthful picture of the world. It is the task of the human mind to invent a theoretical framework to account for them.

-Francis Bello-

3.1 Introduction

The preceding chapter presented the existing literature on doctoral education, specifically emphasising the attrition of doctoral students encompassing global, regional and local perspectives from various scholars and researchers. However, the mere presence of factual information alone, regardless of how much or how accurate the information is, does not necessarily result in a coherent or accurate understanding of reality. The quote above suggests that it is the responsibility of the human intellect to construct a framework of thought that can explain those occurrences. This chapter delves into the theoretical framework that could assist in addressing the research questions highlighted in Chapter 1. This study employed Tinto's (1993) theory of student integration as a framework to analyse why doctoral students enrolled at Namibian HEIs do not complete their studies within a specified period of their candidature or why they drop out before graduation. Tinto's theory was primarily developed to elucidate the phenomenon of student retention or attrition in HEIs in the United States. This theory posits that academic and social integration are pivotal factors that shape a student's experiences upon entering a university. The integration process unfolds over time, ultimately culminating in a decision to persist or withdraw from the institution.

In this chapter, the researcher analysed the fundamental elements of the student integration theory in relation to Tinto (1993) with their connections and interrelationships. Thus, this chapter is divided into four sections. The first section provides a comprehensive overview of the theory of student integration, and section two deliberates on the critique of the student integration theory. The third section presents how the theory has informed the current study. The concluding section offers a thorough discourse on understanding the attrition of doctoral students in the Namibian context.

3.2 Overview of Tinto’s student integration theory

This section presents a comprehensive overview of Tinto's student integration theory and its relevance to the current study. Tinto (1993) developed a theoretical framework on student integration, which posits a relationship between student experiences and their successful completion of a degree program, which is the primary goal of both students and institutions.

Tinto's theory of student integration compares to Durkheim's theory of suicide, as noted by Brunsden et al. (2002) and Koen (2007). Durkheim's study shows that the understanding of a seemingly individualistic behaviour is, in fact, socially patterned and has underlying social causes rather than being solely attributed to psychological factors. Durkheim considered factors including a range of socio-demographic variables, such as country of origin, marital status, religious affiliation and level of education, to elucidate the divergent patterns observed in suicide rates. McCubbin (2003) explains that Durkheim's theory on suicide suggests that having a strong support system and a good network of individuals can enhance a person's social integration and reduce the likelihood of suicide. Tinto (1993) concurs with the suicide theory, positing that while leaving an institution does not necessarily equate to failure, there are some similarities between the act of dropping out and suicide since both phenomena can be construed as voluntary disengagement from a specific community.

Tinto's student integration theory also incorporated the elements of interaction and organisational experience originally proposed by Spady (1971). Spady introduced the perspectives of suicide theory as an approach to investigate the phenomenon of student attrition. However, Bean (1980) criticised the suicide theory in the student attrition models proposed by Tinto and Spady. Bean (1980) argued that the connection between the process of student dropout and suicidal behaviour was not clearly established, and there were vague similarities between the two scenarios. Bean (1980) maintained that the models presented by Tinto (1975), Spady (1971), and other previous studies on this subject matter only demonstrated a connection between the demographic characteristics of students and their institutions without providing any analytical explanation for student attrition.

Tinto's student integration was also influenced by the work of Arnold van Gennep (1960), a Dutch anthropologist who introduced the concept of "the rite of passage notion" to describe a three-stage development theory. Van Gennep's (1960) theory elucidates how people transition from one phase of life to another. Tinto's integration theory is appropriate to the concept of a rite of passage, as it explains the journey a new higher education student encounters as they transition from the familiar secondary school environment to adapting to the demands of a new learning environment (Koen, 2007). According to Tinto (1993), students can fully integrate into their institutions by successfully progressing through van Gennep's (1960) three stages of passage: separation, transition and incorporation.

According to Tinto (1993), first-year students are in a ***separation phase*** where they distance themselves from members of their communities, for example, home or school. Van Gennep (1960) explains that when students first join an institution, they bring a wide range of characteristics and levels of initial commitment, including gender, race, academic aptitude, family socio-economic background, parent educational level and different levels of initial commitment to the institution. The progression of students through the separation stage is influenced by these qualities and the initial level of institutional engagement they display.

In both the academic and social systems, the process of separation begins before and at the beginning of the actual institutional experiences. When students enter the institution, they are expected to disassociate themselves, at least partially, from their involvement in communities they have been a part of. These communities may include their family members, friends, high school or the area in which the student previously resided. This separation is the first stage of the rite of passage into the university years, and it may demand some personal transformation and possibly the rejection of the norms of previous groups. Tinto (1987; 1993) explains that it is quite likely that a student will drop out of university before completing their degree if they do not receive encouragement and support from their friends and family members.

The ***transition phase*** involves adopting the new community's norms, values and behaviour to move from the old to the new which does not always appear the same for each student, given the significant range of differences in individual experiences and the fact that the transition does not necessarily follow a defined pattern. During

this phase, the individual motivations and goals of students play a part in the extent to which they can succeed in their transition. The first transition phase occurs when students enter their new academic environments, where they feel isolated and disconnected from their world, requiring time for them to become acclimatised to the new environment. In the second transition phase, students fully accept their new academic environments and abandon their apprehensions as they begin to experience a sense of belonging. The final transition phase involves students fully adapting to the new academic setting. Tinto emphasised that isolation, early departure, abandonment and low performance may result from a lack of integration. Students are expected to completely integrate into the institution's community by becoming part of the college's social environment as they move on to the final phase.

During the ***incorporation phase***, students are required to become involved in the academic and social communities of the institution (Tinto, 1993), where the lack of incorporation is possibly caused by “incongruence” and “isolation”. Incongruence generally implies that the characteristics of the student and the characteristics of the institution do not match up. This sentiment of not fitting in comes from the student's assumption that they do not belong to the institution's academic or social system. These systems can be formal or informal, individual or institutional characteristics, or in the rules and regulations of the institution. On the other hand, "isolation" refers to a student who cannot form a meaningful relationship with someone on campus, either with academic staff or peers (Tinto, 1993).

Both the transition and incorporation phases ultimately impact the student departure decision (Tinto, 1993). Conversely, Tierney (1992) argues that Tinto's understanding of van Gennep's 'rite of passage' is inadequate. Specifically, Tierney (1992) contends that Tinto's interpretation could encourage minority students to distance themselves from their cultural traditions and support systems, which could be detrimental to their academic success.

Tinto's model of doctoral success highlights academic integration, social integration, research possibilities, advising relationships and financial support as the factors that contribute to the successful completion of a doctoral degree (Goodsell-Love et al., 1994). The selected concepts from Tinto's theory provide a valuable framework for investigating doctoral student attrition at Namibian HEIs. The theory further suggests

that the most effective approach to achieving successful doctoral education and a high level of doctoral output is implementing appropriate strategies and measures by HEI leaders, policymakers and students. Figure 4 depicts Tinto's (1993) student integration theory and includes several concepts, which are explained in the following section.

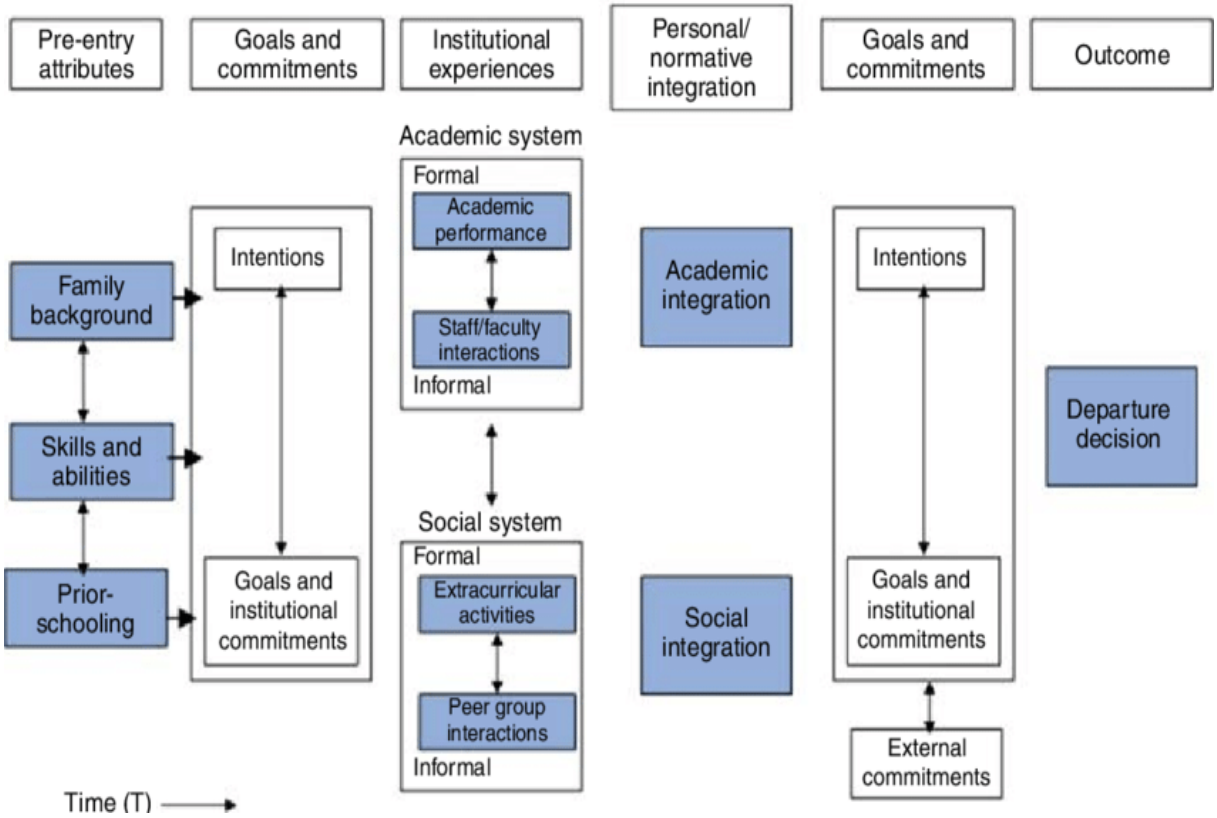

Figure 4. Tinto's student integration theory (1993)

Figure 4 attempts to explain why certain individuals drop out of their chosen institutions before completing their studies. Tinto's (1993) theory on student integration, as illustrated in Figure 4, demonstrates that academic and social integration are critical components of student persistence. However, other key principles are equally significant and cannot be disregarded in the attainment of a doctoral degree. These fundamental principles are of great significance and have been verified to be effective by Tinto and other scholars who advocate for this framework. As such, HEIs in Namibia and elsewhere can implement these principles to understand the data in their respective institutions to help understand what drives academic success. The next section goes into further detail on the critical principles informing Tinto's student integration theory.

3.2.1 Pre-attributes

A student's goals are influenced by pre-existing attributes, encompassing their social background and prior academic experiences (Brunsden et al., 2000). The pre-entry attributes of Tinto's (1993) model of attrition were identified to examine the factors that contribute to the withdrawal of students. As attrition continues to be a persistent issue in higher education, understanding the attributes of students who are most likely to withdraw can inform the development of targeted interventions and support services by HEIs. Tinto's (1993) attrition model posits that pre-entry attributes, such as academic readiness, motivation and social integration, significantly determine a student's likelihood of persisting in their graduate programs. By examining these pre-entry attributes, the current study sought to identify which factors are most strongly associated with the withdrawal of doctoral students.

In addition, Tinto (1993) also argues that students possess three primary factors upon entering university: their previous educational experiences, skill sets and abilities. The combination of these three factors results in several commitments, goals, and intentions from and to an institution. In other words, students possess a pre-existing understanding of their educational goals before enrolment in their first year of study. A student's academic background, as indicated by their grade scores, is important in determining their readiness to join a higher education institution (Koen, 2007) because past academic performance, particularly in secondary school, is a predictor of future academic success (Tinto, 1975).

After entry to a university, a combination of academic and social engagements can significantly impact a student's integration into the institution (Beil et al., 2000). Tinto argued that a student's social background, including nationality, gender, age, race, and socio-economic status, can impact their social interaction outcomes. Conversely, students draw strength and support from family members who have experience in higher education (Tinto, 1975), therefore, the educational backgrounds of students' families can affect how well they integrate into an unfamiliar learning environment (Brunsden et al., 2000). Tinto (1993) posits that developing social and academic integration skills is essential for students and should be cultivated through formal and informal means.

3.2.2 Goals and commitments

Drawing from the work of Tinto (1975), it is argued that the persistence of an individual student in pursuing higher education is dependent upon their constant commitment to achieving their academic goals, which is primarily influenced by their professional aspirations and their educational goals. As Tinto's (1993) cautions, negative experiences tend to erode the commitment and dedication of students, thereby augmenting the likelihood of their premature departure from the academic institution without a degree. Conversely, positive experiences tend to reinforce the determination of students to complete their degree programs while also fostering a stronger bond between the student and the institution.

Tinto (1993) developed this theory based on three main conditions that need to be met to achieve student persistence. The first condition is that students must have access to retention programs that are specifically designed to aid the students themselves rather than solely benefiting the educational institution. Such programs are intended to support and assist students who may be experiencing difficulties in their academic pursuits and are designed to help them overcome any obstacles or challenges they may be facing. The second condition that must be considered in developing effective retention programs is the need to avoid a narrow focus on a particular student population, such as those who are low-income or from minority backgrounds. Instead, it is recommended that retention programs should be designed to cater to the needs of all students, regardless of their socio-economic status or ethnic background. The third condition is a successful retention program that offers a degree of integration for students in both social and academic communities. Tinto further emphasised that the retention program must be structured to enable students to feel a sense of belonging and connectedness to the institution, thereby fostering a positive and supportive learning environment.

3.2.3 Institutional experiences

According to Tinto's (1993) proposition, three primary prerequisites must be fulfilled to attain student persistence. These prerequisites are deemed essential for successfully retaining students in higher education. Firstly, students must be provided with access to retention programs that prioritise their support over the institution's interests. Secondly, retention initiatives must not exclusively concentrate on a

specific student demographic, such as those from low-income or minority backgrounds, but rather prioritise all students. Lastly, there should be retention programming that provides a level of integration for students in both social and academic spheres.

3.2.4 Personal/normative integration

Contemporary doctoral education occurs within a globalised society in which graduates are expected to interact appropriately with people from various cultural backgrounds (Cutri & Pretorius, 2019). Several studies indicate that doctoral students struggle with isolation, stress and depression due to a lack of socialisation. Caruth (2015) refers to socialisation as the myriad of experiences from being accepted into the program to when students finally earn the official title of "doctor". Socialisation might cause doctoral students to fail to graduate (Kong et al., 2013). Acclimating to a new setting requires the development of social skills and behaviours, both of which are acquired through the process of socialisation. According to Zhang et al. (2022), this process generally unfolds gradually as students engage in coursework and supervised research. As students acquire more knowledge and increased independence in their research, they gradually assimilate a scholarly identity and assume the responsibilities of an independent scholar.

Zhang et al. (2022) further emphasise the significant variability in individual experiences within these settings. They also note that maladaptive socialisation experiences, such as inadequate social support, a lack of department or lab belonging and unsatisfactory supervisor-supervisee relationships, can inhibit progress toward degree attainment or even completely derail it.

3.2.5 Academic and social integration

According to Tinto (1998), a student's persistence and program completion are two success indicators that can be directly attributed to their academic and social integration level. Tinto proposes that students are more likely to persist when they are either academically or socially integrated or when both forms of integration are combined. In other words, students' academic and social integrations have an inversely proportional and mutually reinforcing effect on each other and on their likelihood of persisting in their studies.

As can be seen in Figure 4, Tinto's student integration theory posits that a student's commitment to the institution and external efforts is closely linked to their social and academic integration. Tinto maintains that the level of academic and social integration encountered by students within educational institutions significantly affects their level of commitment, ultimately influencing their decision to continue or abandon their studies. This implies that students are more likely to remain committed if they become involved in their institution's social and academic life.

The term "social integration" refers to the involvement of a student in the various facets of life at the university, such as membership in university clubs, affiliation with sororities or fraternities, and interactions with other students. According to Weidman et al. (2001), socialisation is a complex process involving acquiring knowledge, skills, and attitudes that enable individuals to become more or less influential members of society. This suggests that socialisation is a dynamic and ongoing process that occurs throughout an individual's life and plays a crucial role in shaping their identity and behaviour. Weidman, Twale and Stein (2001) argue that an individual's acquisition of knowledge and skills is facilitated through interactions with other members of society as it plays a crucial role in helping individuals gain membership into a particular group or society. This, in turn, facilitates integration with other students and academic staff.

On the other hand, Tinto referred to the student's relationship to the institution's intellectual life as "academic integration". Tinto (1975) posits that academic integration within HEIs can be gauged by assessing grade performance and intellectual development. He points out that academic achievement is attained as students advance through grades and intellectual growth is viewed as a process of acquiring knowledge, which is evaluated by the academic system. In other words, the cumulative grade point average, engagement with teaching staff or involvement in academic activities are common examples that can be used to gauge academic integration. As per Tinto's assertion, students who fail to integrate themselves socially and academically effectively risk experiencing isolation during their time on campus. The current study maintains that adopting Tinto's student integration theory, given its substantial emphasis on the academic and social integration aspects of students can be implemented for understanding and better supporting doctoral students at HEIs to enhance the output of doctoral degrees.

Tinto (1987; 1993) explained that an important reason why there is less research on doctoral attrition than on undergraduate attrition is that research on graduate attrition has not been guided either by a comprehensive model or theory of graduate persistence or by the methodological strategies that have been successfully employed in the study of undergraduate persistence. The student integration theory emphasises that integration and socialisation among students positively impact their completion time. However, given that most doctoral students study on a part-time basis given their other work, personal, family and other commitments; and that they are rarely on campus to integrate and socialise with other students, they tend to take longer to complete their studies. Tinto (1987) theorises that students who socially integrate into the campus community increase their commitment to the institution and are more likely to graduate. He argues that the classroom is the main location for students to interact with their peers and faculty, especially non-residential students and students who work part-time or full-time while pursuing their degree and who do not participate in other campus activities or events.

In agreement with Tinto's assertions, Lott et al. (2010) postulate that doctoral students are likely to drop out of doctoral programs due to a lack of socialisation, and isolated students. Gardner (2008) also emphasised that relationships play an essential role in the socialisation of doctoral students during the entirety of the doctoral program in their transition from being students to independent scholars. Numerous aspects of student socialisation and factors have been found to significantly affect the overall development of the student's social life and their overall success in obtaining a doctoral degree. Relationships within an academic setting, with faculty, student peers, and peers in the same academic discipline working at other institutions all play a part in the professional socialisation process of becoming conversant with the knowledge, research capabilities, and values of an academic discipline (McAlpine, 2012). Students commonly perceive that the most important aspect of completing a doctoral degree is maintaining good relations with the institution and the supervisor.

In addition, the socialisation process that doctoral students undergo in their academic departments is a crucial factor to consider concerning doctoral attrition, as Maddox (2017) noted. Other studies have shown that one of the critical factors related to doctoral attrition is social isolation (West et al. 2011). Their study emphasises the

challenges that doctoral students faced when they were academically and socially isolated, as well as the influence that isolation had on the amount of time it took for the students to obtain their degrees or finish their programs. To lessen the amount of social isolation that students face, Holmes et al. (2014) propose that students require opportunities to learn from each other, such as planned research activities.

Similarly, Gardner (2010) suggests that a greater understanding of how doctoral students socialise could help faculty and supervisors provide more effective support for doctoral students, which could lead to higher graduation rates overall. In addition, some researchers such as Ali and Kohun (2006), Jairam and Kahl Jr. (2012), Spady (1970), and Tinto (1993) assert that opportunities for doctoral students to interact with others can influence their beliefs about themselves while also fighting feelings of isolation that are known to contribute to doctoral student attrition rates.

3.2.6 Departure decision

Brunsden et al. (2000) suggest that the determination of a student to either persist or withdraw from their academic pursuits is dependent upon a variety of factors, including pre-entry attributes, level of commitment to their goals, and the extent to which they can integrate themselves academically and socially within the higher education environment. According to Tinto's theoretical framework, the likelihood of dropout is relatively high when students lack sufficient integration experiences. Conversely, students who possess adequate integration experiences are perceived to be committed to their goals, increasing their persistence.

Tinto (1993) posited that a heightened degree of institutional commitment among students may manifest as elevated goal commitments, culminating in sustained persistence and that the significance of favourable academic and social encounters bolster the persistence of students in HEIs (Koen, 2007).

3.3 Critique of the student integration theory

It is a widely accepted notion that every theory is subject to criticism. Tinto's (1993) theory of student integration has been subject to numerous criticisms; however, such criticisms do not necessarily justify the rejection of the theory. One of the critiques directed towards Tinto's theory of student integration pertains to the use of Durkheim's suicide theory analogy for elucidating the phenomenon of attrition in

higher education institutions. Brunsden et al. (2000) propose that withdrawal from universities should not be universally deemed as unfavourable and linked to failure because, for some students, dropping out may prove to be advantageous.

Another critique pertains to Tinto's utilisation of academic and social integration as fundamental components of his model on student integration. According to Tierney's (1992) analysis, these two constructs are overly general and fail to account for particular instances about students who have entered higher education through non-traditional pathways. Furthermore, Melguizo (2011) argues that Tinto's conceptualisation of academic and social integration lacks explicit definitions and clarity, and there is no precise method for measuring these constructs.

Another critique is that Tinto misrepresented the cultural dimensions of the transition process by placing excessive emphasis on student attrition as an individual issue. Similarly, Yorke and Longden (2004) argue that Tinto's theory only concentrates on academic and social integration and overlooks the impact of financial and cultural factors on student retention in HEIs.

In addition, while Tinto's (1993) student integration theory has undoubtedly contributed to the understanding of student integration in academic and social systems, it is important to acknowledge its limitations. One such limitation is its failure to adequately address the specific behaviours and interactions between students and faculty members or peers that play a crucial role in facilitating integration. By neglecting to delve into these interpersonal dynamics, Tinto's theory overlooks a significant aspect of the integration process. The relationships and interactions between students and faculty members, as well as among peers, can greatly impact a student's sense of belonging and overall integration within the academic and social systems of an institution. Understanding the behaviours that foster integration between students and faculty members is essential. Faculty members who actively engage with students, provide mentorship, and create a supportive learning environment can greatly enhance the integration experiences of students. One interesting point to consider is the assertion that interactions between students and faculty members play a significant role in the current study. This assumption suggests that when students engage with faculty through supervision and academic

support, it can potentially result in timely study completion. However, it is important to critically analyse this claim and explore its validity further.

A comprehensive discussion and application of Tinto's student integration theory to this study is presented next.

3.4 Application of Tinto's student integration theory

This section explains how Tinto's student integration theory relates to the current study. This study found relevance in Tinto's (1993) theory of student integration, which elucidates the viewpoints of students regarding academic and social structures. It delineates the factors that contributed to the retention and attrition of students in HEIs. The theory details the academic challenges, the inability of individuals to pursue educational and job goals, and their absence as the primary factors contributing to student attrition from the program. The framework posits a positive correlation between the degree of academic and social integration of students and the rates of student retention.

The relevance of Tinto's (1993) theory of student integration was established in this study, as it was utilised to elucidate the process by which doctoral students successfully integrate into their new academic environments and identify the specific phases in their doctoral journeys at which integration occurs. Furthermore, this theory enhances the understanding that the integration process manifested at varying stages of the doctoral journey for particular individuals, in which certain students integrated at an early phase while others integrated at a later stage of their academic programs. Thus, it helps to understand that doctoral students cannot complete their studies simultaneously as the pace at which they integrate differs from one individual to the other. In general, this study enhances the understanding of the factors that impact the integration experiences of doctoral students and emphasises the significance of cultivating a feeling of connection and belonging in doctoral education.

In the context of this study, Namibian HEIs enrol a significant number of doctoral students each year, but the graduation rate is exceedingly low. As these doctoral students enter HEIs in pursuit of their highest and most advanced degrees, they may encounter a measure of isolation due to the structure of graduate studies in Namibian and international higher education compared to undergraduate education. Since many doctoral students study part-time and are rarely on campus compared to

undergraduates, it can be challenging for doctoral students to establish new relationships with other students who may be experiencing the same level of isolation. Students must also contend with the new learning experience, which requires a more independent learning style founded on a mentoring relationship between the student and the assigned supervisor.

Even though the student integration theory was highly developed with a focus on undergraduate student attrition, the researcher opines that it sheds light on how doctoral students respond to or integrate socially and academically, how they interpret events concerning their thinking, motivation and achievement and also how they motivated themselves to accomplish their educational goals. This theoretical framework serves as a valuable tool for investigating the attrition experiences among doctoral students using the data gathered from two selected HEIs in Namibia.

The subsequent section presents a thorough discourse on understanding the attrition of doctoral students in the Namibian context.

3.5 Understanding doctoral student attrition in the Namibian context

This study identified three concepts that may be suitable for analysing the attrition of doctoral students at HEIs in Namibia, in addition to the student integration theory. This was done after an in-depth analysis and conclusions drawn from the review of the literature and the theoretical framework. The doctoral student attrition phenomenon may be effectively investigated by exploring key concepts, including student support systems, institutional commitment, and extrinsic and intrinsic motivational factors. The study was framed using the four dimensions of attrition. Furthermore, the four sub-research research questions and, consequently, the primary research question reflected these dimensions. Figure 5 depicts a schematic diagram that presents the identified concepts about the understanding of attrition of doctoral students at Namibian HEIs.

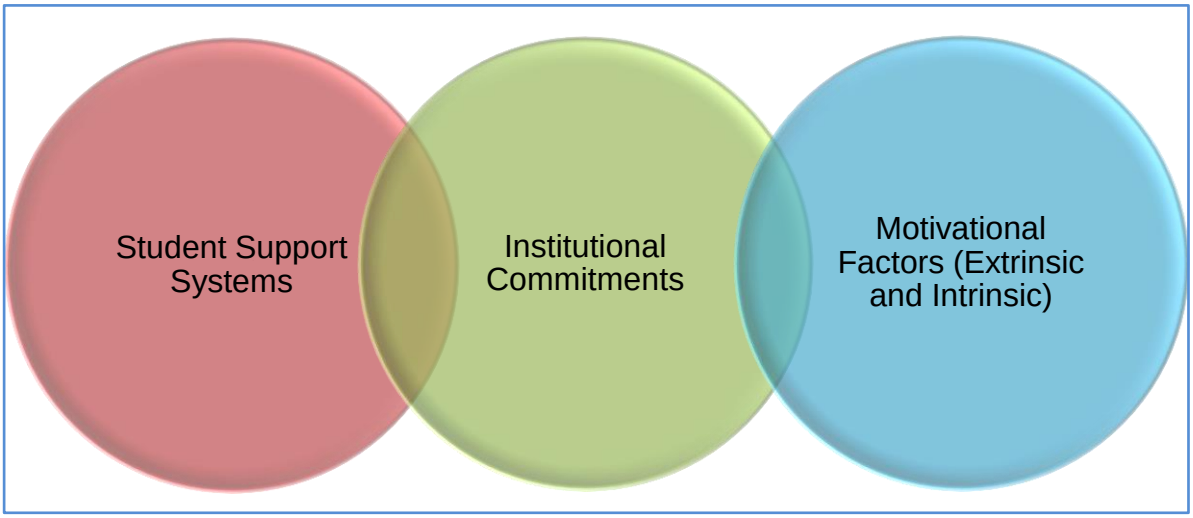

Figure 5. Understanding doctoral student attrition in Namibian HEIs

Source: Author's own construct (2023)

(a) Student support systems

Because pursuing a doctoral degree is a demanding and challenging undertaking, providing comprehensive support systems for students is widely regarded as an indispensable component for attaining academic achievement and advancing one's overall progress. Such systems may manifest in various forms, including but not limited to supervisors, peers, family and friends. In an ideal situation, the doctoral student's journey is strengthened by the guidance of supervisors, peers, and other individuals who support and facilitate discussions about their emotional and mental wellbeing.

In addition, Tinto (1993) posits that student support systems encompass not only academic assistance but also financial support. This implies that to adequately assist students, institutions should contemplate providing resources and assistance to mitigate financial hardships. By recognizing the significance of financial assistance within the wider context of student support systems, institutions can more effectively cater to the diverse needs of their students and improve their overall academic achievements and welfare. Tinto (1975; 1993) suggests that financial and support systems, particularly those provided by family and university services, exert a substantial influence on student retention. These elements have been identified as critical factors that can either facilitate or impede a student's capacity to persevere

and achieve success in their educational endeavours. The current study elucidates the essential role of good support structures in emphasising the efficacy of doctoral education and the challenges that doctoral students encounter without such structures.

(b) Institutional commitments

Institutional commitment pertains to the level of dedication a student has towards a specific educational institution compared to others. This concept is a valuable measure of a student's level of attachment to an institution. Institutional commitment is crucial and has far-reaching effects on student retention, academic performance and the institution's overall success. Thus, it is crucial to comprehend the elements that contribute to institutional commitment and how it can be developed in students. Bean (1980) posits that institutional commitment significantly influences withdrawal and can only be determined by asking students about their attitudes toward their institutions. The current study stresses the importance of specific attitudes that play a crucial role in retaining students in higher education.

The imperative role of academic institutions in fulfilling their institutional responsibilities toward supporting the successful completion of doctoral students within the designated timeframe is of paramount significance. This particular issue is driven by the increasing concern surrounding the increased rates of attrition observed among individuals pursuing doctoral degrees. The institutional commitments may encompass various approaches to providing support to students, including the provision of financial aid in the form of scholarships, grants and fellowships, as well as educational assistance in the form of effective supervision, providing financial aid in the form of scholarships, grants and fellowships, as well as educational assistance in the form of effective supervision, guidance, and training. These commitments are essential to cultivating an environment that promotes the academic success and personal growth of students.

In addition, students who are studying on a full-time basis, tutoring and student assistantship position which provide students with opportunities to gain academic experiences can also enhance a student’s integration process. It helps the students to be socialised into the culture of the institution, helps them to participate in the teaching, tutoring and advising of students which provides the students an

opportunity to test their knowledge and skills and their relevance in application in their institutional context. The successful application of these result in a student gaining confidence in his or her ability and enhances the process of integration and which result in a sense of belonging.

(c) Extrinsic and intrinsic motivational factors

The extant literature has demonstrated that individuals who exhibit motivation, particularly those enrolled in doctoral programs, are more inclined to persist in their academic pursuits. This assertion is congruent with the findings of the study conducted by Guerin et al. (2015) on a group of 405 students at an Australian university, encompassing students from various academic disciplines such as engineering, health sciences, humanities and multiple sciences. The findings revealed five underlying factors that motivated students to pursue a doctoral degree. These included the importance of family, friends and the support provided by previous and current teachers. Their study also discovered that intrinsic motivation played a significant role among students. Furthermore, the students perceived research experience and career motivation as highly practical factors that underscored the significance of obtaining a doctoral degree. Their study adds to the body of knowledge as a current and pertinent dataset that illuminates some of the prominent arguments and motivations for pursuing a doctorate.

The current study postulates that the influence of both extrinsic and intrinsic motivational factors on the pursuit of doctoral education produces positive results for students. Extrinsic motivation refers to external motivational factors or advantages that drive individuals to engage in a particular behaviour, such as pursuing a doctoral degree for prospects for employment or financial gain and societal status. On the other hand, intrinsic motivators refer to internal stimuli or incentives that originate from an individual's inherent interest, enthusiasm, or enjoyment.

A study conducted by George-Reid (2016) analysed the intrinsic and extrinsic motivational factors that contribute to the achievement of professional doctoral degrees among educators at a southern university in the US. The study included motivating factors that doctoral students considered to be the most influential in their decision to pursue a doctoral degree in education. The intrinsic motivators included personal achievement, the enhancement of skills and abilities and a focus on

achieving goals. On the other hand, the extrinsic factors included financial benefits, status and recognition, the acquisition of credentials for upward mobility and the possibility of becoming a faculty member in the study. The study's findings revealed that intrinsic motivators drove educators' pursuit of a doctoral degree. Conversely, extrinsic factors are also instrumental in motivating individuals to pursue doctoral degrees. However, further research is needed to explore the complex interplay between intrinsic and extrinsic motivators in this context and the potential impact of individual differences and contextual factors on doctoral degree pursuit.

The above proposition implies that doctoral students enrolled at HEIs in Namibia have the potential to influence both intrinsic and extrinsic motivators to enhance their progress in their doctoral studies, which facilitates the timely completion of their doctoral programs.

3.6 Chapter summary

This chapter explained the theoretical framework upon which this study was based. The researcher analysed student integration theory's key elements and their relevance to this study. The chapter also discussed the critique of the student integration theory and addressed how the theory has influenced the current study. The next chapter discusses the research methodology selected to guide this study.

CHAPTER 4: RESEARCH APPROACH, DESIGN AND METHODOLOGY

"No research without action, no action without research."
-Kurt Lewin-

4.1 Introduction

The quotation above implies that research and action are interdependent as each relies on the other suggesting that conducting research necessitates a solid methodology due to the complexity of determining the research's scope, devising an approach and choosing suitable research techniques. This section discusses the research methodology and design utilised for this study. The previous chapter explained the theoretical framework upon which this study is based. The researcher adopted the student integration theory's key elements and assessed how the theory influenced the current study. This chapter discusses and justifies the approach, paradigm and design for this study. The chapter describes the research site and participant sampling and selection methods. Semi-structured interviews and document analysis are explained and justified as data collection instruments. The techniques employed for data analysis following a description of the researcher's role and reflexivity, are presented. The chapter concludes with a discussion of ethical considerations and an overview of the measures taken to ensure adherence to quality criteria and research trustworthiness.

The study was informed by Tito's (1993) theory of student integration. The primary research question was: What factors cause attrition among doctoral students at higher education institutions in Namibia? The following sub-questions were used to explore further the primary research question.

1. What are the reasons for the attrition of doctoral students at Namibia's Higher Education Institutions?
2. How do doctoral students experience their institution's policies structures and strategies aimed at supporting the successful completion of their studies?
3. How do existing policies address the issue of doctoral student attrition?
4. What strategies would help doctoral students to successfully complete their studies?

The above research questions guided the selection of the research paradigm, methodology and data collection and analysis procedures. Given that the current

study aimed to gain an in-depth understanding of the factors associated with the attrition of doctoral students at HEIs in Namibia, the researcher employed a qualitative case study research methodology to facilitate the process of analysing and interpreting various viewpoints on the issues under study.

4.2 Research approach

Considering the subjective nature of the subject matter of the attrition experiences of doctoral students, qualitative research was the most suitable approach for investigating the issue under study (Merriam & Tisdell, 2015; Patton, 2002). Qualitative research can be used to understand how an individual interprets and provides meaning to their social reality (McLeod, 2019). The following section clarifies the researcher's decision to use a qualitative approach.

Johnson and Christensen (2004) assert that the qualitative research approach depends on the experiences of participants, broad and generic questioning and the collection of narrative data and the identification of themes through the analysis of words. Thus, questions in the qualitative study focus on "the why and how" of human interactions and experiences (Agee, 2009). Qualitative researchers aim to better understand complex situations, and approach their research with a receptive mindset, ready to fully engage with the situation's complexity and establish a rapport with the participants. According to Jones et al. (2006), qualitative research involves forming relationships between the researcher and participants. The researcher's experience as a fellow doctoral student helped facilitate these relationships with doctoral participants as the researcher earned their trust and fostered mutual respect. The purpose of this study was to better understand doctoral student attrition at Namibian HEIs, specifically among students who had exceeded the anticipated duration of their doctoral studies.

The key advantage of the qualitative approach is that it takes place in a natural setting and focuses on the individual's lived experiences (Marshall & Rossman, 2014). For these reasons, the qualitative approach allowed the researcher to study things in their natural settings, attempting to make sense of or interpret the phenomena of doctoral attrition in terms of the meaning students bring to it (Denzin & Lincoln, 1994). Doctoral attrition among students at HEIs in Namibia was therefore investigated using a small number of participants to obtain rich and detailed data

from their experiences and perceptions throughout their doctoral studies. The selected approach was deemed suitable due to its potential to encourage the autonomy of participants and reduce power imbalances between the researcher and participants. Moreover, it enables participants to share their personal narratives. The research is also descriptive in nature, providing an in-depth look at the perspectives, beliefs, values, knowledge and aspirations of doctoral candidates at Namibian HEIs.

Even though it is widely utilised in research, the qualitative approach is certainly not without limitations. According to Henning et al. (2013), the most significant disadvantage of using a qualitative approach is that the findings cannot be reliably extended to a larger population sample size. This is because the results of the research are not subjected to statistical analysis to evaluate whether or not they are merely the result of chance or whether or not they are significant. Although the current study's findings only apply to its context, comprehending them can aid in understanding situations with comparable settings.

Another disadvantage is that the qualitative research process can be time-consuming, important issues could be overlooked, particular issues could go unnoticed and all researchers' interpretations could be limited (Bowen, 2009; Yauch & Steudel, 2003). In addition, as positioned subjects, personal experience and knowledge influence the observations and conclusions. Such drawbacks describe qualitative research as "subjective" and therefore inherently unreliable, contributing to a degree of bias. However, several methods were used to counter the danger of bias. Similarly, Ahmad et al. (2019) contend that qualitative research might not always yield the most accurate responses to important questions since data analysis can be challenging when participants express their points of view in various ways and occasionally stray from the topic at hand. These limitations were addressed through the utilisation of thematic analysis for data analysis and the development of an interview schedule that facilitated a thorough review of the discussions.

Despite the various limitations associated with the qualitative research approach, as outlined above, this approach was deemed suitable for the current study. The data obtained from doctoral students assisted the researcher's understanding of the research subject matter. Sufficient time was allocated to each participant to obtain a thick description of the phenomenon through receptive listening to the personal

experiences of participants about the attrition of doctoral students in Namibia. The study also explored potential strategies that educational institutions could implement to ensure the timely completion of doctoral programs by their students.

4.3 Research paradigm

Johnson and Christensen (2012) defined paradigm as a methodological framework guiding research or the research process. A research paradigm serves as a model and guide that describes and illustrates how the valuables are treated in the study. A paradigm is a conceptual and theoretical framework for understanding and studying the world's reality. In other words, every researcher approaches research with interlocking and sometimes opposing philosophical assumptions and viewpoints.

Research paradigms serve as fundamental belief systems that are rooted in ontological, epistemological and methodological assumptions (Denzin & Lincoln, 1994; Rehman & Alharthi, 2016). Lincoln and Guba (1985) concur that a paradigm encompasses these three fundamental elements, but they have added a fourth element, namely axiology. A paradigm is thus a shared worldview that represents a discipline's shared thinking patterns, imagination, beliefs and values and guides how problems are addressed within that discipline (Schwandt, 2001). This study employed an interpretivism paradigm which is detailed below in terms of its ontological, epistemological, axiological and methodological underpinnings. The diagram presented in Figure 6 provides a concise overview of the interpretive paradigm and its interrelated components.

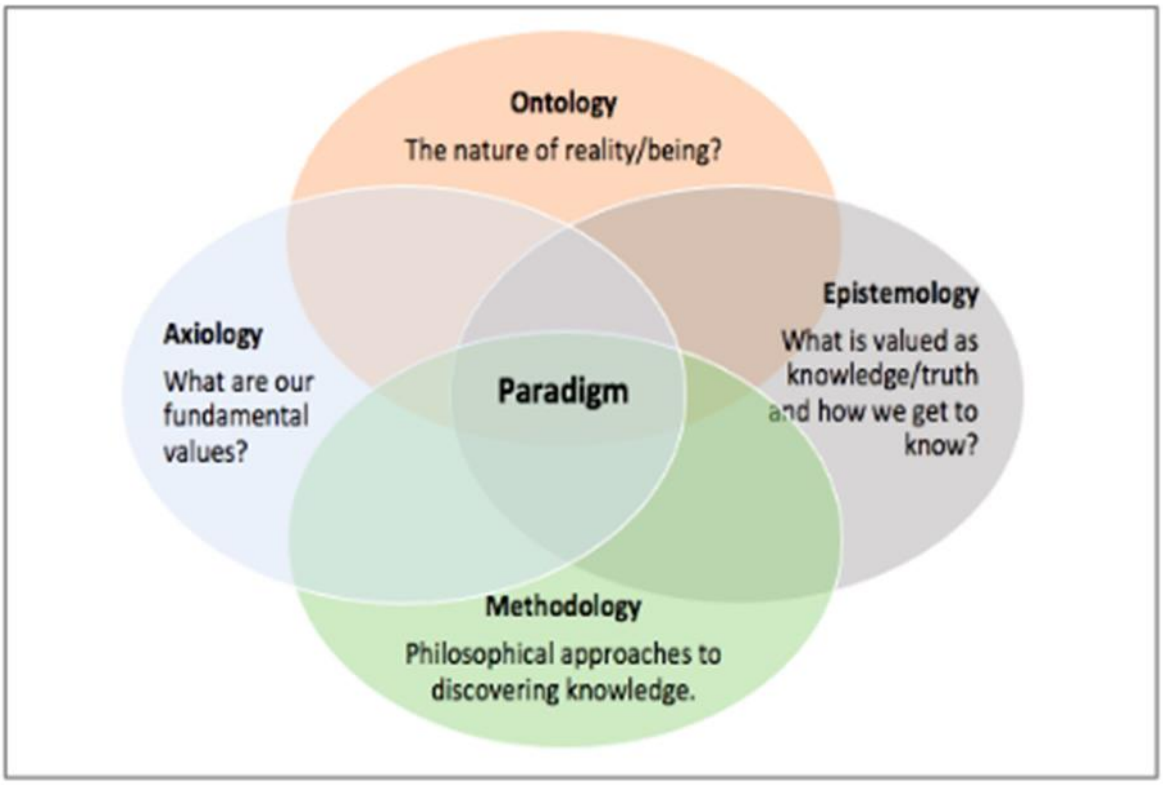

Figure 6. The basic elements of research

Source: Guba and Lincoln (2005); Henry and Macpherson (2019)

(a) Ontology

Ontology is a philosophical discipline concerned with investigating the fundamental nature of social entities and realities. According to Crotty (1998), ontology is the study of 'being' and is concerned with 'what is,' i.e., the nature of existence and the structure of reality as such. In other words, ontology is concerned with the reality of assumptions and their various characteristics. The ontological assumption behind this study is that there are few doctoral graduates from HEIs in Namibia. Thus, the researcher assumed that investigating the narratives of doctoral students who experience prolonged completion times was necessary. The researcher took a firm stance on adopting a specific set of procedures that are aimed at arriving at the truth through the analysis of data that is as objective and accurate as possible. However, it is important to note that the reality of any given situation is not always straightforward and can often be subjective and fluid. As such, the researcher was acutely aware of the subjective realities of both the participants and themselves and this was taken into consideration throughout the research process. By acknowledging the subjective

nature of reality, the researcher was able to approach the research with a more open mind and a greater understanding of the complexities involved.

(b) Epistemology

Epistemology is a branch of philosophy investigating the interplay between an individual and the world's collective knowledge. It relates to a given knowledge base and how individuals become knowledgeable or acquire knowledge (Hirose, 2014). Epistemology also provides a lens through which to view and make sense of the world (Crotty, 1998). According to Crotty's (1998) perspective, epistemology pertains to the fundamental nature of knowledge, encompassing possibilities (i.e., what knowledge can be pursued and what cannot), extent and validity. Cohen et al. (2007) define epistemology as the set of presumptions that an individual holds regarding the fundamental underpinnings of knowledge, its inherent characteristics and organisation, as well as how it can be acquired and communicated to others. The researcher used interpretivist epistemology to understand the phenomenon, positing that individuals construct their own understanding through their interactions and experiences with other people.

O'Donaghue (2007) highlighted the significance of epistemological assumptions in shaping the process of uncovering knowledge about social behaviour. They refer to the process of making choices that a researcher must undertake when selecting a research methodology, which is influenced by their epistemological perspective. The researcher posits that an investigation of the experiences of doctoral students could provide insight into the challenges they face and suggest potential strategies that HEIs could employ to facilitate the successful completion of their doctoral programs.

(c) Axiology

The axiology paradigm is a philosophical discipline that scrutinises the nature of values and their significance in the world we inhabit, as well as the benefits we obtain from them. Finnis (1980) elaborates that axiology pertains to the ethical considerations that must be taken into account during the development of a research proposal. It looks at the philosophical perspective on the process of determining ethical or morally sound decisions.

Simply put, it addresses the question: What is the nature of ethics or ethical perform? In response to this question, it is crucial to consider respect for the human values of all individuals who will be involved in or participate in your research project. According to the Australian Research Council (ARC) (2015), this consideration is facilitated by the following questions: What principles or standards will you live by or be guided by as you conduct your research? What should be done to respect the rights of all participants? What moral considerations and characteristics must be taken into account? How will you address the cultural, intercultural and moral issues that arise? How can you gain the support of participants? How can you conduct the study in a manner that is socially just, respectful, and peaceful? How can you avoid or mitigate risk or harm, be it physical, psychological, legal, social or economic? To ensure that accepted practices and norms of qualitative research are carried out effectively, the researcher made sure that all ethical procedures were observed from the proposal stage onward. The researcher also made sure that all parties involved were informed accordingly to avoid any misunderstandings or harm being done to any involved parties.

(d) Methodology

As defined by Hirose (2014), methodology refers to the set of procedures utilised to obtain knowledge. This study employed a qualitative methodology to comprehensively investigate the root causes of attrition among doctoral students at Namibian tertiary institutions, as well as to explore potential strategies for mitigating these causes. According to Niewenhuis (2016), the utilisation of qualitative methodology enables researchers to investigate a particular case within a multifaceted setting through the application of techniques such as interviews, observations and document analysis.

Theoretical and epistemological underpinnings of a study are reflected in its methodological assumptions, which in turn shape the research process. The current study's methodology is informed by the preceding three assumptions. The methodological choices made were influenced by ontology, epistemology and axiology. This methodology was selected based on its adaptable nature in scrutinising and construing perspectives from diverse participants who participated in this study. The employed research methodology in this study involved the utilisation of semi-structured interviews and document analysis. The current study employed

diverse data collection techniques to enhance and fortify the researcher's comprehension of the phenomenon impartially. Triangulation is predicated on the idea that the utilisation of multiple data sources, researchers or methods can effectively neutralise any inherent bias within a given data source, researcher or procedure. The utilisation of these research methodologies was predicated on the recognition that they facilitated comprehensive exploration of the phenomenon of doctoral attrition, thereby affording a plethora of insights into the achievement of doctoral candidates in Namibia and other contexts.

As mentioned earlier, this is primarily a predominately interpretive study. As depicted in Table 1 below, the study's interpretivist aspects are classified into the research's purpose, the nature of reality (ontology), the nature of knowledge (epistemology), axiology and methodology utilised in this research (Cantrell, 2001).

Table 1. Characteristics of interpretivism

Feature	Description
Purpose of research	Understand and interpret doctoral students' perspectives on factors that cause attrition at Namibian HEIs.
Ontology	• Multiple realities exist. • Human interactions and meaningful actions can be used to understand and construct reality. • Discover how individuals make sense of their social worlds in the natural surroundings through their everyday routines, discussions, and writings while engaging with others. These writings could include both text and images. • Due to the diversity of human experience, such as knowledge, perspectives, interpretations, and experiences, numerous social realities exist.
Epistemology	• Interaction with social surroundings affects how we perceive events in our minds. This is how we make sense of the world around us. • Those involved in the research process socially build knowledge by interacting with actual or natural environments. • Inquirer and the inquired-into are intertwined in an interactive process of speaking and listening, as well as reading and writing. • A method of data collection that is more interactive and personalised.
Axiology	• Understanding and communication. • Consciousness, moral choices and ethics.
Methodology	• Data collection procedures involving text messaging, interviews and reflective sessions. • Research reflects my values.

According to Thomas (2010), inter-subjective epistemology and the ontological belief that reality is socially constructed might be adopted by interpretivist researchers, who believe that reality is based on people's subjective experiences of the external world. The interpretive paradigm was considered suitable for this study because it allows the researcher to develop an understanding of the meaning or nature of the experiences of others who were engaged in the study.

One advantage of conducting research utilising interpretivist approaches is that the results are reliable and close to reality. They give a good reflection of how individuals are genuinely feeling, typically providing an accurate picture, and measuring what the researcher set out to investigate. Interpretivist research methods put an emphasis on the individual participant rather than the responses collectively, which allows the respondent to give answers that are rich in feeling and meaning while also providing responses that are detailed.

On the other hand, interpretivist methods of research have a number of disadvantages. One disadvantage of using interpretivist research methods is that they are unreliable because typically they depend on personal relationships built between the respondent and the researcher. As a result, it is difficult for other researchers to repeat the research and get similar results, showing that there is no consistency between the results. The second disadvantage is that the results are not representative of the entire population. Due to the small number of participants in the study, the results of the interpretivist methods cannot be generalized (Cohen et al., 2011). For instance, this research was only carried out at two HEIs in Namibia, and there was a total of 23 participants. This sample size is too small to be representative of all HEIs in Namibia.

4.4 Research design

According to Creswell (2014), research design is the procedure involved in the research process: data collecting, data analysis, and report writing. The research literature specifies two well-known approaches namely qualitative and quantitative research (de Vos et al., 2005; Welman et al., 2005). Due to the subjective nature of the topic of doctoral attrition, qualitative research was deemed most appropriate for addressing the research questions (Merriam, 2009; Patton, 2002). There are several different methods for conducting qualitative research; however, Leedy and Ormrod (2001) recommend the following five: case studies, grounded theory, ethnography, content analysis, and phenomenological. For this study, a case study was the most appropriate approach because it provided a holistic, intensive description and analysis of the issue at hand (Merriam & Tisdell, 2015). With a case study, further insight and understanding of the phenomenon's dynamic, namely attrition among doctoral students, could be obtained. Accordingly, Yin (2003) opines that a case study has a distinctive advantage over other research designs because it employs investigative strategies that focus on the "how" and "why" questions about a contemporary set of events over which the researcher has no control.

This design was relevant for this study to understand the experiences of doctoral attrition as a phenomenon and its ramifications on the success of students. The experiences of doctoral students could only be understood in the contexts in which they occurred and cannot be generalised to all doctoral students. The use of the case study design was driven by the researcher's desire to gain a deeper understanding,

uncovering new findings and interpreting data, as opposed to formulating hypotheses (Merriam, 2009).

Whilst the researcher selected the case study design for the current study, it is important to point out the inherent challenges within this design. Case studies have been criticised for not being able to generalise their findings to include larger populations (Merriam, 2009). However, supporters of this design have countered this claim by stating that case studies are only conducted to understand specific cases, not to generalise the results (Stake, 1995; Wolcott, 1994). Thus, the two HEIs selected for this study in Namibia were considered suitable due to their prominence as the first educational institutions in the country to be granted university status.

Additionally, some academics contend that maximising the researcher's knowledge and intuition strengthens the finding of a case study, however, objectivity is still debatable (Creswell, 2017; Maree, 2020). Therefore, it was crucial during the study for the researcher to maintain an objective view of the data collected and analysed (McMillan & Schumacher, 2016).

4.5 Research methodology

The research methods used in the study are covered in this section. The section outlines the criteria applied for selecting participants in the study and describes the site where the data was collected. The section further provides a detailed discussion of the research instruments used during data collection.

4.5.1 Research site

For this study, two HEIs from Namibia were selected. The selection criteria for the two HEIs were based on their unique distinction as the only educational institutions to have been the first conferred with university status in the country. Presently, Namibia has only three educational institutions that have been granted university status. The third institution, which was granted university status in 2015 and commenced offering doctoral programs thereafter, was deemed unsuitable for the current study. The study focuses on the two institutions that attained university status in 1992 and 2002, respectively, and have a long-standing history of offering doctoral programs.

The HEIs that were chosen have various campuses throughout the country. Therefore, the researcher did not take into consideration the specific campus where

the student is enrolled. The reason behind including all campuses of the two HEIs was due to the challenge of locating doctoral students who predominantly engage in part-time studies. This approach was deemed feasible because it was possible to obtain a sufficient number of participants. All faculties of the two selected HEIs were considered for the study. In order to mitigate the potential drawbacks of generalisation and representation, the researcher restricted the scope of the findings to encompass only the 12 campuses affiliated with Institution A and the 4 campuses associated with Institution B.

4.5.2 Sampling and selection of participants

The sampling process is important for data collection, analysis and presentation of findings in a qualitative case study (Flick, 2009). Sampling is a technique that allows researchers to select a subset (sample) of a larger population from which to draw conclusions about the entire population. The first step in the sampling process is (Taherdoost, 2016). In the context of research, a population is a group of individuals who share one or more characteristics of interest to the researcher. The population of interest for this study focused on doctoral students who could not complete their doctoral studies within the allotted timeframe. Those who had registered between 2013 and 2019 at the two designated Namibian HEIs were considered for the study because they were expected to have already graduated. This study did not include registered doctoral students from 2020, as their enrolment years were deemed valid and still within the completion period.

Some researchers refer to a sample as a subset of the population in which a researcher is interested and from which measurements are drawn for analysis (de Vos et al., 2005). Participants were chosen purposefully to identify those who could contribute significantly to the questions regarding the given topic (Jones et al., 2006). The study was carried out on doctoral students enrolled at institutions A and B. The sample was drawn from a smaller group of participants selected from 12 campuses of the selected Institution A and 4 campuses of the selected Institution B. The sample comprised students from any department or faculty within the institutions who could not finish their studies or are still in the process but have exceeded the prescribed time limit.

This study integrated purposive and snowball sampling. In purposive sampling, the researcher conducts a deliberate sampling of potential participants using their own discretion and understanding of the study's context. Johnson and Christensen (2004) define purposive sampling as a type of sampling where the research specifies the characteristics of a population of interest and then tries to locate individuals who have those characteristics. The participants were purposively selected because they are "information-rich" about non-completion of doctoral students at these institutions given that they have taken too long to complete their studies or have neglected or dropped out of their studies.

The researcher obtained a sample from an accessible population through various means such as email and telephone communication. The researcher sought ethical approval from institutions A and B as the initial step. The researcher then requested a list from the offices of the Registrars of institutions A and B of doctoral students who enrolled between 2013 and 2019 but have not yet completed their studies. The Registrars at the two institutions contacted prospective participants via an automated email that was sent to them without the researcher's involvement requesting voluntary participation in the study. Hence, the researcher waited for the response of potential participants, who would indicate their willingness to participate in the study. Only upon getting confirmation from potential participants did the researcher provide information about the study and extend a formal invitation to them to participate. Participants who consented to participate in the interviews were allocated specific time slots, and those who could not meet the researcher for face-to-face interviews due to work or geographical limitations were scheduled to participate in telephonic interviews.

Snowball sampling, on the other hand, relies on current study participants to assist in identifying more possible subjects. Snowball sampling is a non-random sampling technique that uses a small number of cases to entice additional individuals to participate in the study, thereby expanding the sample size (Taherdoost, 2016). This strategy is best suitable for small populations that are difficult to reach for some reasons. In this case, doctoral students who formed part of this research population were not available at the two selected HEIs but scattered all over the country, given that they were all studying on a part-time basis and had full-time jobs in different regions of Namibia.

After the interviews, the researcher utilised snowball sampling by requesting participants to provide the names and contact details of their colleagues who could offer important insight into the phenomenon being studied. The utilisation of snowball sampling was necessitated by the low response rate of potential participants to automated email invitations, as well as the reluctance of the two selected HEIs to disclose the identities and contact details of prospective participants due to the sensitive nature of the study. Therefore, snowball sampling was the only viable method for the researcher to access these participants, and in so doing expand the participation rate in this study.

The researcher purposefully conducted interviews with doctoral students who were pursuing their studies beyond the expected candidature period at institutions A and B. A total of 61 students were invited to participate in the interviews. Of the 61 doctoral students who were approached for interviews, 23 provided their consent to participate in the study. The study sample comprised the participants as presented in Table 2.

Table 2. Research sample

Institution	Participants contacted	Participants interviewed
A	39	9
B	22	14
Total no. of participants	61	23

As can be seen in Table 2 above, the target sample for this study was 61 participants from the two selected HEIs. However, a total of 39 participants from Institution A were contacted, of which 9 provided their consent to participate in the interviews. Similarly, 22 students from Institution B were contacted, of which 14 agreed to participate in the interviews. The study determined data saturation with a sample of 23 doctoral students as participants.

4.5.3 Pilot study

A pilot study was conducted to ascertain the pertinence and comprehensibility of the questions among the participants. According to Jariath (2000), a pilot study is a preliminary methodological test conducted in advance of a larger study, intending to

verify the feasibility of proposed methods or concepts in practical settings. The main aim of the pilot study was to evaluate the effectiveness of the proposed data analysis methodology and to determine the adequacy of the research questions in terms of their simplicity and comprehensibility. During the pilot study, two doctoral students, each representing one of the selected institutions, were interviewed to refine the interview guide and document analysis checklist with the ultimate goal of enhancing trustworthiness. The pilot study's participants were requested to provide feedback on various aspects, including but not restricted to, format, grammar, ambiguity, consistency and the omission of crucial elements from the research instruments. The pilot study showed that certain research questions were ambiguous, prompting the researcher to use simple English to ensure a proper understanding of each question. The final versions of the research instruments were modified to include every suggestion provided by participants in the pilot study.

4.5.4 Data collection instruments

The emphasis on scientific data collection methods is to ensure the systematic gathering of research evidence, searching for a broad array of evidence that will be used to answer important questions or to confirm or disconfirm propositions (Hartley, 2004). Multiple methods were used to collect data for this case study. This was done through semi-structured interviews and document analysis as depicted in Table 3 below.

Table 3. Data collection instruments

Instrument	Type of data collected	Data collection procedure	No of Students
Semi-Structured Interviews	• Time spent in the program • Students' experiences • Dissertation experiences • Students' progress • Students' suggestions for possible interventions	Individually through face-to-face, WhatsApp video call and any other valid suggestions by participants	23
Document Analysis	• Students' progress • Graduation rates • Possible strategies that the university has come up with to curb this challenge	Analysis of the university's reports, internet sources, policies and guidelines, newspaper reports articles and progress reports	23

(a) Semi-structured interviews

The first phase of data gathering involved conducting semi-structured interviews. The utilisation of this technique was predicated on the need to directly elicit the viewpoints of doctoral students. Due to the sensitive nature of the current study, inquiring about attrition matters from individuals who have been pursuing their studies for an extended period and may have experienced heightened stress levels posed a challenge. Consequently, the issue of doctoral attrition took a critical role during the interview process to ensure that any ambiguities were addressed. Jupp (2006) postulates that an interview represents a meeting or dialogue between people where personal and social interaction occurs, but for research, an interview is a two-way dialogue in which the interviewer asks the participant questions to collect data and learn about ideas, beliefs, views, opinions and behaviour of the interviewee.

Merriam (2009) outlined how semi-structured interviews are designed with a flexible protocol, allowing for a fluid structure with no predetermined order or wording to the questions. De Vos et al. (2005) highlight the significance of semi-structured interviews in enabling researchers to explore interesting insights that may arise during the interview process. According to Abd Gani et al. (2019), this type of interview is in a moderate form as it is neither too rigid nor too open and it allows for new questions if necessary to be raised during the interview session based on the participant's answers. Such interviews allow participants to provide a comprehensive account of their feelings and viewpoints concerning a particular subject. With semi-structured interviews, the researcher used an interview guide to keep track of the most significant issues to bring up but was not limited to simply asking those questions. The researcher was able to ask open-ended questions and conduct in-depth probing. Furthermore, semi-structured interviews allow the understanding of individual experiences because of the flexibility they provide for participants to change the flow of the discussion, consequently eliciting information that may not have been preconceived but is still important for the study (Axinn & Pearce, 2006).

The interview questions, as presented in Table 4, focused on the students' program experiences, from admission to the dissertation phase, and their current progress at the time of the interview. To enhance understanding of the main research question and the subsequent four research questions, respondents were solicited for their perspectives on different aspects of attrition among doctoral students. These

included their views on the implementation of policies, the level of institutional support they receive, and possible strategies to enhance doctoral completion rates in HEIs. The interviews lasted between 30 and 45 minutes, were audio-taped and later transcribed verbatim. Table 4 below displays the research questions and interview questions that were taken into account by the researcher throughout the interview process.

Table 4. Research questions and interview questions

Question	Research questions	Interview questions
Q1	What are the reasons for the attrition of doctoral students at Namibia's higher education institutions?	1. When did you first register for your doctoral studies? 2. What are the main challenges you have been facing since the inception of your study? 3. What effect will non-completion of your study have on you as an individual and also on the country as a whole? 4. How are you coping with these challenges?
Q2	How do doctoral students experience their institution's policies structures and strategies aimed at supporting the successful completion of their studies?	5. What type of assistance did you receive from your faculty or the institution to help you in completing your studies? 6. What policies, procedures or strategies are you aware of that address doctoral studies at your institution and how effective are they being implemented? 7. Do you think your institution is doing enough to address the challenges you are facing?
Q3	How do existing policies address the issue of doctoral student attrition?	8. Are the existing policies, procedures or strategies addressing doctoral student attrition?
Q4	What strategies would help doctoral students to successfully complete their studies?	9. What do you think can be done to improve the completion rate among doctoral students at your university?

Although semi-structured interviews are more flexible in terms of changing the order of questions for more extensive follow-up on the responses of participants, they are prone to subjectivity and bias (Cohen et al., 2010). To mitigate potential bias, the researcher took measures to ensure that interview questions contained within the interview guide were asked and subsequently probed in instances where further clarification was required about issues raised by participants.

It is important to note that the response rate to interviews among the selected participants was considerably low. Initially, a total of 61 students were invited to participate in the study; however, only 23 students provided their informed consent to

participate but this was sufficient to achieve data saturation. During the data collection process, the researcher observed analogous trends in the responses of participants, and additional data gathering would not necessarily have resulted in new insights into the problem. In addition, although the sample size was limited to 23 participants, the researcher believes that the findings provide key insights and perspectives that may be extended to the issue of doctoral student attrition at HEIs in Namibia and beyond.

Table 5 below reveals that Institution B had a greater number of participants who were both willing and accessible in comparison to Institution A. The majority of the participants who were requested to take part in the study were from Institution A, which is recognised as one of the academic institutions in the country that has the most substantial yearly enrolment of doctoral candidates. Nevertheless, upon being contacted, the majority of the participants displayed emotions of resentment and irritation, with some declining to partake in the study immediately. The potential reluctance to participate in this study may stem from the adverse effects of prolonged academic pursuits on prospective participants. Asking about the reasons for their delayed completion of doctoral studies could potentially cause distress.

Despite exceeding the standard duration required to obtain a doctoral degree, all participants remained actively engaged in their doctoral programs. Table 5 presents a summary of the participants from Institutions A and B. The table provides information on gender, institution, year of enrolment and number of years at each participant's institution. Pseudonyms are used to ensure the anonymity of participants following ethical standards governing social research (Maree, 2010). Thus, a description of the symbols is provided to differentiate between students belonging to the two respective institutions. The participants from Institution A were assigned the labels IAS1 to IAS9, signifying the first to ninth student belonging to the mentioned institution. The participants from Institution B were designated as IBS1 to IBS14, signifying the first to fourteenth student of Institution B.

Table 5. Biographical information of the participants

Participants	Gender	Institution	Year enrolled	Years at the institution
IAS1	Male	A	2019	4
IAS2	Male	A	2013	10
IAS3	Male	A	2017	6
IAS4	Male	A	2015	8
IAS5	Female	A	2019	4
IAS6	Male	A	2014	9
IAS7	Male	A	2013	10
IAS8	Female	A	2014	9
IAS9	Male	A	2014	9
IBS1	Male	B	2019	4
IBS2	Male	B	2019	4
IBS3	Female	B	2019	4
IBS4	Female	B	2017	6
IBS5	Male	B	2019	4
IBS6	Male	B	2019	4
IBS7	Male	B	2019	4
IBS8	Female	B	2017	6
IBS9	Male	B	2019	4
IBS10	Male	B	2015	8
IBS11	Male	B	2017	6
IBS12	Male	B	2018	5
IBS13	Female	B	2017	6
IBS14	Female	B	2016	7

Based on the biographical information gathered, it was found that a majority of the participants were male. Interestingly, none of the participants were doing their studies on a full-time basis. This is because all participants revealed that due to their concurrent full-time employment at diverse ministries, corporate businesses and educational institutions across the country, they are unable to study full-time. To ascertain the length of time doctoral students pursued their studies, the researcher

initiated the interview by inquiring about the date of enrolment at their respective institutions.

As can be seen in the table, the average length of time spent at the institution during the interviews was four years for the majority of the participants associated with Institution B. Nevertheless, some students have stayed enrolled for a duration of five to eight years. The findings further indicate that two participants had pursued their studies for four years at Institution A. Specifically, one participant was in their sixth year, another in their eighth year, and three others were in their ninth year and two participants spent 10 years in pursuit of a doctoral degree. It was established during the interviews that none of the students who took part in the study indicated that they were to graduate soon but most indicated that they will still pursue their studies despite the many challenges they face.

(b) Document analysis

The second phase of data gathering involved analysis of institutional documents. Document analysis is defined by de Vos et al. (2005) as the analysis of any written material that contains information about the phenomenon being researched. In addition, document analysis is also defined by Bowen (2009) as an approach to qualitative research in which documents are analysed to provide a voice and meaning around an assessment topic. In this study, document analysis was utilised as a tool to complement the data collected through semi-structured interviews.

It is important to note that the researcher encountered limited information from the documents, as it was discovered that the two institutions possessed a dearth of documentation regarding doctoral studies at each institution. Nonetheless, a limited number of documents sourced from both the institution's website and physical copies were subject to analysis. According to Busetto et al. (2020), document analysis may comprise the review and analysis of both personal and non-personal documents, including archives, annual reports, guidelines, policy documents, diaries, and letters. In the current study, the researcher obtained and carried out a critical evaluation of information about postgraduate studies from relevant documents of the two selected HEIs as indicated in Table 6 below. This is crucial for the current study as it places paramount importance on the comprehensive understanding of the practical implementation of doctoral education regulations and policies in Namibian HEIs.

Such an analysis is imperative for determining potential gaps and limitations in the implementation process, which can inform future policy-making and regulations.

Table 6. Institutional documents analysed

Name of document	Source from which the document was obtained
Postgraduate guidelines	Postgraduate brochures
Annual reports	Internet sources
Policies and guidelines	Institutional policies guidelines
Newspapers reports	Internet sources

The above documents were analysed in order to obtain better insights of the situation and to support the theoretical as well as methodological part of the study. Documents used as sources of evidence may have issues, according to certain researchers. Bowen (2009) posits that document analysis is a non-intrusive and non-reactive method due to the inherent lack of obstruction in documents. The majority of the scrutinised documents were conveniently accessible through online sources, while others were obtained from relevant institutions. These documents spanned a considerable duration, as reported by Bowen (2009). Corbin and Strauss (2008) have suggested that document analysis has certain limitations, such as the possibility of inadequate detail in some documents and the potential for biased selectivity. Drew (2016) notes that the researcher may encounter difficulties and delays in accessing certain documents that are not readily available. To establish the trustworthiness and credibility and of the findings obtained through document analysis, the researcher cross-referenced them with the data acquired through semi-structured interviews.

4.5.5 Data analysis

Graue (2015) defines qualitative data analysis as the process of describing, classifying and relating phenomena to the study's key concepts. Henning (2004) states that qualitative data analysis involves organising data into manageable units, synthesising it, identifying patterns and uncovering key insights essential for generating new knowledge. Analysing data in a qualitative study involves studying the data to understand its importance, relationships and make sense of the

multifaceted set of practices and interrelationships to bring some understanding and illuminating order (Addison, 1999). In other words, data analysis brings order, structure and meaning to the mass of collected data. This involves organising data by breaking it into smaller pieces and reading the data collected several times to make sense of what it contains. The data is then grouped into categories or themes before it is integrated and summarised and known facts are incorporated into the research. The outcome of the data analysis enables the researcher to make findings and recommendations regarding the research questions.

For this study, data analysis was carried out using thematic analysis. Thematic analysis is defined by Clarke et al. (2015) as a qualitative research method that involves identifying, analysing and interpreting patterns of meaning, also known as "themes" within data. The authors elaborated that the utilisation of thematic analysis can facilitate the recognition of recurring themes within and between data sets concerning the lived experiences, opinions, perspectives, behaviours and practices of participants. Furthermore, the data was analysed following the sequential phases outlined by Clarke et al. (2015), which are schematically depicted in Table 7 below.

Table 7. Thematic data analysis

Phase	Process	Description of the process
1	Familiarization with data	• Transcribing • Reading and re-reading the data • Noting down initial ideas
2	Generating initial codes	• Coding interesting features of the data systematically across the entire data set • Collating data relevant to each code
3	Searching for themes	• Collating codes into potential themes • Gathering all data relevant to each potential theme
4	Reviewing potential themes	• Checking the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2) • Generating a thematic “map” of the analysis
5	Defining and naming themes	• On-going analysis to refine the specifics of each theme, and the overall story the analysis tells • Generating clear definitions and names for each theme
6	Producing the report	• Selection of vivid, compelling extract examples • Final analysis of selected extracts • Relating the analysis back to the research question and literature • Producing a scholarly report of the analysis

Table 7 illustrates that the process of data analysis involved the transcription of raw data and the recording of preliminary ideas. The data's interesting features were assigned relevant codes, which were subsequently interpreted as possible themes. The analysis culminated in the final stage, during which themes were discussed and decided upon relating to the research questions, document analysis and literature. The relationship between themes and sub-themes with the primary research question and sub-questions has been confirmed through the inclusion of verbatim quotations from the responses of participants. The relevant categories synthesised from the responses of the participants were merged to generate 4 main themes and 12 sub-themes as presented and discussed in Chapters 5 and 6 of this study.

Data analysis for the documents was carried out employing a self-designed checklist that served as the instrument for gathering the data obtained through the document analysis. According to Bowen (2009), it is important to remember not to regard the data as necessarily precise, accurate or complete recordings of events that have happened when analysing documents. It is also equally important to organize the documents in such a way as to filter out the aspects that are not linked to the study, particularly those that are not related to the phenomena that are being investigated. Hence, to get reliable results from document analysis, the researcher needs to go through an extensive planning process beforehand. O'Leary (2014) presented an eight-step planning process that should take place not only in document analysis but in any textual analysis:

1. Gather relevant texts;
2. Develop an organization and management structure;
3. Make annotation copies of the originals;
4. Evaluate the authenticity of documents;
5. Explore the document's agenda, and biases;
6. Explore background information (e.g., tone, style, purpose);
7. Ask questions regarding the document (e.g., Who produced it? Why and when? Type of information?); and
8. Explore content.

The researcher maintained a high level of objectivity and sensitivity for the document analysis results to be credible and valid (Bowen, 2009). O'Leary (2014) outlines two

primary techniques that can be utilised to successfully complete the eight steps, which is the process of investigating the "witting" evidence, also known as the substance of the documents themselves. The first technique is an interview. In this scenario, according to O'Leary (2014), the researcher approaches the document in the same manner as if it were a respondent or an informant who provides the researcher with important information. After "asking" questions, the researcher will identify the answers within the text and underline them. The other technique is called content analysis and it involves the researcher quantifying the use of particular words, phrases and concepts. This technique is also known as recording occurrences.

4.6 The role of the researcher and reflexivity

Qualitative research often entails a prolonged and in-depth engagement between the researcher and the participants. Holliday (2002) points out that qualitative research is characterised as an interactive process that involves establishing a relationship of culture-making between the researcher and participants, and the researcher's presence becomes intertwined with the political dynamics of the research environment. According to Creswell (2003), the involvement of a researcher as an active member in qualitative research brings forth various strategic, ethical and personal issues that establish the necessity of reflexivity, a method of objectivity that focuses on the researcher.

To establish and maintain trust and rapport with the research participants, the researcher employed the following strategies as outlined by Jones et al. (2006):

- Establish clear expectations for study participants and carefully consider the motivations that may drive individuals to participate in the research.
- Express your interest in the project in your initial request for participation, along with your expertise on the phenomenon being studied.
- Attune yourself and adapt accordingly to the cultural norms, behaviours, appearances, language and values of the participants.
- Be mindful of the influence that your presence may have in the research environment.
- Examine the relationship between your own socially constructed identities, such as race, ethnicity, age, gender, sexual orientation, social class, religion,

and ability and those of the participants to determine the potential impact on the establishment of rapport and trust.

- Take into consideration the physical surroundings while conducting interviews or observing participants. Is the observed subject located within its natural environment? Is the location of their preference? Minimise any potential sources of distraction that could potentially impact your capacity to engage with participants.

The researcher, in her capacity as a doctoral student, exercised caution to avoid imposing her personal experiences on the participants. The researcher actively engaged in the conversations and posed questions based on the conversations. Nonetheless, the act of sharing much of the participants' experiences facilitated the researcher's exploration of each of their doctoral experiences (Holliday, 2002).

4.7 Ethical considerations

Ethical considerations refer to the set standards that researchers should consider before, during and after their research studies (de Vos et al., 2005). The researcher ensured that all necessary ethical standards for conducting research were duly observed (Henning et al., 2013). Johnson and Christensen (2004) defined research ethics as a set of guidelines that assist researchers in conducting ethical research. To ensure that ethical issues are considered in this study, research ethics application forms accompanied by letters of invitation, consent letters, and interview questions were submitted and approved by the University of Pretoria Research Ethics Committee. Then, a letter of consent seeking permission to conduct research in the Ministry of Higher Education, Training and Innovation was sent to the Permanent Secretary and permission was granted. A letter to the selected two HEIs was also sent to the institutions seeking permission to conduct this research and permission to collect data was granted. The letters explained the purpose of the study and what it entailed. Access to participants was made through contact with the Registrars of the universities to identify the years of admission of the students to the program.

The researcher and the participants agreed upon a date, time and venue for the interviews. During the interviews, participants were informed that they have the right to agree or refuse to participate in the research activities. Moreover, given that this study had the potential to evoke some emotions and stress, considering the experiences of participants, which may have not been pleasant and, as a result, the

researcher emphasised the confidentiality of information to maintain trust with the participants in the early phase of the interviews. According to Bos (2020), the participants must trust that the researchers will fulfil their responsibilities and protect the participants' interests, and to ensure this, an agreement was drawn up in which these duties are specified and communicated to the participants. During the data collection, alphabetic and numerical codes were used to represent the two selected HEIs and participants. While discussing the purpose of the study with the participants, the researcher shared her experience and some of her personal stories as a doctoral student. This helped create confidence and, in turn, inspired participants to share their stories.

4.8 Quality control of the study

Researchers have the responsibility of making their studies more trustworthy and credible. The question frequently asked by researchers is whether the credibility of the data and sufficient evidence collected support the claims, or whether the cumulative results should be released. According to Marshall and Rossman (2014), such concerns can be reduced by the dimension of trustworthiness. Lincoln and Guba (1985) defined trustworthiness as a criterion required for assessing how good a qualitative study is. Quality criteria for all qualitative research are credibility, transferability, dependability and confirmability (Korstjens & Moser, 2018). In further support of this claim, Hameed (2020) posits that confidence can be attained by demonstrating the trustworthiness of the study through credibility, confirmability, transferability and dependability. Hence, it is pertinent to address how the researcher established these four components to ensure trustworthiness of the study.

4.8.1 Credibility

Credibility is defined as the confidence that can be placed in the truth of the research findings (Macnee & McCabe, 2008). The basis of any claim to trustworthy knowledge is credibility. Lincoln and Guba (1985) argue that ensuring credibility is one of the most important factors in establishing trustworthiness. The measuring instruments used for any research must be both reliable and valid for the findings of the study to be credible. The credibility of this study’s findings was achieved by the use of multiple data sources through triangulation. To attain this, the researcher used semi-structured interviews and document analysis to collect data on attrition of doctoral

students in Namibian HEIs. This aided the researcher in gaining a comprehensive grasp of the phenomenon under investigation, authenticating the opinions of participants, and getting dense justifications and obtaining information overload.

During the entire process, a fieldwork journal was maintained to reflect new ideas, thoughts, and challenges and to enable the researcher to adapt the method of data collection as necessary. The findings were triangulated against the student integration theory. To reduce data misinterpretation and appreciate participants' experiences, a member-checking technique was used to cross-check transcribed interview information with participants.

4.8.2 Transferability

Transferability relies on the reasoning that findings can be generalised or transferred to other settings or groups. Polit and Beck (2004) defined transferability as the extent to which the findings can be transferred to other settings or groups. The context in which qualitative data collection occurs defines the data and contributes to the interpretation of the data. This study made use of thick description to show that the findings of the study can apply to other contexts, circumstances and situations (Shenton, 2004). On the contrary, since the study was conducted at two HEIs in Namibia with university status, the outcomes of the study are not generalizable.

4.8.3 Dependability

The dependability of qualitative data refers to the stability of data over time and conditions (Polit & Beck, 2004). This means that if another researcher wants to replicate the study, there should be enough information from the research report to do so and obtain similar findings as the study did. Therefore, it is important to state the principles and criteria used to select participants and detail the main characteristics of participants so that the transferability of the results to other contexts can be assessed (Moretti et al., 2011).

In this study, the researcher used an enquiry audit to establish dependability, which requires an outside person to review and examine the research process and the data analysis to ensure that the findings are consistent and could be repeated (Lincoln & Guba, 1985). According to Earnest (2020), an audit trail may include contextual documents including quotes from field notes taken during observation and interviews,

descriptions of the environment, people and location, methodological documents, analytic documents and personal response documents. Thus, the researcher sought the expertise of professionals in the field to scrutinise the data and requested peers to evaluate the findings of the study. The researcher then conducted a follow-up verification process with the participants to ensure the accuracy and consistency of the conveyed meanings.

4.8.4 Confirmability

Lincoln and Guba (1985) explain confirmability as the degree to which the findings of the research study could be confirmed by other researchers. This means that the findings are based on the responses of participants and not any potential bias or personal motivations of the researcher. In this study, the views of the participants were transcribed word for word as they were recorded during the interview sessions. This was done to ensure that the views of participants were correctly stated and captured.

All participants' narratives were double-checked to ensure they accurately reflected the participants' views and experiences on the attrition of doctoral students in Namibian HEIs. In addition, the researcher also provided a complete set of notes on decisions made during the research process, reflective thoughts, sampling, research materials adopted, the emergence of the findings and information about the data management (Lincoln & Guba, 1985). The use of multiple data instruments and sources yielded rich data and the views of participants were captured and recorded.

4.9 Chapter summary

This chapter presented the methodology employed in the study, including the approach, paradigm and design. The research employed a qualitative approach, an interpretive paradigm and a case study design to aid researcher-participant interaction and gain insights into the viewpoints and experiences of doctoral students regarding attrition. The researcher utilised purposive and snowball sampling techniques to select research sites and participants who possess extensive knowledge and experience regarding the attrition of doctoral students in Namibian HEIs. This study comprised doctoral students from the two selected HEIs in Namibia who registered between 2013 and 2019. The participants were either still pursuing or abandoned their studies. The study used semi-structured interviews and document

analysis to collect data to achieve an in-depth understanding of the phenomenon being investigated. To enhance the accuracy and dependability of the research findings, the study used a triangulation approach by comparing data obtained from semi-structured interviews and document analysis. In this study, thematic data analysis was applied.

The next chapter, Chapter 5, focuses on the presentation, analysis and interpretation of both the first and second main themes that surfaced from the data. The two themes are factors that lead to doctoral attrition and the implications of delayed doctoral degree completion. In addition, the data set yielded strategies and solutions relevant to the third and fourth main themes, which are presented in Chapter 6. These themes pertain to the experiences of doctoral students with institutional policies, structures and strategies that are associated with doctoral studies at their respective academic institutions, as well as potential retention strategies that could mitigate attrition. The theme derived from the analysis of institutional documents is incorporated in this chapter and is discussed accordingly.

CHAPTER 5: CAUSES OF DOCTORAL ATTRITION AND EFFECTS ON STUDENTS

"If knowledge is not put into practice, it does not benefit one."

-Muhammad Tahir-ul-Qadri-

5.1 Introduction

The preceding chapter covered the methodology employed in this study. The study's research approach, paradigm, design, site, sample, data collection method and data analysis were discussed. In concluding the chapter, the researcher addressed issues related to the trustworthiness and ethical considerations of the study.

This chapter presents and discusses both the first and second main themes that emerged from the data, namely, factors that lead to doctoral attrition and the probable implications associated with delayed completion of doctoral degrees. The discussion and analysis in underpinned by the utilisation of the student integration theory, which served as the theoretical framework for this study. The quote above serves to reaffirm the researcher's aspiration to undertake an investigative study aimed at comprehending the phenomenon of attrition among doctoral students in Namibian HEIs. The researcher posits that, in light of Namibia's aspirations to join the ranks of countries that are driven by Knowledge Economy, it is imperative to produce a substantial number of doctoral graduates who can effectively apply their knowledge to practical situations, thereby facilitating the country's attainment of its anticipated goal. Thus, the quote implies that the utilisation of knowledge in real-world scenarios is the sole means by which it can confer genuine benefits. Stated differently, the mere attainment of knowledge does not suffice to ensure success or advancement. Consequently, it is crucial to not solely pursue knowledge but also to actively implement it to fully capitalise on its advantages.

The researcher begins by presenting the first and second themes in the context of Tinto's theory of student integration. This is followed by a comprehensive analysis of Theme 1, which pertains to the factors that influence doctoral students to either prolong their academic pursuits beyond the designated period or to withdraw from their studies before completing their degrees. The last section considers the implications associated with delayed completion of doctoral degrees.

5.2 Themes 1 and 2 in relation to Tinto's student integration theory

According to the student integration theory by Tinto, a student's decision to continue or withdraw from university or college can be influenced by various factors such as academic challenges, lack of integration and difficulties in adjusting to the new environment. The data analysis table presented below provides a comprehensive analysis of the research findings on the first and second themes within Tinto's theory of student integration framework.

Table 8. Themes 1 and 2 data analysis table in relation to Tinto's student integration theory

Main theme	Tinto's student integration theory interpretation
Theme 1: Factors that lead to doctoral attrition	**Research supervision challenges:** *Lack of support and feedback* ❖ Tinto (1997) suggests that academic, social and personal support including mentorship programs, student clubs and informal student-faculty interactions help students persist and succeed in their academic pursuits. ❖ Students may feel disconnected and unclear about their research progress if their supervisors don't provide adequate support and feedback. This can lower motivation and output and increase attrition. This might cause emotions of isolation and disengagement, which can hinder academic performance. ❖ Tinto's (1993) suggest that students ought to be provided with retention programs that prioritize their support over that of the institution. *Limited knowledge of students' research topics* ❖ Tinto's theory of student integration suggests that supervisors who lack expertise in their students' research areas may encounter difficulties in providing valuable feedback and guidance. A lack of direction for students can lead to frustration and a sense of lack of direction, which can hinder their ability to provide effective guidance and support. This could result in students dropping out of a program. *Strained supervisor-student relationships* ❖ Tinto (1997) underscores the criticality of academic relationships in the context of higher education. Specifically, Tinto posits that the nature of academic engagements that students undertake at the institution is intrinsically linked to the quality of faculty-student relationships. ❖ Poor relationships between supervisors and students can lead to communication breakdowns, misunderstandings, and conflicts that can impede progress and hinder the development of important skills.
	Added pressure of personal, work and family responsibilities: ❖ Tinto suggests that students who can successfully integrate various aspects of their lives are more likely to persist and achieve success in their academic pursuits. However, for many students, striking this balance can be quite

Main theme	Tinto's student integration theory interpretation
	challenging. Studies have indicated that students who hold jobs while pursuing their education tend to face elevated levels of stress and are at a greater risk of discontinuing their studies.
	Lack of financial resources: ❖ Tinto's student integration theory recognises the significance of financial factors in the context of retaining students. ❖ According to Tinto (1997), the type of financial support provided by an academic institution is a crucial factor in determining student persistence. This support is part of the institution's commitment to ensuring the success and persistence of its students.
	Lack of interest and commitment: ❖ Tinto's theory of student integration highlights the significance of creating a nurturing and comprehensive academic environment that motivates doctoral students to completely integrate into the scholarly community and sustain their dedication towards academic endeavours. By addressing student integration challenges, HEIs and policymakers can facilitate the provision of essential skills and resources to doctoral students, which will improve their academic achievements.
Theme 2: Implications of delayed doctoral degree completion	**Effects of delayed doctoral degree completion:** ❖ To be successful in the pursuit of a degree, students need to achieve a level of commitment to their career, academic goals and the institution; without this integration, the failure to persist is likely. **Student persistence strategies:** ❖ Academic and social integration constructs can influence the student retention processes.

Tinto's student integration theory posits that student integration into the academic community is a critical factor in their academic success. As can be seen from Table 8 above, the current study has yielded distinctive research findings concerning the first and second themes, which have been presented and analysed within the framework of Tinto's theory of student integration.

The first theme, centred on the factors that lead to doctoral attrition, revealed that students are confronted with various obstacles that can hinder their academic progress. The underlying causes for these factors may be ascribed to the integration of students into the academic and social system of the institution. According to Tinto's theory of student integration, institutional support plays a crucial role in

facilitating the integration of students. This suggests that the provision of sufficient institutional support can have a substantial impact on the academic and social integration of students. The provision of assistance includes but is not limited to, academic guidance and mentoring as well as opportunities for interpersonal connections. In addition, drawing from Tinto's theory of student integration, students who experience a sense of integration within the academic and social aspects of the institution are more inclined to persist and achieve success in their academic endeavours. Hence, it is imperative for institutions to prioritize the provision of sufficient support to enable students to overcome the challenges that they face and integrate effectively into their institutions.

The second theme delves into the implications of delayed doctoral degree completion. Tinto's student integration theory posits that the degree to which students feel integrated into the academic community is a crucial factor in their persistence and success. Thus, it is likely that students' delayed completion of a doctoral degree may impact their sense of integration and consequently their academic outcomes. The following section provides an in-depth discussion of the findings on the first main theme of the current study.

5.3 Theme 1: Factors that lead to doctoral attrition

The in-depth interviews demonstrated that the experiences of doctoral students, who were the participants of this study, were influenced by various factors. The current study's findings indicate that research supervision challenges were the primary impediment to the progress of participants, as reported by a significant majority, if not all, of the participants. The current study's findings align with previous studies which found that challenges in research supervision are the main contributing factors to the prolonged completion of doctoral degrees (Mbogo et al., 2020).

Likewise, the findings presented in this chapter demonstrated conclusively that research supervision is a critical element in the successful completion of a doctoral degree. The findings reveal that four factors related to research supervision were responsible for the delay in doctoral degree completion namely lack of support and feedback, limited knowledge of students' research topics, strained supervisor-student relationships and the heavy workloads of supervisors. Participants have also reported additional factors that hinder their academic success. These factors include added

pressure of personal, work and family responsibilities, lack of financial resources and a lack of interest and commitment shown by policy-makers, researchers and prospective participants in their studies.

The inability to complete a doctoral program within the expected timeframe or to finish the degree in its entirety could indicate inadequacies and a lack of efficiency in higher education. Hence, a critical analysis of factors that contribute to this phenomenon is essential for devising effective strategies to mitigate the negative consequences of prolonged or incomplete doctoral studies. This theme emphasises the most significant factors the participants have encountered since commencing their doctoral journeys. At the onset of the interviews, the researcher needed to focus on this aspect for two reasons: (a) to gauge the perspectives of participants concerning their extended academic pursuits; and (b) to assist the researcher in devising important additional questions, considering the sensitive nature of the research in question.

The findings in this study show that various factors influence the attrition of doctoral students at HEIs in Namibia. The findings in this section are supported by the relevant literature reviewed that focuses on factors that hinders doctoral degree completion. To display the consistency between this finding and literature, the researcher chose to discuss the findings in terms of international, regional and local literature. It is important to note that there is little knowledge on the phenomenon under study in the Namibian context. Thus, literature on local literature is very limited in this discussion. This chapter focuses on the elicited four sub-themes and eight categories as identified by the participants. The sub-themes and categories discussed in this chapter are illustrated in Figure 7 below.

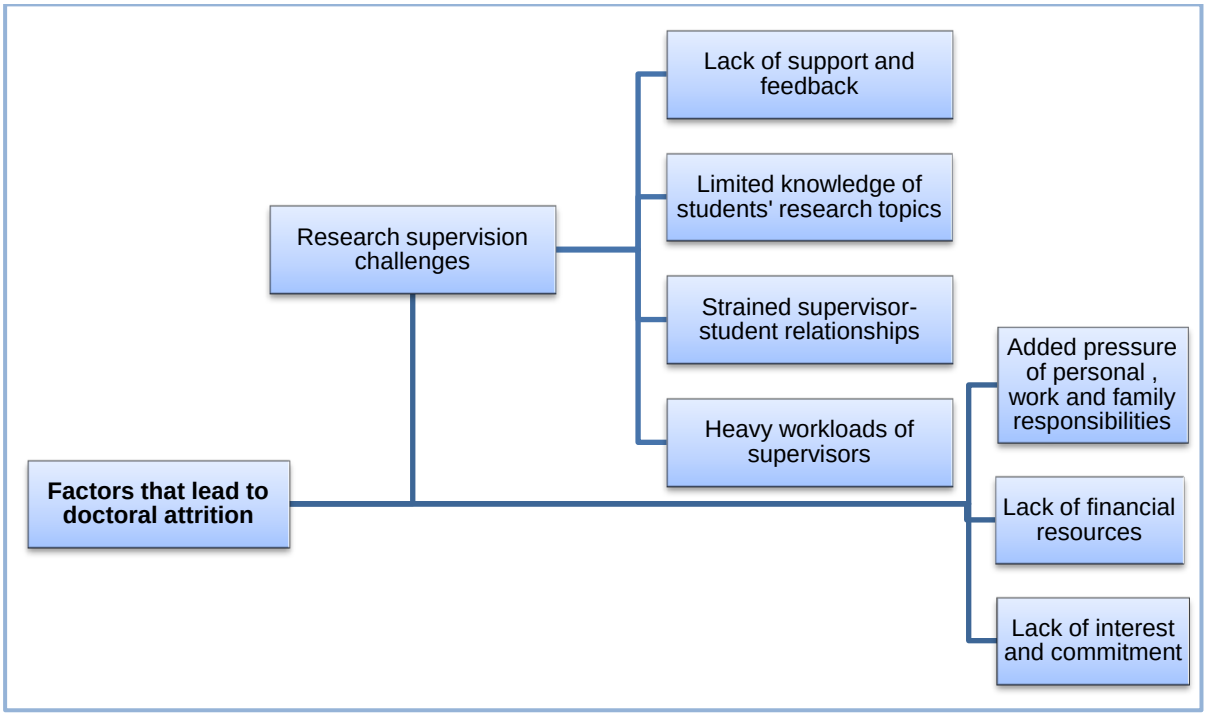

Figure 7. Factors that lead to doctoral attrition

Source: Author's own construct (2023)

5.3.1 Sub-theme 1: Research supervision challenges

Numerous studies have identified research supervision as a crucial factor in the successful completion of postgraduate studies (Abiddin et al., 2011; Cekiso et al., 2019; Sidhu et al., 2013). This sub-theme focuses on particular issues that doctoral students experience in their interactions with their research supervisors. The majority, if not all, of the participants have identified supervision as the primary barrier impeding them from completing their studies. Based on the findings, the majority of supervisors do not live up to their responsibilities, which leads students to give up on their studies along the way. Four categories of thought relating to the personal experiences of participants of supervisors emerged from this sub-theme. The four categories are discussed hereunder.

Category 1: Lack of support and feedback

Despite the advanced level of education that doctoral students have achieved, it is imperative to acknowledge that they still require support to excel in their academic pursuits. When aspects relating to research supervision were investigated, it emerged that the provision of support and feedback to students by their supervisors

is currently inadequate. However, there is a potential for improvement in this area, as timely and effective support during the proposal and dissertation phases can greatly benefit students and enhance their academic success. The assertion is substantiated by the following verbatim excerpt:

> *It is expected that there would be a supportive environment that allows students to focus on their studies. This should include supervisors that are available to assist students since they have the knowledge and skills to improve the quality of the students' work (IAS1).*

This category demonstrates the crucial role of providing sufficient support to students in fostering their engagement and motivation, particularly in light of the formidable obstacles they encounter. The provision of adequate student support would assist students in overcoming isolation and assist them in integrating into the institution. On the other hand, lack of support would lead students into isolation and leave them at risk of dropping out and thus contributing to statistics on the high attrition rate of doctoral students. The findings suggest that without such support, students are at risk of becoming disengaged and demotivated. Chapter 2 of this study highlights the pivotal role of the supervisor in providing guidance and support to students as they navigate through the processes of research. As Nygaard and Savva (2021) suggest, the supervisor's role becomes crucial in guiding students through unfamiliar ground given the complexity and unpredictable nature of the research process. However, it is imperative to acknowledge that the research process is inherently complex and unpredictable, and thus, necessitates a critical and optimistic approach towards finding solutions. The current study indicates that students may exhibit a decreased inclination to persevere with their academic endeavours when their supervisors are not fully engaged. This finding emphasises the importance of active and committed supervision in promoting the academic success of students. However, it is also crucial to note that this finding points out the need for further research to explore the complex interplay between student motivation and supervisor involvement in academic pursuits.

In addition, the current scenario may be interpreted by students as a potential indication of the lack of interest of their institutions in their contributions, potentially leading to a shortage of drive and/or a sense of unimportance. According to Hawkins and Larabee (2009), students must feel welcome at the university, that they are

valued and that their demands are significant. Specifically, in line with Tinto's (1993) theory of student integration, the findings suggest that students' sense of belonging and perceived value within the academic community are critical factors in promoting their academic success and overall wellbeing.

The participants in the study also revealed that the feedback provided by supervisors to them was often delayed. The prolonged waiting period for feedback provision was seen as a significant concern as it hampered the students' capacity to adjust their work. The following participant's reflection sheds light on the impact of feedback absence on academic progress, resulting in a delay of nearly two years.

> *…I had to wait two years before my proposal could finally be approved. There are situations when the supervisor is not even keen to look at the proposal you have submitted (IAS7).*

The above quote suggests that students undergo an unfathomable experience, like enduring a two-year wait for feedback from a supervisor. However, while the delay of nearly two years is undesirable, it serves as a valuable lesson for the participant and emphasises the need for clear communication and feedback in academic settings. Several academics contend that timely, constructive and high-quality feedback is crucial for facilitating and supporting doctoral students (Deshpande, 2017; Rauf, 2016). This is because feedback allows doctoral students to determine which aspects of their writing are appropriate and which need development, as well as their strengths and weaknesses in academic writing (Manjet, 2016). This renders the aspect of effective feedback indispensable and unavoidable at all times. Thus, effective communication between the student and supervisor is imperative in facilitating progress on the research project. However, according to the findings of this study, one of the challenges encountered by the participants was the issue of communication between the two parties. The participant responses presented below are evidence for this assertion:

> *My supervisor did not communicate with me for the whole year (IAS2).*

> *I had to wait for almost three to four months before I could get the feedback from my supervisor (IAS3).*

…the process of receiving inputs from the supervisors on chapters proves to be cumbersome since supervisors are always busy (IAS8)

These quotations indicate an apparent imbalance in the dynamics of the relationship between students and their respective supervisors. The researcher in this study believes that the absence of proper guidance and instruction can lead to a lack of clarity and coherence, resulting in a below-average research output. The current study revealed that participants expressed their dissatisfaction with their respective faculties, particularly concerning the provision of feedback that is deemed to be insufficient and delayed. However, despite these reports, no remedial measures have been implemented to address the issue, leading to a sense of disappointment and stress among the students. The current findings are consistent with the study carried out by Cekiso (2019), which found that students faced challenges in terms of obtaining feedback from their supervisors, which included insufficient feedback, feedback lacking constructive elements, inconsistencies in the feedback given by supervisors for the same content, delayed feedback, inadequate attention, guidance, or interest from supervisors.

Moreover, the study participants expressed their opinion that the supervisor's delay in providing feedback could be attributed to insufficient coordination of tasks and deadlines, coupled with an absence of explicit expectations between the student and the supervisor. This lack of coordination and explicit communication could result in a situation where the supervisor is unable to provide timely feedback, leading to possible fallout in the supervisory relationship.

The significance of communication in the academic realm has been highlighted by Bireda (2019), who posits that students place considerable weight on getting support, feedback, trust and effective communication from their supervisors. Similarly, Ismail et al. (2013) have identified several effective attributes that are deemed essential for supervisors. These include the consistent provision of motivation, having relevant research experience, providing support and facilitating interaction and opportunities. In addition, Le et al. (2021) assert that effective supervision requires solid communication and support skills to facilitate the timely completion of doctoral research by students. Thus, the supervisor has the responsibility of maintaining

effective communication as part of the implicit or explicit supervisor-student relationship.

The current study postulates that the lack of support and feedback provided to students pursuing a doctoral degree could stem from the supervisors' assumptions regarding the students' degree of scholarly preparedness. The data presented in Chapter 2 of this study indicates the majority of supervisors expect that their students possess the necessary skills to function as autonomous scholars, capable of working effectively on their own. However, Mouton et al. (2015) contend that a significant proportion of potential doctoral students exhibit insufficient preparedness for doctoral-level studies, which includes a lack of research skills and inadequate ability in academic writing. This argument aligns with the findings of Fetene and Tamrat's (2022) research, which identified one of the primary factors contributing to delays in doctoral studies as the unpreparedness of students to meet the demands of thesis proposal and dissertation writing. Specifically, their study revealed that while doctoral students found coursework to be manageable, they encountered significant challenges in generating an original proposal or dissertation. The assertion is substantiated by Manjet's (2015) findings, which suggest that graduate students face difficulties in their scholarly writing endeavors with regard to articulating their ideas, establishing linkages between concepts, organising their assignments in a logical sequence and maintaining accuracy in their writing.

According to Evans and Stevenson (2011), another conceivable explanation for the lack of support and feedback could be that supervisors fail to carefully review students' work. Given the lack of efforts made to assist their students succeed, this denotes inadequate service delivery to their clients, in this case, doctoral students. Several scholars argue that it can be challenging to receive feedback that is vague, general, non-specific and unclear (Ali et al., 2019; Ding & Devine, 2018). This implies that doctoral students need supervision that is geared toward assisting them in producing novel and worthwhile knowledge that could help to build their reputations as highly educated and capable professionals in their respective fields.

In contrast to the findings of this study, some authors expressed criticism towards this concept of support and feedback to students as it may diminish the degree of ownership that students feel towards their research. According to Herrmann and

Wichmann-Hansen's (2017) argument, excessive feedback has the potential to diminish the students' sense of ownership over their work. This may occur when students accept all comments made by their supervisors. Over-reliance on the supervisor's inputs may occur over an extended period, as noted by Nasiri and Mafakheri (2015). The researcher in this study posits that in instances of this nature, it is imperative to maintain a suitable balance between the workload assigned to students and the feedback provided by supervisors. This practice has the potential to cultivate a feeling of ownership concerning the academic output generated by the student. Nonetheless, the underlying fact remains that doctoral students cannot produce original work to contribute to knowledge production without the guidance, mentoring and support of their supervisors.

The findings of this study indicate that, overall, research supervisors perceive a lack of adequate support from their supervisors. Drawing upon the theoretical framework underpinning this study, Tinto (1997) contends that one factor contributing to persistence is the provision of regular and timely feedback on the performance of students during the learning process. This feedback is particularly effective in promoting persistence when it is provided early on in the learning experience. This assertion implies that the absence of effective feedback and support from a supervisor can be considered a detrimental factor that may delay the success of doctoral students.

Although research supervision is widely acknowledged as a critical element of doctoral studies, this study reveals that many supervisors do not fulfil their obligations, potentially leading to student attrition. This particular situation maintains significant importance for supervisors regarding providing feedback and support to students during the important phases of academic writing. According to the researcher in this study, the importance of these phases lies in their complexity and the attributes necessary to apply critical thinking to a comprehensive review of pertinent literature. It is concerning regarding the apparent lack of recognition among a significant number of doctoral students' supervisors regarding the importance of their role in facilitating the success of their students. Based on the preceding, this study argues that effective communication and feedback from supervisors are essential in guiding students throughout the research process, fostering critical thinking skills, and addressing any obstacles that may arise.

Category 2: Limited knowledge of the students' research topics

The scholarly work of Tahir et al. (2012) posits that the optimal supervisory relationship is marked by the qualities of approachability and flexibility, with the supervisor serving as a resourceful expert. This category highlights the issue of students being assigned supervisors who exhibit inadequate subject expertise of their research areas. Supervisors play a pivotal role in guiding students, thereby serving as the foundation of quality research at any institution of higher education. It is expected that doctoral students receive guidance from a qualified individual who possesses specialised knowledge in a particular field, has a track record of published research, and can produce high-quality work. Locating all of this can be challenging, owing to the dearth of professorial positions within the Namibian tertiary education landscape. One of the participants highlighted that the lack of adequate knowledge on the related subject matter by supervisors can result in inadequate guidance and potentially lead to neglecting the student. This is confirmed verbatim as follows:

> *The fact that there is a limited number of professors at HEIs in Namibia is contributing to the lack of research supervision capacities at the doctoral level at such institutions (SIA4).*

> *After three months, the first supervisor who was allocated to me told me that my research topic was not in his field and stopped supervising me. I ended up not having a supervisor for two years. I was then assigned a supervisor in the third year who was not happy with my proposal that I have been writing on my own for two years with no guidance, so I was told to start over and my proposal was approved at the end of the third year. Right after my proposal was approved, my supervisor resigned and another supervisor was recently appointed (IBS8).*

> *Getting a supervisor on time who specialise on your field is another problem. This brings delays because you cannot progress without a supervisor or with a supervisor who does not understand your field (IAS6).*

The above findings align with what the existing literature has reported: in some instances, supervisors do not have enough knowledge of the student's study topic to offer insightful feedback to aid doctoral students in finishing their studies (Mwangi, 2022). This study's findings suggest that inadequate supervisors' expertise is another barrier that students sometimes face.

Literature maintains that a good supervisor cannot be a competent advisor on topics in which he lacks in-depth specialised knowledge because supervision is primarily the act of observing the work of someone who lacks complete knowledge of what they are doing or the concept at hand (Almusaed & Almssad, 2020). Ladany et al. (2013) support this argument by asserting that quality supervision entails an expert in a specific field guiding a doctoral student through conveying gathered helpful information. Hence, if the supervisor lacks subject knowledge, some students may have a more profound subject knowledge than their supervisors (Gunnarsson et al., 2013), leading to their supervisors' inability to significantly contribute to the student's research development which could negatively affect research output and dissertation quality. Based on what participants said, the researcher established that there is a scarcity of doctoral-level research supervision in Namibia. This insufficiency may result in inadequate supervision of outstanding research at several HEIs in the country.

Participants expressed how some supervisors become autocratic or dictatorial towards the students' research focus within this category. This mainly occurs when the supervisor has little expertise in the subject matter. Participants emphasised that despite supervisors being appointed based on the student's research interest, given their knowledge and expertise in specific areas, some supervisors often feel uneasy with some topics and would attempt to change even when the student does not agree. It was reported that:

> *…Sometimes, there is a lack of understanding between the supervisors and the students regarding the research topics, and the supervisors compel students to do research in areas that are not significant or not of interest to them (IBS1).*

The quotation above shows that individuals who enrol for doctoral programs already have a predetermined area of research in mind. However, they are sadly compelled to divert from their research interests and focus on areas of study that do not interest them if the supervisors do not agree, or are not comfortable with the topic. Because of that, they are likely to ask the student to make changes, resulting in the research study losing its focus and further delaying the completion period. Based on what participants alluded to regarding the constant reallocation or re-appointment of supervisors, it is clear that Namibia has a dearth of research supervision capability at

the doctoral level. Tinto's theory of student integration posits that students come with pre-determined ideas of what they know and want to learn.

Mahlangu (2021) believes that the allocation of incompetent supervisors could be attributed to the heightened need for higher education, specifically at the doctoral level, which may result in certain institutions or departments experiencing a shortage of doctorate holders in faculties to supervise doctoral students The researcher in this study asserts that a significant threat to the success of students lies in the lack of appropriate discipline among supervisors tasked with their supervision. The potential compromise of research outputs may adversely affect HEIs as a whole. In numerous cases, the primary issue pertains to the inability of supervisors to aid the student in comprehending the full context of the research and the suitable methodology to bridge the gaps in knowledge that the research aimed to address.

Category 3: Strained supervisor-student relationships

According to Akparep et al. (2017), the effective completion of the thesis directly affects the relationship between the supervisee and supervisor. The current study discovered that strained relationships between supervisors and students represent a significant hindrance to the timely success of doctoral studies. Prior research has emphasised the significance of supervisors cultivating positive relationships with their students. Almusaed and Almssad (2020) assert that supervisors must establish favourable rapport with students and maintain an impartial stance to prevent any negative events in their relationships. Previous studies have shown that relationships between supervisors and students can be strained. Due to this, there is a potential that completion will be delayed, which could also lead to significant attrition of doctoral students within HEIs.

The study revealed that certain supervisors intentionally prolong the academic progress of their students due to personal grievances or unresolved misunderstandings between them. The necessity for a favourable environment and mutual understanding is emphasised by participants as follows:

> *Some supervisors or individuals delay students for personal issues that they have against them. When some students complain to the institution regarding the lack of support from their supervisors, it becomes personal, and they find themselves being delayed unnecessarily (IAS2).*

Similarly, Mbogo et al. (2020) contend that conflicts may arise in the student-supervisor relationship due to discrepancies between the guidance required by students and the prescribed approaches they perceive, making it challenging to achieve an optimal balance. This finding aligns with the assertions made by Gunnarsson et al. (2013) regarding the prevalence of conflicts between doctoral students and their supervisors, which have the potential to escalate and elicit intense emotional responses. Thus, supervisors and students must engage in a discussion regarding their respective expectations at the beginning of the research process (Almoustapha & Uddin, 2017; Masek & Alias, 2020).

As previously mentioned, a possible disagreement between the supervisor and the student, possibly stemming from a misunderstanding, can hinder academic progress and timely completion. The existing literature substantiates the contention that disagreement between the two parties is a prevalent phenomenon, wherein the research subject matter could be the significant contributing factor to such disputes. However, Bernery et al. (2022) posit that throughout the doctoral journey, both the doctoral student and the supervisor are subject to a degree of uncertainty and lack of control over the outcomes of their efforts. Thus, it is imperative for doctoral students to maintain an optimistic mindset and draw on the unique opportunity provided, despite the likelihood of encountering setbacks.

Inferring several authors, the relationship between the supervisor and the student during supervision significantly affects the student's academic success. According to Le et al. (2021), it is generally agreed that the success of a doctoral program depends on the quality of supervision and the academic interaction between supervisors and students. This is consistent with Al Makhamreh and Stockley (2020) and Mbongo et al.'s (2020) explanation that establishing a positive doctoral relationship is essential to the student's success. Similarly, Almoustapha and Uddin (2017) claim that doctoral students' success in both the academic program and their professional career can be influenced by their relationship with the faculty, particularly their supervisor.

Insofar as participants mentioned the type of supervision they have been receiving from their supervisors, the following three categories of supervision described by Almusaed and Almssad (2020) are congruent with the findings of this study. To begin

with, an instance of abusive supervision can be observed when a supervisor engages in behaviour that involves demeaning students and attributing their shortcomings or errors to their actions.

Secondly, the phenomenon of ghost supervision, wherein the supervisor's presence is infrequent and their responsiveness to emails is limited. Finally, the phenomenon of controlling supervision is characterized by a supervisor who micromanages the student's research, requiring updates on every issue ranging from the selection of the topic for the subsequent publication to the approach for the following investigation. Under this type of supervision, the student has limited autonomy in managing their research.

The researcher in this study posits that specific supervisors exhibit comparable traits as outlined by Almusaed and Almssad (2020). According to the participants, particular supervisors exhibit an instinct for inducing a sense of underperformance in students by implying that their lack of progress is attributable to insufficient effort or a lack of competence. The study's participants conveyed that certain supervisors exhibit a high degree of authoritarianism by dictating the content that students should produce. Additionally, some supervisors are infrequently present or unresponsive to student inquiries. The literature suggests that while a favourable supervisor-student relationship positively impacts the throughput rates of students, supervisors may face constraints in fulfilling all roles simultaneously, which can hinder the completion of doctoral degrees of students (West & Gokalp, 2011).

On the other hand, despite the purported significance of supervisors, extant literature suggests that many supervisors lack the necessary institutional support to effectively cultivate such relationships. The insufficiency of support is frequently attributed to inadequate supervision process training, as Mapesela and Wilkinson (2005) emphasised. Consequently, HEIS must address this issue by equipping supervisors with essential resources and training to navigate the complex dynamics of the supervisory relationships. This includes establishing clear goals and expectations, providing constructive feedback and fostering a supportive academic environment.

Drawing on the theoretical framework that informs this study, Tinto's (1993) student integration theory posits that student-faculty interaction plays a crucial role in facilitating student integration into the social and academic systems of their

educational institutions. This assumption highlights the significance of student engagement with faculty members as a key factor in their overall success and sense of belonging within the institution. By emphasising the importance of this interaction, Tinto's theory underscores the potential impact that faculty-student relationships can have on students' overall educational experience. One potential strategy to enhance faculty members' institutional commitment and reduce the likelihood of their withdrawal is to foster a more informal and interactive environment for faculty-student interactions through open and casual communication channels between faculty members and students. This approach recognises the importance of building strong relationships and rapport between faculty and students, which can contribute to a sense of belonging and loyalty to the institution.

Category 4: Heavy workloads of supervisors

The study's findings reveal that a further challenge doctoral students encounter is the limited supervision their supervisors provide due to their daunting workloads. Supervisors attribute their inability to provide sufficient attention to their students to overwhelming teaching workloads. Similarly, Akala's (2021) findings on the challenges encountered by doctoral supervisors in their interactions with their doctoral students in South African universities revealed that a significant proportion of supervisors reported a heavy workload, which they attributed primarily to the changing demands of their academic and administrative responsibilities; all of which contribute to elevated stress levels among doctoral supervisors. Askew et al. (2016) also argued that the duties of academic supervisors for doctoral students are extensive and challenging, as they involve managing their own research goals and overseeing other postgraduate students, such as those pursuing a Masters or Honours degree.

Consequently, due to time constraints, supervisors cannot give sufficient attention to the research supervision of their students. The participants in this study said:

> *Supervisors are normally academic staff who are also involved in teaching (IBS12).*

> *Supervisors normally blame the lack of attention they give to their students on the teaching workload being too much, leaving them with little time to focus on students' research supervision (IBS14).*

The current study's findings align with those of Almoustapha and Uddin (2017), who assert that the development of academic pursuits is considerably impeded when supervisors are preoccupied with other responsibilities and fail to give adequate attention and time to engage in discussions about the research of their students. In addition, the findings also align with the CHE and the Centre for Research on Evaluation, Science and Technology's (CREST) 2010 report on doctoral education, which reveals that South African academics are progressively restricted with an impracticably increased responsibility of supervising postgraduate students (CHE/CREST, 2009). This aligns with the perspective posited by Yousefi et al. (2015) that a significant institutional factor in doctoral supervision is the notable burden of responsibilities endured by faculty members tasked with overseeing the progress of doctoral candidates. Kimani (2014) and Naidoo and Mthembu (2015) support that an upsurge in the number of students pursuing graduate studies has culminated in a marked increase in the teaching responsibilities of academic faculty in tertiary institutions.

Similarly, Chapter 2 presents an in-depth look at the adverse effects of an overwhelming workload of supervisors on the progress of students' research. El-Deeb (2016) conducted an analysis that revealed that academic supervisors face challenges in fulfilling their duties. These challenges include limited availability due to extensive academic and teaching obligations and involvement in scholarly conferences and committees. This argument is corroborated by Mwangi (2022), who argues that institutional factors, such as the rigorous workload assigned to graduate faculty members who supervise doctoral candidates, exert a considerable influence on the supervision of dissertations. According to Mwangi, the workload results from insufficient resources allocated towards staff development and an inadequate framework for doctoral supervision.

This study argues that the matter of supervisors experiencing feelings of being overwhelmed and overworked may have significant negative implications for students and may potentially induce attrition. According to Akala's (2021) assertion, students who struggle to handle an excessively burdened supervisor may consider changing supervisors or discontinuing their academic pursuits. To provide their students with the necessary guidance and support, the above findings demonstrate the need for supervisors who are solely responsible for supervision with limited teaching

responsibilities, which is hard to balance as an improved workload implies additional costs to the institution in hiring additional staff, which in turn implies higher costs of tuition for students. The ramifications for additional staff sharing the demanding workloads of supervisors ripple towards higher costs.

The challenges faced by doctoral students in the realm of supervision underscore the significance of adequate supervision in research, particularly in the context of doctoral studies. This study highlights the importance of comprehensive supervision involving the student, supervisor and institution to ensure the best possible outcome and timely completion of doctoral programs. Ngozi and Kayode (2014) suggest that the time of the research phase is influenced by the supervision process, which depends on the actions of the students, supervisors and universities. This study put forward that supervision quality significantly impacts the duration of the research phase by affecting the student's capacity to navigate the intricate academic inquiry process and produce high-quality research outputs. This illustrates the importance of universities implementing effective supervision frameworks that facilitate positive and constructive interactions between students and supervisors. The limited research supervision, as viewed through the lens of Tinto's (1993) student integration theory, has a significant adverse impact on the support provided to students for their development and success in the academic domain. This assertion posits that without adequate supervision, progress may be hindered, consequently impeding the overall success of obtaining a doctoral degree.

5.3.2 Sub-theme 2: Added pressure of personal, work and family responsibilities

This sub-theme references the temporal constraints that doctoral students encounter in pursuing academic advancement. The findings of this study pointed out that participants have a limited amount of time available for their studies due to their full-time employment and other personal obligations. In addition, participants reported that simultaneously working and studying has a detrimental impact on their completion times, as revealed in the quotes below:

> *Most of us are working. You are at work from morning until late in the afternoon or evening. You are so exhausted at the end of the day that you have no energy to study (IBS4).*

> *It is nearly impossible to balance office employment and academic responsibilities because of time constraints. Given the fact that I have a job that requires a lot of my time and often extends into weekends, I have very little spare time to devote to my academic pursuits, which means that my education frequently takes a back seat. Due to the fact that the research work requires additional reading and is time intensive, it is very difficult to study on a part-time basis while maintaining a full-time job and being responsible for a family (IAS8).*

The findings stated above align with Hovdhaugen's (2015) study, which suggests that several potential factors can contribute to student attrition, with one of the most commonly cited factors being the challenge of balancing employment with academic pursuits. Hovdhaugen (2015) conducted a study that utilised survival analysis to analyse the impact of employment status on dropout rates. The study revealed that the employment status of students significantly influences their likelihood of dropping out. Specifically, those who engage in full-time employment while simultaneously pursuing full-time studies exhibit lower program completion rates compared to their counterparts who work part-time or not at all. Hovdhaugen further emphasises that employment status in the analysis does not change the effect of variables known to have an influence on dropout, such as academic performance, gender and socio-economic background; however, it does provide additional insights into the identification of students who are at risk of dropout.

In addition, Sverdlik et al. (2018) disclosed that many doctoral students strive to balance their academic work with their family and social responsibilities, necessitating challenging decisions concerning priorities and resource allocation. The findings of a study carried out by West et al. (2011) involving a sample of 103 doctoral students in education, which examined obstacles and difficulties encountered during their studies, revealed that 60% of students encountered difficulties in managing their time efficiently and achieving a balance between their academic and personal obligations. This was compounded by other challenges, such as maintaining a full-time job and coping with financial constraints which also aligns with Motseke's (2016) assertion, that doctoral students face time constraints, necessitating dividing time between work, family, and academic pursuits. Consequently, some responsibilities may be neglected, postponed, or mismanaged.

The findings indicate that doctoral students face time constraints in dedicating themselves to their academic pursuits, owing to personal obligations such as family-related and occupational responsibilities. The student integration theory posits that their employment influences doctoral student attrition during their studies (Tinto, 1993). According to this theory, students primarily engage with their peers and faculty members within the learning environment, leading to increased commitment to the academic institution and a greater likelihood of completing their studies. The theory further posits that the social integration of students is contingent upon their physical attendance at the institution. However, the study participants stated that achieving consistent socialisation on campus is unfeasible due to their work and other commitments, making it a practically unattainable goal. It is thus argued that attaining a doctoral degree demands a significant commitment of time and effort due to the extensive reading required to comprehend established existing knowledge and produce innovative and relevant knowledge. Such challenges add pressure to not being able to interact with peers, faculty members or supervisors sufficiently. If students can find the balance between all the roles exercised during doctoral studies, then the ability to establish meaningful relationships and networks of support will prosper.

5.3.3 Sub-theme 3: Lack of financial resources

It has been reported that education is very costly, especially at the doctoral level and such financial constraints pose a notable hindrance to the successful completion of doctoral studies in Namibian HEIs. This includes the financial responsibility of paying registration, tuition fees, research expenses and personal obligations. Participants explained how difficult it is to finance their studies even though they have a monthly income, which mostly takes care of other responsibilities:

> *Most of us are paying from our pockets, we are working but we have families to take care of. This has negatively affected me financially because I have been paying from the services I never got and wasted my time and money without the guidance from the institution (IBS4).*

Some participants have reported that they resort to acquiring loans to finance their studies, expecting that such endeavours will lead to improved career prospects in the future, thus easing the repayment of their debts. It was reported:

…there is no provision in Namibia for funding postgraduate studies, especially at doctoral level (IAS1).

Students have to pay for themselves with no financial assistance or scholarship to pay for tuition fees and carry out their research activities and this requires a lot of money (IBS1).

…there was a year I could not afford to pay for my studies (IBS8).

In a meta-analysis of previous studies from the National Postsecondary Student Aid Study (NPSAS; 1991–2005), Gururaj et al. (2010) found that more loan availability was associated with decreased attrition. They also found that the availability of loans enabled graduate students to meet their financial obligations, which allayed some financial stress and improved their ability to focus on their studies, even though this contributed to substantial student debts. Borrowed funds may lead to future financial instability and challenges with interest owed to pay off the bank loan.

It was clear from the interviews with participants that regardless of their full-time paying jobs, they still need financial assistance to fund their studies.

The fact that one has to keep paying while there is no progress is frustrating, and each year you are expected to register and pay (IAS2).

Several authors indicated that the most common factor that could inhibit doctoral students' degree completion is the lack of financial resources (Ampaw & Jaeger, 2012; Belasco et al., 2014; Kuhl et al., 2014). The findings correlate with van der Haert et al.'s (2014) study of 3 092 doctoral students across disciplines, which found that students without financial support showed the highest withdrawal rate than those with research funding. In support of these assertions, Cornwall et al. (2019) also observed that financial constraints concerning continued employment and the ability to satisfy financial commitments were a significant source of pressure. Similarly, Lim et al. (2019) asserted that one of the challenges faced by doctoral students is balancing the needs of their families with the demands of their academic work since they must manage their finances to secure adequate funding for their studies.

According to Nevill et al. (2007), financial support is the most significant aspect influencing the capacity of students to complete doctoral degrees. In addition, Tinto (1993) argues that the amount of financial aid provided greatly influences a doctoral

student's involvement in the program, as time spent by students on supporting themselves is valuable learning time spent away from the demands of their candidature. Tinto's (1993) model highlights that the student's ability to pay for their studies and retention are closely linked.

5.3.4 Sub-theme 4: Lack of interest and commitment

This sub-theme captures significant diverse viewpoints expressed by participants regarding the reluctance and unwillingness of potential participants to participate in research activities. Participants indicated that after obtaining permission to collect data from organisations, businesses or the government, students must still battle to convince participants to participate. The findings indicated that sometimes when researchers approach prospective participants, there is hesitancy to take part in the study or to provide information. In addition, it was reported that it is not easy to gain permission from organisations or ministries to collect data since these entities are overwhelmed by the influx of requests for permission from academics to collect data. Participants explained as follows:

> *… when it comes to data collection, the majority of participants are unwilling to complete your questionnaire or take part in the interviews, and this in itself creates an obstacle for your research (IBS1).*

> *People do not have the time or interest to constantly respond to research requests. Sadly, without data, research cannot be completed (IAS2).*

> *My respondents were members of management cadres like executive directors, chief regional officers, deputy directors and directors, all of whom were constantly busy or out of office on official trips, which caused my data collection phase to take very long to be completed. In addition, interview appointments weren't really kept, and the self-administered questionnaire, which the majority of respondents indicated was their preference, took a very long time to be completed (IAS8).*

The finding is consistent with Rimando et al. (2015), who emphasised that during the data collection phase of their dissertation study, early-career researchers, such as doctoral students, may encounter unforeseen challenges for several reasons. Challenges that may arise during data collection can involve research with human subjects using interviews or focus groups. In support of this assertion, Ashton (2014) also stresses that participants might become uncomfortable or emotional while

sharing personal experiences on sensitive topics during the interview and if the phenomenon being investigated was extremely sensitive and had the potential to elicit strong emotions from participants interviews they could even express anger in their refusal to participate.

The findings of this study revealed a lack of attention from policymakers and government officials toward students pursuing research in diverse fields in the country. The data collection process remains a challenge in Namibia, despite obtaining permission to conduct the research. However, this challenge presents an opportunity for further exploration and innovation in academia, ultimately leading to improved data collection methods and more robust research outputs. This current observation indicates a potential gap in the general public's awareness of the considerable advantages that research inquiries can offer a nation and its potential for enhancing the socio-economic growth of a given society. This responsibility lies with officials in high positions in government or private sectors as a significant factor contributing to this disparity is that neither the national nor the institutional levels have efficient information-gathering mechanisms for research purposes. Hence, the study found that policymakers and other stakeholders do not pay close attention to the increasing delays in awarding doctoral degrees in the country.

The first section of this chapter focuses on the main theme of the factors that lead to doctoral attrition. Nonetheless, the data gathered also revealed significant implications of these factors on students, academic institutions and society. The subsequent section of this chapter delves into the second main theme that surfaced from the data, namely, the effects of delayed doctoral degree completion.

5.4 Theme 2: Implications of delayed doctoral degree completion

This section provides an in-depth discussion and analysis of the second main theme that was derived from the data. It centres on analysing the implications that arise from delayed completion of a doctoral degree and the consequential impact on the students and the broader society. This section further delves into various strategies that students employ to cope with delayed completion. Within this overarching theme, two sub-themes were identified, as depicted in Figure 8 below.

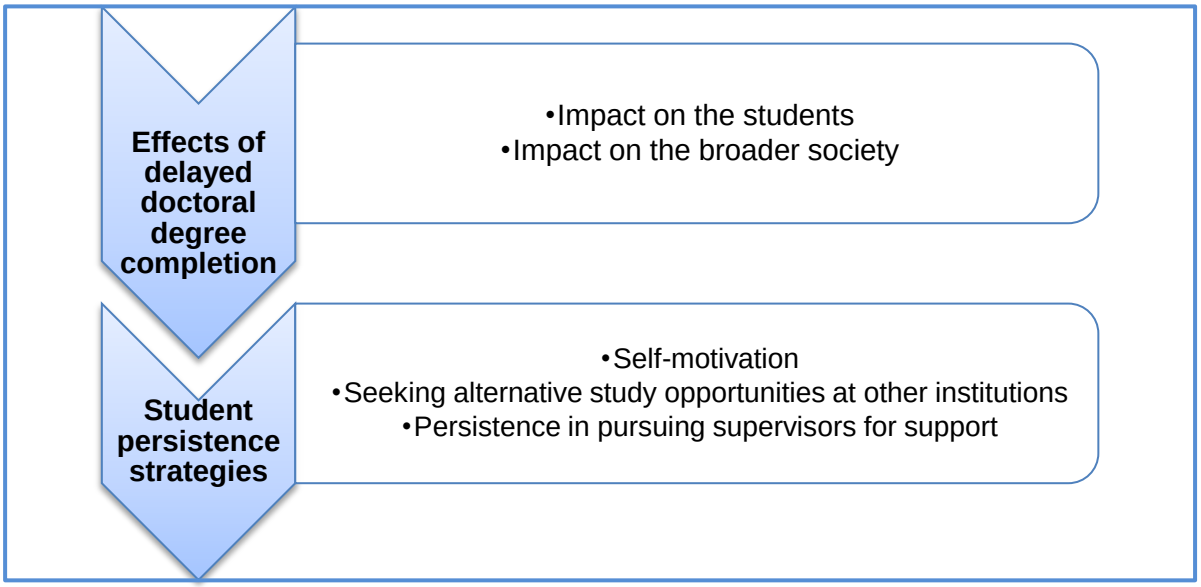

Figure 8. Implications of delayed doctoral degree completion

Source: Author's own construct (2023)

5.4.1 Sub-theme 1: Effects of delayed doctoral degree completion

According to scholarly literature, a considerable proportion of scholars posit that an extended period taken to complete an academic program may result in various adverse consequences across different domains (van de Schoot et al., 2013). The primary focus of this sub-theme pertains to the effects associated with the delayed completion of a doctoral degree. Within this sub-theme, two categories were identified and are being elaborated on below.

Category 1: Impact on the students

The findings of this study suggest that delayed completion of doctoral degrees results in negative implications for students, potentially impeding their ability to have their normal and usual way of life. When asked about the impact of not finishing their studies on time, the participants consistently reported that prolonged completion of their doctoral degrees resulted in detrimental emotional effects. Although most students who participated in the study desired to complete their studies, they could not conceal their frustration, which manifested as low self-esteem, self-doubt, failure in society and stress. Participants said:

This contributes to demotivation, psychological and mental sickness and doubts about oneself. It also affects future plans on applying for better job; such plans remain, but a distant dream (IBS10).

The delay is frustrating and seeing other colleagues studying and graduating from other institutions makes one to doubt yourself (IAS2).

…self-embarrassment and waste of time and resources (IBS1).

Consistent with similar findings in the existing literature, a number of scholars have observed that doctoral students encounter a considerable prevalence of psychological distress due to the discouraging nature of doctoral education (Evans et al., 2018; Lau & Pretorius, 2019; Levecque et al., 2017). Doctoral students are affected socially, psychologically and financially by the time they take to complete their doctoral studies (Mbogo et al., 2020; Mwangi, 2022). Furthermore, the current study established that doctoral students faced individual-level challenges such as financial instability. This means that prolonged studies in doctoral programs may result in a loss of competitive edge for students, as their acquired skills may remain underutilized in the job market. Some participants indicated that they took out loans to fund their studies with the hope that they would secure a better job to repay the loan upon completion. The following participants affirmed this finding:

This has a negative impact on my finances as I have to pay back the loan I took out to pay for studies and it is a setback in my career (IAS6).

This has affected me financially because I am paying for myself and I am not getting the services I am paying for and I wasted time writing without guidance (IBS4).

Beck (2016) provides evidence to support the claim that the attrition of doctoral students is a distressing and costly issue.

Category 2: Impact on the broader society

Delayed completion of a doctoral degree may potentially yield a detrimental impact on the broader society, as there will be a reduced number of individuals capable of propelling the country's economic growth, perhaps with new innovative ideas or research from their incomplete studies.

When participants were asked what effect the non-completion of their studies has on the country, responses pointed towards the lack of qualified people in the country who are likely to contribute meaningfully to the pool of knowledge and towards the realisation of the envisioned Vision 2030 that is geared towards a knowledge-based society. They said:

> *…very stressful because I will not achieve what I have intended to achieve for myself and the country at large (IAS8).*
>
> *What I could have contributed once qualified will not be felt as I am not in a position to command that and cannot mean anything that I registered and could not finish (IBS6).*
>
> *The country is losing people that might have filled the knowledge gap in particular industries. Namibia has a potential to have its own people who could contribute in many ways to its development when they complete their doctoral studies but because of the many challenges they face, they end up quitting their studies and the country depends on importing experts from outside which could be costly for the country (IBS8).*
>
> *Doctoral students are potential future professors and researchers. If students do not complete their studies, the country will remain trapped in the vicious cycle of lack of researchers and institutions will also remain with persistent limited capabilities for research and research supervision at doctoral level. Research and development is critical contributor towards the economic development of the country (IAS4).*

Interestingly, the study raised a crucial aspect at which Namibia aspires to see herself in 2030. This aspiration is geared towards realising a knowledge-based society by 2030. This, however, came out strongly from the findings that the country will still have a shortage of well-educated people and will have to depend on imported skills. In line with Namibia's Vision 2030, particularly with improving higher education, the Namibian government strives towards attaining the country's strategic goals, including transforming Namibia into a knowledge economy (Government of Republic of Namibia, 2007). Fetene and Tamrat (2022) made this clear by stressing that in many parts of the world, the main reason for initiating doctoral programs is to increase the number of qualified researchers who can contribute to a country's economic development and participate in the global knowledge society. However,

this study argues it is evident that the Namibian higher education sector is troubled by the high rate of doctoral student attrition and the tremendous negative impact it may have on the country's socio-economic development.

The findings further highlighted the dearth of qualified citizens in the country due to a delay in the completion of doctoral degrees. This study asserts that Namibia has the capacity to produce its own doctoral graduates, but considering the country's low doctoral output, this appears to be a challenge that needs intervention strategies at the HEIs. Unfortunately, the country seems to rely on hiring professionals from other countries, which can be costly.

Congruent with Wao and Onwuegbuzei (2013), this study argues that on a national level, a prolonged period to obtain a degree results in increased wasted finances and inefficient utilisation of the large amounts of public resources that are used to support doctoral students. Hence, institutions must invest additional resources to support doctoral students; as such, inefficiencies may reflect negatively on opinions about the institution's commitment to doctoral education success.

5.4.2 Sub-theme 2: Student persistence strategies

This sub-theme focuses on the perspectives regarding the strategies individuals employed to manage the challenges they encountered while pursuing a doctoral degree. The findings indicate that all participants are committed to continuing their academic endeavours despite these challenges. They stated that normalising stress and anxiety helped them maintain congruence with their intended professional goals. The findings within this sub-theme are consistent with the student integration theory, as posited by Tinto (1993), which suggests that the persistence of doctoral students is influenced by the personal and intellectual interactions that take place within and among students and faculty, as well as the diverse communities that constitute the academic and social systems of the institution. As proposed by Tinto (1993), the constructs of integration encompass academic and social integration. These constructs elucidate that both personal and institutional factors influence a doctoral student's decision to persist, and the interaction of the two influences a doctoral student’s choice to persist. Tinto (1975) emphasises that students persist in higher education due to their commitment to completing their degrees.

In addition, it has been established that a proficient coping mechanism has the potential to mitigate stress levels and increase confidence (Rodgers & Summers, 2008). Implementing coping strategies is a common practice in modifying the prevailing circumstances or resolving a given problem. Students who exhibit successful coping strategies are more likely to be academically and socially integrated and less likely to withdraw from their studies (Bean & Eaton, 2000). This study revealed that students employed various strategies to manage their studies, including self-motivation, seeking alternative study opportunities at other institutions and persistence in pursuing supervisors for support.

Category 1: Self-motivation

Self-motivation is very important for an individual who is keen to reach their goals no matter the circumstances. Participants indicated that to stay abreast with their studies, they remain focused on their goals and understand that obtaining a doctoral degree can take a long time. They emphasised that self-motivation is key for individuals keen to attain their goals regardless of the circumstances. Participants explain how they keep themselves motivated:

> *I try to overcome the challenges by encouraging myself and I try to balance my studies so I can finish what I have started (IBS5).*
>
> *I am persevering. I cannot give up now after all resources and money I have spent since I registered (IBS6).*
>
> *There is still a little bit of courage left in me knowing that I have done my best (IBS8).*
>
> *I have discovered that PhD is filled with loneliness, challenges, uncertainty, hard work and delayed gratification. Therefore, to succeed you need to stay motivated (IBS1).*

The findings show that dropping out of studies is not an option. It is evident that students who enrol for doctoral studies do it with courage and determination, even though it is easy to become overwhelmed and unmotivated given the many challenges they have to endure. The participants reported that to keep up with their studies, they maintain their focus on their goals and are aware that the process of acquiring a doctoral degree can take a significant amount of time, many hurdles, a lot

of hard work and much-deferred gratification. Participants' commitment came out strongly during the interviews, indicating that abandoning their academic pursuits is not a viable option. This finding aligns with Tinto's (1975) argument that a student's dispositional attributes, such as their commitment to goals and their educational institution, as evidenced by their persistence in their studies, are indispensable. This suggests that the students have integrated to some degree into the institution, whether socially or academically which is an important aspect of a student's academic journey.

It is perceived that students who enrol in doctoral programs do so with some measure of courage and commitment, even though it is easy for them to get discouraged and overwhelmed given the number of obstacles they are required to overcome. The prospect of greater earnings after receiving a doctorate motivates students to persist during the research phase of their doctoral program (Ampaw & Jaeger, 2012). In support of this assertion, Tinto (1987) affirms that the importance of degree completion for students is incontestable because they secure employment and gain social, cultural, and psychological fulfilment.

Category 2: Seeking alternative study opportunities at other institutions

Some of the participants reported that they had already cautiously left their institutions; nonetheless, the records maintained by their institutions may still reflect that they are members of the institutions. Nevertheless, they disappeared without a trace from that establishment and are now registered with other institutions outside Namibia. They said:

> *The frustration lead to a situation where I had to unfortunately transfer to another university, I am currently progressing that within a year my proposal was approved, and I was able to write my first three chapters (IAS1).*

> *With all the challenges, I had to find another institution of higher learning outside Namibia, which offered me an opportunity to proceed with my studies because I did not want to lose my vision, which I initially had upon registering for a doctoral degree (IBS1).*

> *At the moment I am not paying attention to my studies but thinking of registering with another institution so I can continue with my studies (SIB11).*

Literature on doctoral attrition indicates that once a student withdraws from a doctoral program, the institution often does little to no follow-ups (Lovitts, 2001) and is often ignored. This finding can lead policymakers to consider a follow-up administrative communication with students to understand their decisions.

Category 3: Persistence in pursuing supervisors for support

The participants reported that to proceed with their studies; they continually seek the support of their supervisors by initiating contact, making requests for their assistance and feedback, and continuing to engage in conversation with them. Some participants admitted that, in the lack of help from their supervisors, they primarily rely on the resources available online to guide them, such as reading the doctoral dissertations of other scholars to gain more insight. Participants affirmed that:

> *I always try to engage my supervisor so that I can at least carry on with my studies. By initiating contact requesting for assistance is what is keeping me going (IBS13).*

> *In the absence of my supervisor' support, I rely on online materials to guide me by reading other doctoral theses for further guidance (IAS2).*

The above quotations imply that their supervisors do not give some doctoral students adequate guidance or assistance during their academic journeys. This is concerning for any country striving to cultivate graduates who can contribute meaningfully to socio-economic progress. The findings of this study revealed that doctoral students try to build strong relationships with their supervisors as a coping strategy to survive or avoid this predicament. This finding is in line with Fetene and Tamrat (2022), whose study found that some doctoral students indicated to have self-discipline and coping mechanisms that allow them to complete their studies on time, and one coping mechanism that they use is developing positive relationships with their supervisors.

5.5 Chapter summary

The study's findings indicate that doctoral students at Namibian HEIs face numerous challenges that delay their academic progress and, in some cases, result in their dropping out of the institution. Most participants cited supervisory factors, such as lack of support and feedback, limited knowledge of the student's research topics,

strained supervisor-student relationships and heavy workloads of supervisors, as the primary contributors to their slow progress. Due to their full-time employment and personal obligations, doctoral students encounter time constraints that limit their time to devote to academic pursuits. The students also revealed that their inability to balance the roles that they have in their lives, together with the desire to succeed at their studies, causes them to neglect their studies. The study revealed that financial constraints and a possible deficiency of interest on the part of the participants, policymakers and researchers that they approach to participate are significant hurdles to the completion of their doctoral studies. The lack of interest and commitment was reported to hinder progress, as obtaining rich data is a fundamental aspect of any research project. In addition, this study revealed multiple implications associated with delayed doctoral degree completion and participants expressed discontentment, stress, and frustration regarding the protracted nature of the research process.

The next chapter, Chapter 6, presents a comprehensive analysis of the strategies and solutions in doctoral studies. The first section of the chapter delves into the third central theme, which pertains to the experiences of doctoral students concerning institutional policies, structures and strategies associated with doctoral studies. The subsequent section presents and discusses the fourth central theme, which relates to the potential strategies that could be employed to mitigate the phenomenon of doctoral student attrition.

CHAPTER 6: STRATEGIES TO ADDRESSING ATTRITION IN DOCTORAL STUDIES

“Never regard study as a duty but as an enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later works belong."

-Albert Einstein-

6.1 Introduction

The previous chapter explored the factors that lead to doctoral attrition, the implications of an extended pursuit of a doctoral degree and the coping mechanisms employed by students to overcome such implications and persist until graduation. This chapter presents a comprehensive analysis of strategies and solutions for attrition in doctoral studies. This analysis pertains to the third and fourth main themes identified in the current study. The two themes illustrate the significance of scholarly pursuits in generating knowledge and devising strategies that could yield national benefits. The quote above by Albert Einstein can be construed as a suggestion to perceive the process of learning not as a duty but rather as a good opportunity to acquire knowledge and recognise the liberating influence of aesthetics in the realm of the intellect, both for personal satisfaction and for the improvement of the community to which one's future innovations are relevant.

The chapter begins by presenting the third and fourth themes in the context of Tinto's theory of student integration followed by an in-depth discussion of the third central theme, which focuses on the experiences of doctoral students with institutional policies, structures and strategies concerning their doctoral studies at their respective institutions. The fourth and last theme pertains to potential strategies that could be utilised to mitigate the phenomenon of doctoral student attrition. The last part of the chapter discusses the findings from a thorough review of the official documents for the two selected institutions.

6.2 Experiences with institutional policies and structures and strategies to reduce doctoral attrition

The data analysis table below provides a comprehensive analysis of the research findings about the third and fourth themes within Tinto's theory of student integration framework.

Table 9. Themes 3 and 4 data analysis table in relation to Tinto's student integration theory

Main theme	Tinto's student integration theory interpretation
Theme 3: Experiences with institutional policies, structures and strategies	**Lack of institutional engagement with students:** ❖ Institutional engagement with students is a critical factor in promoting student integration and success, and HEIs must take a more proactive approach to engaging with students to foster a sense of belonging and connection. **Lack of policy implementation:** ❖ Inadequate implementation of policies within HEIs can lead to unfavourable outcomes, such as lower student retention rates and impeded academic performance. Tinto's theoretical framework emphasises the significance of integrating into the academic and social aspects of university life to achieve academic success. This integration can be facilitated by effectively implementing policies. **Lack of awareness of existing policies**: ❖ Tinto underscores the significance of establishing a nurturing atmosphere that promotes student involvement. Applying Tinto's framework can help researchers and academics develop effective strategies to improve student awareness of existing policies and promote successful integration.
Theme 4: Strategies for reducing doctoral attrition	❖ Integrating a student into both the academic and social dimensions of their program is a critical factor in determining their ability to persist and achieve success. Through applying this theory, it is possible to develop interventions aimed at augmenting students' sense of belonging and involvement, thus resulting in increased retention rates. Several research studies have demonstrated the effectiveness of Tinto's theory in mitigating doctoral attrition, underscoring the significance of its sustained implementation in doctoral education.

The current study revealed significant insights regarding the third and fourth themes. These findings were analysed using Tinto's student integration theory, as illustrated in Table 9. The third theme centres on the experiences of students concerning the policies, structures and strategies implemented by their respective institutions. According to Tinto's theory of student integration, students who lack a sense of connection to their academic institution may face an increased risk of attrition and this disconnection may be attributed to a dearth of institutional involvement with students, inadequate implementation of policies and sufficient awareness of existing policies within the institution.

The fourth theme delves into various strategies HEIs could employ to mitigate doctoral attrition. Implementing Tinto's student integration theory could enable HEIs to augment the academic and social integration of students through diverse strategies such as enhanced research supervision, more efficient implementation of institutional policies, and the provision of financial assistance. The subsequent section provides a comprehensive discourse on the findings related to the third central theme of the current study.

6.3 Theme 3: Experiences with institutional policies, structures and strategies

Experiences on the institution’s policies, structures and strategies theme were derived from the second and third research questions, divided into four interview questions. The first question posed to participants pertained to the academic assistance they received from their respective faculties or institutions. The second question explicitly asked about the policies, procedures or strategies that participants were cognizant of, which pertain to doctoral studies at their respective institutions, and the effectiveness of their implementation. The third question sought viewpoints regarding the level of institutional efforts in addressing the challenges faced by participants. The fourth and last question aimed at finding out whether existing policies, procedures or strategies effectively mitigate attrition among doctoral students.

The second objective of this study highlights the significance of encouraging a sense of belonging as a motivating factor for students' academic endeavours, which has the potential to contribute to student retention and success. This objective elucidates how doctoral students assess the efforts of their academic institutions in supporting the attainment of their academic goals.

This theme focuses on how participants perceive their institution's policies and strategies that are intended to assist them in completing their studies. It is congruent with the notion highlighted by several data sources, which have emphasised the necessity for HEIs to consider student support policies, strategies and structures as an integral component of their institutional strategic plans (DHET, 2012; SARUA, 2008). This view is paramount as it illustrates the essential role of student support in the overall success of HEIs. This would enable HEIs to provide an ideal educational

setting for students and enhance their academic performance. Therefore, HEIs must recognize the importance of student support and integrate it into their strategic plans to ensure their long-term success. The responses obtained from the participants reflect a diverse range of viewpoints. Three sub-themes were identified within this theme, as seen in Figure 9 below.

Figure 9. Experiences with institutional policies, structures and strategies

Source: Author's own construct (2023)

6.3.1 Lack of institutional engagement with students

Participants strongly emphasised the lack of institutional engagement with students. Some participants mentioned that there were instances where institutional engagements were only a few meetings. The study found that some supervisors, and therefore some institutions, do not proactively reach out to students to provide support or issue reminders concerning approaching deadlines. Thus, many students experience a sense of abandonment from the academic institution and their respective supervisors.

In line with Tinto's (1993) insightful interpretation of student integration theory, it becomes apparent that the interaction between educational institutions and students presumes a crucial role in fostering their integration and subsequent success. Through proactive engagement with their students, HEIs can create an environment that nurtures a sense of belonging, ultimately fostering a deeper connection between students and their educational community. This connection, in turn, serves as a solid foundation upon which students can build their academic and personal growth.

Furthermore, Tinto's theory implies that when students experience an actual sense of engagement with their educational institution, they are more inclined to cultivate a profound sense of belonging and commitment to their overall educational experience. Therefore, it is imperative for HEIs to foster the growth of social networks and communities through the provision of platforms that facilitate meaningful interactions and collaboration. The current study established that doctoral students face a lack of engagement from their institutions, which contributes to their inability to complete their studies on time. Some participants expressed themselves as follows:

> *Management needs to engage PhD students in problem-solving and find logical solutions to those problems and show commitment (IBS1).*

> *There is no effort especially from the supervisor, they don't even call to find out where you are or to remind you to hand in your work (IAS1).*

> *The institution does not make follow up on students to find out how they are doing and the challenges they are going through in order to assist them (IAS6).*

> *The institution is not supportive and is not aware if there is no communication between supervisors and students. In most cases, if there is no communication, you have no idea who to report to but you just end up being stuck (IAS3).*

According to the findings, these institutions typically engage with their students during their first year of study, during which they are exposed to few theoretical courses and potentially introduce them to their research supervisors. Once the phase of face-to-face sessions is complete, students are expected to work independently. One participant explained:

> *I didn't get much assistance from the faculty except that they arranged coursework at the beginning of the program but when I started with research writing, I felt very much neglected (IAS7).*

These findings indicate the dearth of support from their institutions. Further, it is argued that HEIs ought to acknowledge the significance of implementing personalised approaches to address specific needs involving doctoral students concerning the policies, structures and strategies in place. The provision of institutional assistance and recognition is deemed crucial within this aspect.

6.3.2 Lack of policy implementation

The third objective of this study was to examine the effectiveness of existing policies, procedures, and strategies in mitigating attrition rates among doctoral students. The findings obtained from the interviews indicate that educational institutions exhibit minimal or negligible endeavours toward implementing policies and strategies to facilitate the successful completion of academic pursuits of students as reported by the study participants. In addition, participants raised the issue of some supervisor's seeming lack of commitment. Despite the provision of completion or submission deadlines in the guidelines, supervisors tend not to adhere to such timelines. Drawing upon Tinto's (1993) theory of student integration, it is evident that the inadequate implementation of policies within HEIs can lead to negative consequences. When HEIs fail to effectively implement policies aimed at promoting student integration, the repercussions can have wide-ranging and negative effects. One of the primary consequences of inadequate policy implementation is a decline in student retention rates.

The findings of the document analysis indicate the existence of regulations or standards about various aspects of student matters, including admission, grading and assessment, student retention, student code of conduct and student publications and guidance. However, the participants expressed that these measures are not fully implemented and are rarely adhered to. For some participants, even if the guidelines stipulate completion dates or due dates regarding submission or progress, they are not followed. This is a sign that the supervisors, too do not adhere to the guidelines in place. Some participants believed the implementation could be hampered by a lack of human and financial resources. The following verbatim quotes substantiate these findings:

> *Policies and strategies need to promote student engagement, learning and progress made through cross-functional leadership and strategic plans (IBS1).*

> *Institutional policies, structures and strategies are there and well documented, meaning the crux of the problem is not institutional policies but their implementation. The operationalisation of these policies is a problem which can be attributed to the limited academic capacities plaguing the institutions (IAS4).*

This finding is consistent with the findings of a study conducted by DAAD/BC in 2018, which revealed that most universities have established guidelines and protocols for the supervision of doctoral theses. However, these guidelines typically encompass various requirements, such as the frequency of meetings between students and their supervisors, the duration of time allotted for feedback from supervisors following the submission of student work, and the scheduling of progress reports to be submitted to the graduate school at specific intervals. Nevertheless, the study indicated that their implementation was infrequent. Certain universities lack a code of ethics delineating the supervisory process and the corresponding rights and obligations of supervisors and students.

Based on the narratives provided by the participants, it was concluded that the effective implementation of current policies and awareness of implicit policies on the departure of doctoral students is essential in addressing the challenges linked to doctoral education. The researcher in this study asserts that the institutional policies, structures and strategies are firmly established and recorded, indicating that the underlying cause of the problem does not stem from the policies per se but rather from how the participants perceive their implementation. Thus, HEIs must develop distinctive approaches to address issues about doctoral education within their respective institutions, given that the complexities of doctoral studies and attrition matters may vary among diverse students.

Notwithstanding, several participants conveyed the opinion that the absence of resources, encompassing both personnel and finances, may pose additional difficulties in executing policies, thus leaving the issue of completion rates for doctoral students unresolved. This suggests that HEIs need to prioritise implementing their policies and procedures to address this matter.

6.3.3 Lack of awareness of existing policies

The study also assessed participant perspectives on whether the existing policies, procedures or strategies address the attrition of doctoral students at their institutions. This was necessary to establish whether participants knew institutional documentation on doctoral studies at their institutions. A number of the participants acknowledged their lack of familiarity with the existing policies and procedures. Participants said:

I do not know much about the policies in place (IAS1).

Most of the students do not really go through policies and it's up to the institution to simplify and extract vital information for the students (IAS7).

The participants had an opinion that their academic institutions had not effectively involved and instructed them on issues related to doctoral studies, irrespective of the presence of policies, citing infrequent communication from their respective institutions. Some participants felt that even with policies in place, their institutions failed to engage and educate them on that. As per the viewpoints of some participants, it is rare for students to read regulations and procedures; hence, institutions must simplify them by extracting the most crucial information. In contrast to other perspectives, one participant expressed that there are established procedures and structures for students pursuing doctoral studies.

The participant further explained that the Head of the Department and co-supervisor have demonstrated accountability by maintaining regular communication with the students through various platforms. Participants reported:

My university has improved, there are clear procedures and programme for undertaking a PhD (IAS3).

I comment the HOD and the co-supervisor as they have been so responsible and communicated regularly with students on various platforms (IAS6).

This indicates that while some institutions and supervisors may not prioritise their students, others actively engage with them to ensure their academic success. In alignment with Tinto's (1993) theory of student integration, it is imperative to draw attention to the significance of nurturing an optimum environment that promotes student engagement in their educational pursuits. This entails providing students with access to and knowledge about existing policies that are likely to enhance their educational achievements. Therefore, the use of Tinto's theory is a valuable instrument in the endeavour to improve the educational experience and enhance a more inclusive and supportive learning environment.

The following section explores the fourth overarching theme that emerged from the data, which focuses on potential strategies for retention aimed at mitigating attrition rates among doctoral students, thus expediting the timely completion of their doctoral

programs. The chapter concludes with a discussion of findings from document analysis.

6.4 Retention strategies for reducing doctoral attrition

The student integration theory by Tinto (1993) assumes a pivotal role in assessing the capacity of students to endure and attain academic accomplishments. Through this theory, individuals can acquire significant insights regarding the various factors that contribute to a student's comprehensive experience and their probability of succeeding throughout their educational tasks. In the process of utilising this theoretical framework, one can proficiently formulate interventions aimed at augmenting student perceptions of belongingness and engagement, consequently resulting in increased rates of student retention. This study has yielded compelling evidence that substantiates the efficacy of Tinto's theory in effectively addressing the issue of doctoral student attrition and expediting the process of timely graduation. Informed by the participants' views, three sub-themes and six corresponding categories emerged from this theme relating to strategies that could be considered to improve the completion rate of doctoral students at Namibian HEIs and beyond, as illustrated in Figure 10 below.

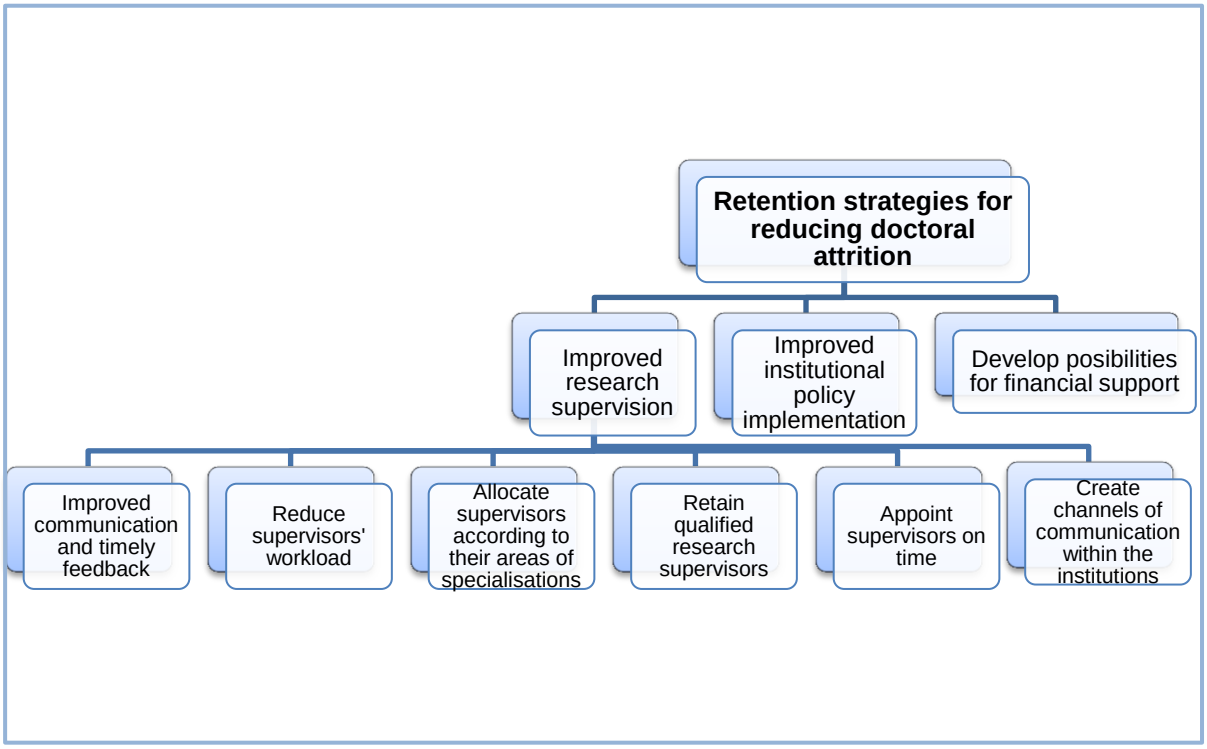

Figure 10. Retention strategies for reducing doctoral attrition

Source: Author's own construct (2023)

6.4.1 Improved research supervision

Supervisors play an essential part in the lives of students pursuing doctoral degrees as they provide guidance, individualised support and mentorship in the completion of dissertations (Mwangi, 2022). This sub-theme focuses on issues related to research supervision. As observed from the findings presented in Chapter 5 of this study, it is evident that research supervision presents numerous challenges that inhibit the progress of students, as indicated by the participants. Six categories emerged from this sub-theme.

Category 1: Improved communication and timely feedback

During the interviews with participants, it was discovered that some supervisors tend to prolong the time before reviewing their students' work, ultimately resulting in delays. The findings indicate that improved communication and timely supervisor feedback play an integral part in the student's progression and successful completion of their studies. Participants reported:

> *…a conducive environment should be created between the supervisors and students and when issues are raised in the progress report, the institution should take actions (IAS1).*

> *In order to assist students, institutions should consistently follow up with students to find out where they are, what progress has been made, and what challenges they are facing (IAS6).*

In addition, participants suggest that to keep track and ensure that students are making adequate progress; both students and their supervisors should create and adhere to a predetermined plan to assess the progress of students. The following responses provide evidence for this point:

> *Another aspect related to monitoring the progress of students is by breaking down studies into sub-components with specific deadlines, mini presentations, cohort groups to self-review own work and peer-to-peer feedback (IAS5).*

It was then suggested during the interviews that, at the absolute, the management of the faculty should be provided with progress reports. This would enable HEIs to assist students who might be struggling with their supervisors by routinely checking up on them. It was reported that:

Often times, it is only the supervisor who is aware of the student's progress or non-progress. Progress reports should at least be submitted to faculty management biennially (IBS10).

The study argues that better research supervision in terms of concise communication and prompt feedback would promote a dynamic environment in HEIs and address issues that are likely to arise. Implementing this necessitates that academic institutions undertake suitable measures to address any issues raised in the progress report. All these can only be achieved through effective communication between the student and the supervisor. However, it is also the student's responsibility to take the feedback and find ways to revise and improve the quality of the next draft submitted for critique.

Category 2: Reduce supervisors' workload

This study also suggests that institutions could consider reducing the workload of supervisors so that they can pay attention to their students. Participants emphasised the importance of institutions ensuring that they do not admit more PhD students than they can manage. Participants explained as follows.

The institution can put a ceiling to say how many students per supervisor so that each student can get enough time and proper guidance from the supervisor (IAS1).

In areas where the university has very little capacity for research supervision, efforts must be made to engage external supervisors (IBS10).

This helps to avoid situations in which a single supervisor is forced to oversee an increased number of students, which can lead to a reduction in the overall level of quality. Establishing a maximum number of students that one supervisor can supervise will ensure that each student receives adequate attention and direction from their supervisors.

Category 3: Allocate supervisors according to their areas of specialisation

The interviews with participants revealed an issue in providing adequate supervision for doctoral students. In certain instances, supervisors assigned to students are found to lack the requisite expertise for the research areas of students. The findings of this study suggest that the allocation of supervisors should be based on their

respective areas of expertise, thereby promoting superior supervision and yielding high-quality research outputs. The following verbatim quote confirms this finding:

> *Supervision, advice, and support are crucial. Supervisors for specialised fields or areas of expertise should also be identified during the allocation of supervisors and they should be trained to provide the necessary support structure. It was disappointing when my supervisor was unable to assist me with my focus area, resulting in confusion rather than resolution (IBS11).*

Hyatt and Williams (2011) emphasise the necessity of the pedagogical and research skills of supervisors to provide guidance that is precise and effective throughout the process of writing the dissertation. In the process of supervisor allocation, it is crucial to identify suitable supervisors for specific sectors or fields of expertise. HEIs must ensure these individuals receive comprehensive training to establish and maintain adequate support for their students effectively. The significance of a supervisor's incapacity to assist students in a specific subject matter may result in more significant confusion rather than resolution, thus leading to frustration among students.

Category 4: Retain qualified research supervisors

Based on some participants, some highly qualified supervisors frequently leave their respective institutions due to various personal and professional obligations. This can be difficult for the students who were left behind to deal with this situation since they would have to be given new supervisors, which would cause the process to move along at an extremely snail's pace. The institutions must keep their experienced supervisors on staff to guarantee continuity and boost the percentage of doctoral candidates who graduate. The following are some suggestions made by the participants:

> *The institutions must retain their experienced supervisors to ensure continuity and improve completion rate among doctoral students (IBS10).*

> *Address the issue of supervisor resignations. As much as resignations are normal in any organisation, institutions must do their very best to retain their experienced academic staff and researchers who are supervisors for doctoral students (IAS4).*

Institutions should do everything in their power to retain their experienced academic staff and researchers who serve as supervisors for doctorate candidates, despite the brain drain and resignations being a natural part of any organisation's culture. Another participant emphasised that a possible strategy for retaining supervisors or senior lecturers, and professors at the institutions is by increasing the incentives that are given to them as a motivational tool that will encourage them to push their students toward completion.

Category 5: Appoint supervisors on time

During the interviews with the participants, it was indicated that the appointment of academic supervisors should be done timeously before the completion of the coursework. This is because, at that time, the student will have already identified their research interest as part of the coursework or within three months after the coursework in the following academic year. Participants explained as follows:

> *I am not sure if appointments of supervisors have improved because I was assigned a supervisor seven months upon completion of my coursework and that delayed the approval of my research proposal. Hence, it is important that the appointment of supervisors is done in a timely manner to avoid delays and frustrations (IAS8).*

> *I was only assigned a supervisor seven months after I have completing my coursework (IBS14).*

The quotes above suggest that there exists a need for improvement in the process of supervisor allocation to mitigate the occurrence of delays in data collection and frustration with timeous completion.

Category 6: Create channels of communication within the institutions

Participants believed that there are no provisions of channels where students might complain when they find themselves having challenges relating to the advancement of their studies. This they believed would allow management to take action when students express concerns because neglecting to resolve these concerns could result in some students withdrawing from their studies or abandoning their education altogether. It was also suggested that it is necessary to have a coordinator for doctoral students to ensure that students may voice their concerns. Institutions

should seriously examine the possibility of instituting regular contact sessions, workshops, or seminars with students, during which the students could discuss any issues emanating from student complaints platforms. Participants elaborated as follows:

> *When students raise concerns, management should act because ignoring these concerns could lead to some students dropping out or quitting their studies (IAS1).*
>
> *A coordinator for doctoral students is essential so that students can report all of their grievances there (IAS3, IBS6).*
>
> *Institutions could consider introducing regular contact sessions, workshops or seminars with students, during which the students can discuss any problems that they may be experiencing (IAS2, IBS4).*

6.4.2 Institutional policy implementation

The interviews revealed that the implementation of policies related to doctoral studies is ineffective at both institutions. The finding raises a concern regarding the effectiveness and integrity of existing academic systems, prompting contemplation of the potential implications and outcomes that may emerge from this outcome. The notion of policy implementation encompasses a wide range of complex and diverse activities carried out by individuals who assume the role of policy actors, acting as intermediaries through which policies are actualised (O'Toole Jr., 2000).

This sub-theme proposes that policies should be available and understood by both the students and the supervisors to ensure that the set goals are achieved at the end of the day. This proposition is believed to function as a reliable foundation, guaranteeing the achievement of the ambitious aspirations and objectives outlined within these policies. Within the context of educational institutions, it is crucial to organise annual workshops or refresher courses to familiarise all individuals involved, including knowledgeable scholars and administrators, with the profound content contained within these esteemed institutional documents. These endeavours are pursued to cultivate a shared comprehension and steadfast commitment to the high standards that are placed upon every individual.

6.4.3 Develop possibilities for financial support

As indicated in Chapter 2 and Chapter 5 of this study, doctoral students find it difficult to cope financially during the tenure of their studies. Thus, some institutions focus on improving attrition and retention rates by providing financial assistance, professional development and mentorship programs (Holley & Caldwell, 2012). In Namibia, the government rarely considers funding for postgraduate students, including doctoral degrees.

During the interviews, it was discovered that students in Namibia have a significant amount of financial difficulty paying for registration fees, tuition fees, and even payments for fieldwork. As presented earlier, the Namibian government's funding of postgraduate studies is almost impossible as much attention is focused on undergraduate studies. This indicates that funding for postgraduate studies in Namibia is relatively uncommon. Participants explained as follows:

> *Postgraduate funds can also be established by institutions to assist postgraduate students financially. "IAS1".*

> *The research fees per registration per academic year are too high even after course work is done and the student work independently with the supervisor only but still expected to pay normal tuition fees "IAS8".*

Participants also highlighted that institutions should come up with dedicated and reasonable fees for research work after coursework, given that due to high costs, some students opt not to continue with their doctoral research studies since it is too expensive.

Participants anticipated that providing students with access to funding for doctoral studies through study loans could help alleviate some of the financial stress students experience while pursuing their degrees. One way of doing this is by establishing postgraduate funds within HEIs. It could also be considered that when all coursework has been completed, and the student is working exclusively and independently with the supervisor, the fees per registration per academic year consequent years should be reduced, where the student is only expected to pay for registration fees instead of the entire qualification cost per year. The fact that students need to pay an equal amount every year puts additional financial burdens on students.

The subsequent section delves into the findings derived from a thorough review of the official documents of the institutions under study. A thorough understanding of the institution's policies, procedures and practices has been attained through a detailed review of these documents.

6.5 Discussion of findings from document analysis

Documents comprised institutional policies and strategies relating to research and research reports. Document analysis was conducted concurrently with data collection from semi-structured interviews. The purpose of document analysis was to find data in the institutional documents, which may prompt additional analysis and consequently inform some of the follow-up questions the researcher was asking participants as confirmation to justify data in the documents. The document analysis was not extensive in terms of the scope of analysis, given that minimal documentation on doctoral studies at the two selected HEIs was very limited. Thus, the findings of the document analysis were relatively minimal compared to the findings from semi-structured interviews. Document analysis contributed to the justification and validation of findings by having determined congruence and having detected contrasting views during the interviews.

In addition, this study was motivated by a more significant number of doctoral students enrolled at HEIs in Namibia; nevertheless, statistics from the documents obtained from the selected institutions indicate that the number of graduates does not correlate with the number of students enrolled. Table 10 below depicts the enrolment and graduation statistics from the two selected HEIs from 2013 to 2019, as reported in the annual reports of institutions. The data in the table was tabulated according to enrolment year, number of enrolments and number of graduates at each institution over seven years.

Table 10. Summary of enrolment and graduation statistics

	INSTITUTION A		**INSTITUTION B**	
Year	**No. of enrolments**	**Graduation percentage**	**No. of enrolments**	**Graduation percentage**
2013	148	6%	-	-
2014	137	4%	-	-

2015	124	8%	-	-
2016	140	6%	10	0%
2017	156	13%	10	0%
2018	171	5%	12	8%
2019	184	11%	15	13%
Total	**1060**	**53%**	**47**	**21%**

Source: Institutions A and B's annual reports 2013-2019

It can be noted in Table 10 that the number of doctoral students enrolled at both institutions increases annually in contrast to the graduation rate, which is extremely low and highly variable, with a minimal number periodically improving before declining again. The table also indicates that Institution B did not enrol doctoral students until 2016, whereas Institution A started doing so considerably earlier. The table also shows that only 53% of 1060 doctoral students at Institution A could graduate over seven years, while only 21% of 47 doctoral students at Institution B could graduate over four years. The analysis reveals that the highest percentage of graduates at Institution A was reported in 2017, with a relatively low 13% of students completing their doctoral programs. Similarly, the highest number of graduates at Institution B was observed in 2019, with a comparable 13% of students completing their doctoral programs. These findings suggest that both institutions have experienced similar trends in graduation rates over the years. The significant discrepancy between the number of students who enrol in doctoral programs and those who successfully graduate is a cause for concern, as it implies a substantial attrition rate within academic institutions in Namibia.

Upon analysing the graduation rates as a percentage of student enrolment stretching from 2013 to 2019, no substantial changes seem to have occurred. The current situation is a crucial lesson for HEIs in Namibia, as it has the potential to elicit a decline in the output of doctoral graduates over an extended period. This, in turn, could have a detrimental impact on the broader landscape of higher education, particularly doctoral education. Therefore, HEIs to take proactive measures to address this issue and ensure the future of doctoral education in Namibia.

Moreover, the institutional documents provided to the researcher indicate a significant increase in the number of students enrolling in doctoral programs annually. This highlights the need to establish environments conducive to graduate students and effectively implement policies and procedures that clearly define the start and end dates of doctoral studies to improve completion rates.

While reviewing institutional documents, it emerged that the Centres for Postgraduate Studies in both institutions are responsible for overseeing and enforcing postgraduate policies and regulations. The review of the regulations and guidelines of the two selected institutions elucidates the requirements for supervisors of doctoral applicants. The findings reveal that both institutions require the supervisors to possess a doctoral degree and exhibit proficiency in the area of research that the student is pursuing. This criterion is deemed essential for ensuring the quality and rigor of doctoral research and facilitating the intellectual growth and development of the students. The findings suggest that the participants' perceptions of being allocated supervisors who possess insufficient subject knowledge in their respective research domains are incongruent with the findings obtained from analysing official documents pertaining to the respective institutions. This implies that the institutions are not effectively adhering to the stipulated procedures and guidelines.

The interviews with students revealed that they frequently find themselves working with the same supervisor even when there is little progress and that they encounter various difficulties with research supervisors. A postgraduate study guideline at one of the selected HEIs states that changing supervisors is only permitted in the following circumstances:

- where a lack of expertise in the area of research or methodology becomes apparent;
- where both the student and the supervisor agree to the change in supervision;
- where unresolved issues between the student and the supervisor may arise; and
- where the supervisor is no longer with the institution and no longer available to supervise.

This indicates that institutions are cognizant of the possibility of conflicts between supervisors and students and have made provisions for students to switch to other supervisors in the interest of progress. In addition, based on the institutional documentation reviewed, supervisors are expected to initiate the first meeting after getting notification to supervise students. After that, discuss with the student the duties, procedures, academic and administrative processes of research and agree on meeting scheduling, research work submission and timelines.

It is noted that there is little information available about doctoral studies at each institution, and what is available mainly focuses on the rules and regulations governing postgraduate studies. The subsequent chapter concludes the study by presenting broad summaries of its findings and conclusions, limitations, delimitations and contribution of the study and further outlines the researcher's reflective journey. Subsequently, the chapter outlines recommendations to inform future practice and recommendations for future research.

6.6 Chapter summary

The study found that institutions lack engagement towards their doctoral students, leading to their inability to complete their studies. The study discovered that academic institutions exhibit minimal or superficial efforts toward implementing policies, structures and strategies to facilitate the successful completion of doctoral degrees. Several participants acknowledged their lack of familiarity with the existing policies and procedures, citing infrequent communication from their respective institutions. The chapter also presented and discussed the findings on possible retention strategies that could be employed to aid Namibian HEIs and others in developing measures to assist doctoral students in completing their doctoral degrees on time. Lastly, the chapter discussed the findings from a thorough review of the official documents for the two selected institutions.

CHAPTER 7: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

"*We now accept the fact that learning is a lifelong process of keeping abreast of change. And the most pressing task is to teach people how to learn."*

-Peter Drucker-

7.1 Introduction

The quote above implies that contemporary society has come to acknowledge that education is an ongoing and continuous journey that involves staying up-to-date with the ever-evolving world. The quote posits the importance of adapting to change and embracing new knowledge and skills throughout one's lifetime. Thus, it was considered imperative for the researcher to conduct this investigative inquiry to obtain novel insights that other academics could employ for subsequent research aimed at enhancing a knowledge-based society operating in a knowledge-driven global economy.

The previous chapter presented and discussed findings that focused on the experiences of doctoral students with institutional policies, structures, and strategies concerning their doctoral studies at their respective institutions. The potential strategies that could be utilized to mitigate the phenomenon of doctoral student attrition were also explored. This chapter concludes the study with broader summaries of the findings and conclusions of this study. The study's limitations, the study's contribution and a description of the researcher's reflective journey are presented. This chapter concludes with recommendations for future research and future practice.

7.2 Purpose of the study

This study aimed to investigate and analyse factors that contribute to high attrition rates among doctoral students enrolled at Namibian HEIs and recommend possible strategies for universities to consider in their policy support strategies and implementation. As a basis of the extensive data analysis, the findings demonstrate a degree of congruence between the findings of the current study and those reported in previous studies. The relevance of each key finding is presented in conjunction with the main research question and four research sub-questions outlined in Chapter 1 of this study.

The main research question this study sought to answer was: **What factors cause attrition among doctoral students at higher education institutions in Namibia?** The study intended to provide answers to the following specific sub-questions:

1. What are the reasons for the attrition of doctoral students at Namibia's Higher Education Institutions?
2. How do doctoral students experience their institution's policies and strategies aimed at supporting the successful completion of their studies?
3. How do existing policies address the issue of doctoral student attrition?
4. What strategies would help doctoral students to complete their studies successfully?

7.3 Methodological reflections on the study

The research employed a case study design to gain a comprehensive understanding of doctoral student attrition in a Namibian context and to make sense of the experiences of participants. Using narratives, this investigation was conducted using a qualitative approach to answer research questions and address the research objectives of the study.

Semi-structured interviews and document analysis were employed as data collection techniques to respond to the specified research questions. Purposive sampling was utilised to choose a representative sample of participants and other data sources to answer the research questions and provide an in-depth description of the phenomenon under study. The semi-structured interviews were conducted with 23 doctoral students who enrolled between 2013 and 2019 at two selected Namibian HEIs. The document analysis was conducted by analysing all the relevant institutional policies, procedures and strategies related to doctoral programs. Data obtained from the semi-structured interviews and document analysis were analysed using thematic analysis. Six overarching themes emerged from the data obtained using the two data collection techniques. The integration of findings from participants and document analysis assisted the researcher in triangulating the information and increasing the trustworthiness of the study.

7.4 Summary of the research findings

This section provides a summary of the key findings presented in the preceding chapters following the study's research questions. The findings of the study are summarised according to the main themes that provided answers to the main research question as well as the sub-research questions.

7.4.1 Factors that lead to doctoral attrition

In this section, the findings of the study revealed that doctoral students are faced with various challenges while pursuing their degrees. The most common finding was that of challenges related to research supervision. Participants indicated that lack of supervisor support and feedback is a leading factor in doctoral student attrition. They reported that the feedback they receive is not timely or adequate to assist them with their proposals and dissertations. This implied that doctoral students need mentoring to generate unique and significant knowledge that can enhance their reputations as highly qualified and capable professionals. In light of their concerns over this impediment, participants reported that they consistently lodge complaints with their faculties and the relevant institutional authorities responsible for higher degrees; nonetheless, these complaints are rarely resolved. This raises the question as to whether HEIs lack appropriate support systems for resolving student issues about supervision.

This study argues therefore that research supervisors need to strengthen their supervision techniques, particularly the communication aspects between themselves and their students, for the benefit of achieving the throughput targets of the HEIs and the personal academic and professional reputations of the institution and its academic staff. To ensure proficient communication between the two parties, institutions should have lines of communication in place for addressing concerns such as the ones identified in this study. In their study, Askew et al. (2016) emphasised the significance of open and honest communication between the supervisor and student in ensuring that both parties understand their roles and expectations in the supervision relationship. This is to avoid errors and unnecessary misunderstandings between them (Ferreira & Pellegrini, 2019).

The findings further reveal the students' perceptions of supervisors who seemingly lack expertise with research topics, which leads to unproductive back-and-forth

interactions between the supervisor and the student and may ultimately derail the study and lower research output quality. The findings revealed that some supervisors intentionally delayed students due to grudges or unresolved disputes. Participants indicated that some of the unresolved disputes are caused by supervisors treating student research dictatorially, which sometimes results from lack of expertise, and personal vendettas, which could lead to further misunderstandings and unresolved confrontations. This implied that, to some degree, supervisors do not adhere to their institution's supervision standards and, as a result, personalise supervisory obligations. This prompts the question of whether there are no accountability or repercussions for treating students unprofessionally. The students further revealed that supervisors are academics who are involved in teaching, conducting research and supervising students, leading to heavy workloads with which they struggle to cope. This leads to supervisors neglecting their responsibilities towards their students.

The findings suggest that the attainment of student academic success is negatively impacted by the challenges associated with managing the demands of personal obligations, work and family responsibilities. This is because most doctoral students are adults with family obligations who need to work to support themselves, their families and finance their studies. Due to their personal circumstances, students also neglect their studies and tend to lose focus on their academic goals. Thus, time management is onerous, as most participants indicated that they neglect their studies because of the demand for full-time employment and putting food on the table for their families. This challenge is accompanied by a lack of financial resources which participants identified as another impediment that stood in the way of progress. Given that most doctoral students are self-funded and depend on their monthly salaries to cater to all their financial needs, including paying for their studies, they indicated that they cannot afford to study full-time even though they may want to.

The findings further exposed the lack of interest and commitment shown by policy-makers, researchers and prospective research participants during data collection. The findings indicated that Namibian policymakers and researchers are not keen on engaging in doctoral studies challenges as they seem to disregard struggling students and applaud those who have succeeded. This is an indication that the lack of well-organised data collection platforms at national and institutional levels is

fraught with diminishing interest that contributes to this imbalance. Perhaps a buy in from educational institutions and governmental structures to support the endeavours of postgraduate education in Namibia is needed, for only through research, can policy and practice be revised and modified.

7.4.2 Implications of delayed doctoral degree completion

The study uncovered numerous implications associated with the delayed completion doctoral degree or dropout. Participants expressed discontent, stress and frustration over the prolonged study process allied with feelings of underperformance and becoming an embarrassment to their communities and the broader society. This negatively affects personal development, future aspirations and financial wellbeing of individuals pursuing doctoral studies because students cannot make use of their expertise without the awarding of a doctoral qualification. This misfortune suggests that there is a possibility of losing their competitive edge in the job market and if they drop out, they will not be able to recover the time lost and costs invested in their postgraduate education.

The findings further indicated that delayed completion could reduce the number of doctoral graduates and may have an impact on the level of skills required for the economic growth of the country. In the case of Namibia, this could hamper the envisioned strategic goal of improving higher education, including becoming a knowledge economy in line with Vision 2030. A detailed review of this study's findings prompted a question as to whether the Namibian higher education system is plagued by the prevalence of doctoral student attrition with a potentially detrimental impact on the country's socio-economic growth. HEIs seem not to invest resources to support doctoral students towards completion, and as such these inefficiencies can reflect negatively on their commitment to producing a highly educated workforce through doctoral education.

This study further discovered how students manage to overcome challenges during their prolonged studies as they have learnt to cope and persevere through the circumstances. Self-control and self-motivation are some coping mechanisms students adopt despite the setbacks. The study also revealed that in an effort not to completely give up on their studies, some participants have abandoned their institutions and looked for other study opportunities outside the country where they

feel they are being supported; such movements become a loss of income for Namibian HEIs. Finally, participants indicated that to keep up with their studies they make efforts to build positive relationships with their supervisors by initiating and maintaining communication and follow-up on the work they have submitted.

7.4.3 Experiences on institutional policies, structures and strategies

The findings regarding institutional policies were not encouraging. Participants viewed their institution's policies, structures and strategies to assist them in graduating as a failure to engage in solving some of the challenges they face. These include admission challenges, grading, assessment, retention, student code of conduct, service units, academic programs, offenses and sanctions policies, student publications and guidance on how to mediate all of the above. In other words, institutions do not make concerted efforts to implement policies, structures and strategies that are focused on helping students. This could be attributed to the HEIs in Namibia being more concerned with the success of undergraduate students than postgraduates.

The findings further showed that some students are unaware of any existing policies within their institutions. Thus, Namibian HEIs seem to be overlooking the implementation of regulations and if this is the case, the problem of doctoral student completion rates will remain unresolved owing to the lack of cross-functional leadership needed to increase student involvement, learning and advancement.

The participants concurred that while procedures and policies are defined, their implementation must be re-examined to improve efficiencies. This implied that policies are rarely enforced and the supervisor-student codes of ethics are either non-existent or not available to both parties. The findings showed that most supervisors and their students do not follow the submission and feedback deadlines policies, which state that supervisors should provide feedback to students within two weeks after submission but this rarely happens. The Namibian HEIs are unaware of the challenges experienced by their postgraduate students and such a crisis needs to be resolved with urgency.

7.4.4 Retention strategies for reducing doctoral attrition

There is a plethora of strategies that Namibian HEIs could adopt, adapt and implement to reduce the attrition rate among doctoral students. For the participants, supervision and financial challenges, work, study and life imbalance, contribute to the delays in the progress and completion of their studies. Having clear supervision guidelines, which may be embodied in a signed and dated Memorandum of Understanding, at the beginning of the student and supervisor relationship, and adherence to these agreements may increase the chances of students to progress and succeed in their studies. This could improve supervisor-student mentorships by promoting clear and open lines of communication.

Moreover, the overwhelming workloads of supervisors present a challenge for them to adequately offer support to students. One potential resolution to this matter, as suggested by participants, is the reduction of supervisor workloads. Through the reallocation of teaching responsibilities, supervisors would be able to enhance their capacity to support students in their research-related endeavours by having more time and resources at their disposal. The implementation of this proactive approach would undeniably augment the comprehensive support system and cultivate a more favourable environment for the advancement and achievement of academic pursuits. When examining potential resolutions for the workload predicament encountered by Namibian HEIs, it is important to take into account the potential financial ramifications that may ensue. Although it is indeed accurate that the allocation of resources for staffing up more personnel to distribute the workload may result in a financial strain, it is imperative to address this matter with a mindset that is characterised by a positive outlook. By recognising the possible obstacles, HEIs can strive to discover innovative solutions that not only tackle the issue of excessive workload but also guarantee the long-term viability of the institutions of higher learning. This may entail exploring alternative funding sources or the adoption of cost-effective strategies aimed at mitigating the repercussions on student fees. By embracing an optimistic perspective, individuals can effectively navigate the inherent challenges of the Catch-22 paradox and thus contribute to the creation of a more promising future for doctoral studies at Namibian HEIs.

Findings in this section stressed the need for HEIs to have a postgraduate office in place that carefully allocates students to supervisors based on their areas of

expertise. This will be a step towards preventing misunderstandings as well as disputes resulting from student perceptions of their supervisor's lack of interest in their research area.

In addition, the study argues for retaining experienced and seasoned research supervisors by offering them competitive income incentives as a strategy to eliminate the need to appoint new and inexperienced or novice supervisors due to the brain drain of supervisor's early resignation in favour of positions with a more desirable and competitive employer. The study also suggested that institutions should assign supervisors promptly after coursework is completed to avoid delays in completion time.

The data revealed that a lack of mutual understanding between students and supervisors is a serious cause for concern. It is recommended that Namibian HEIs develop their doctoral programs to include a policy on establishing such a rapport between two parties. For doctoral studies to be fruitful, both students and supervisors must have access to an agreed Memorandum of Understanding (MoU). In ensuring that all parties involved understand their roles, duties and responsibilities, the study suggests that institutions provide periodic seminars or refresher training on key institutional policies. The MoU may be a possible solution to establish rules and guidelines for engagement in the early stage of the supervision relationship. When both the supervisor and student clarify their expectations, they may be better able to avoid any unnecessary confrontations.

Last but not least, there is no quick fix for the financial struggles of students, no one-size-fits-all solution. Financial aid and taking out student loans is a reality as it is a systemic problem in growing economies that there is a lack of financial resources in communities already burdened with socio-economic challenges. Perhaps if HEIs can strategize alternative ways to drive government subsidies for postgraduate studies, will help alleviate the financial burden on Namibian doctoral students.

7.5 The researcher’s reflective journey

I embarked on this journey with passion and enthusiasm, and although there were some ups and downs along the way, I remained optimistic and persevered through my studies. In my first year of enrolment, I landed a new job with extra responsibilities

and having an 8-to-5 job in a new environment and developing momentum in my studies took around four months. Thus, I was constrained in my actions due to the lack of time to read for a broader perspective, thereby dedicating a whole year to work on the research topic and establishing a gap in studies. Although it seemed like I took too long, I moved from an unrealistic and broad topic to a scaled-down and more manageable research focus.

In my second year, I faced some financial difficulties that prevented me from registering, however, I overcame those challenges and eventually registered for the following year. The third year was challenging due to the impact of COVID-19 on my personal life. Nonetheless, I persevered through the challenges like many others who also faced the personal losses of loved ones and colleagues. Although I had to personally heal from the virus multiple times, which also slowed down my studies, I still persevered and made progress that year with the support of my supervisors.

During the data collection process, I was disappointed that the selected institutions hesitated to provide me with the lists of doctoral students because they deemed the topic extremely sensitive. Although I devised alternative methods of contacting prospective participants through the registrar's offices, it was a slow and time-consuming process because many participants did not respond to these invitations out of fear of participation. However, snowball sampling assisted in acquiring an additional number of participants to reach data saturation with the number of participants for a qualitative study. As a novice researcher, I believed that all parts of a research puzzle would fall into place, but I had no idea what being a researcher on the ground meant in terms of time and personal resources. The research process was difficult and time-consuming, but it was at the same time, personally and professionally fulfilling and rewarding. The study made me realise that my home country Namibia still has a way to go to progress in achieving its 2030 goals but I feel excited that my research will be able to help the process by making a small contribution to understanding how to improve postgraduate student success. Also, this study has improved my academic writing abilities, having learnt to take constructive and critical feedback from my supervisors, implement necessary changes and engage meaningfully with the data. Through my mentor and her belief in me, I learnt that educational achievement and my commitment to lifelong learning is a journey and not a destination.

7.6 Limitations of the study

This study has several limitations, of which the first is its exclusive focus on only two HEIs in Namibia. Therefore, the results cannot be generalised and do not reflect a nationwide phenomenon. Nevertheless, the researcher believes that readers may be able to relate the study's findings to their own contexts.

Also, the anticipated institutional policies and procedures documents were significantly limited because when requested, institutions could not provide such official institutional documents regarding doctoral studies as they possibly did not exist at the time of the research investigation. The researcher therefore relied on institutional documents that were available online.

The two Namibian higher education institutions were the first in the country to gain university status and enrol a large number of doctoral-level students with satellite campuses all over Namibia, and the main campuses situated in the capital city, Windhoek. The researcher did not consider the location of the participants as long as they had been in the system for a more extended period than planned or had withdrawn from their studies.

Another limitation is related to the limited literature on doctoral student attrition in a Namibian context; much of the literature that was used in this study is related to an international setting. The transferability of knowledge generated from the Namibian context to an international setting is context-related and may be limited. Therefore, although the conclusions reached in the study apply to Namibia, this study’s findings may be consulted by other researchers in the field of HE doctoral student experiences to influence the formulation of doctoral student support strategies.

In addition, another limitation of the study relates to the possibility of personal bias, as the researcher also had experienced personal struggles. To sidestep potential bias and maintain objectivity the researcher utilized member-checking and self-reflection by maintaining a study notebook in which daily plans, frustrations, issues, successes, and worries were recorded.

Finally, another limitation of the study relates to challenges encountered when requesting lists of all doctoral students at designated institutions to select a more knowledgeable and representative sample from all faculties of the universities. The

researcher was sent back and forth from one department to the other as they were reluctant to release the names of their doctoral students even though the ethics committees of the selected institutions granted permission to collect data. As a result, the researcher was sent back and forth from one department to the other and was unable to reach the original planned target sample of participants from each of the faculties at the selected institutions. However, snowballing sampling assisted the researcher at the two institutions, where of the 61 potential participants who were invited to take part in the study, 23 showed interest and gave their consent.

7.7 Delimitations of the study

This research was undertaken at two Namibian HEIs. Even though there are three HEIs in Namibia with university status, the scope of the study was limited to the two institutions that were the first to obtain university status in the country and had the most significant number of registered doctoral students at the time this study was conducted. Both of the selected higher education institutions have satellite campuses throughout the country but the researcher was not concerned with the campus where the participants were registered and was willing to somehow reach the participant despite distance and travel challenges.

The population of this study was limited to doctoral students who enrolled between 2013 and 2019 and were actively pursuing their degrees at the time this study was conducted. The report did not include PhD students who registered for their degrees after 2020 because they were still within their allotted time limit and might not have faced obstacles as those who overstayed in the program. To generalise the findings of the study, these delimitations should be considered.

7.8 Contribution of the study

The findings of this study corroborate previous studies on the phenomenon of doctoral student attrition, as evidenced by scholars such as Gao (2018), Golde (2000), Herman (2011), and Lovitts and Nelson (2000), among others. The current study's findings illuminated doctoral students' perspectives on the factors impeding the successful completion of their degrees, as well as the strategies they employ to be resilient and maintain perseverance. Sharing lessons learned can positively impact doctoral students who are beginning their academic journeys. This is because by being informed about persistence strategies, individuals can utilise the potential

strategies suggested by this study, which may ultimately lead to the successful completion of their doctoral programs.

Many students quit before graduating due to the many challenges they encounter which results in loss of invested resources and time, for both the student and the institution, through the supervisor. As presented in Chapter 2 and discussed in Chapters 5 and 6 of this study, research has been conducted around the world to investigate the factors associated with attrition of doctoral students in HEIs. However, there is a lack of current research that investigates the attrition of doctoral students in the Namibian context therefore, this study aimed to make a contribution to the existing literature and knowledge on doctoral student attrition. It is argued that the attrition of doctoral students is the most significant concern facing higher education globally (Golde 2000; Herman, 2011; Mouton, 2011) and it is therefore hoped that this study will be able to empower policymakers with the relevant insight on how to structure the support needed by postgraduate students.

This study makes a significant contribution to the existing body of knowledge by raising awareness among policymakers, higher education managers, leaders and researchers about the critical issue of doctoral student attrition in Namibia. It emphasises that this issue poses a substantial threat to the nation's goal of becoming a knowledge-economy society by 2030. This study proposes that possible policy implementation and strategies be revised to thereby increase postgraduate student completion and graduation rates.

In addition, the study makes a case that stakeholder participation in policy creation promotes policy ownership, a shared vision and implementation effectiveness. Therefore, all concerned stakeholders, including faculty and department management, supervisors and the student body, must participate in policy networks as active custodians. Such collaborative spaces and engagement draw attention to identifying potential challenges and understanding how implemented postgraduate doctoral education policies could lessen emerging drawbacks.

This study is significant because it draws attention to Tinto’s (1993) student integration theoretical framework that guided the study. Due to the data analysis of students' experiences, it is affirmed that learning is indeed a social process and not just a cognitive one. Therefore, the study argues that something more is needed to

enhance the theoretical framework. This study makes a small yet valuable contribution to the current body of knowledge by presenting a novel approach to addressing the psycho-social gap experienced by doctoral students. By integrating the concept of Communities of Practice (CoP), this study provides a distinctive perspective on how to address the challenges faced by doctoral students in their academic journey. Wenger et al. (2011) provided a comprehensive definition of CoP as a collaborative learning arrangement wherein individuals engage in a mutually beneficial exchange of knowledge within a specific domain. The individuals involved in the learning process utilise their experiences in practice as a valuable resource for knowledge acquisition. Drawing upon this definition, it is imperative to delve into the fundamental concepts that form the foundation of CoP and the significant impact it exerts on attaining success in doctoral studies.

Lave and Wenger (1996) made a substantial contribution to the field of social learning theory through their exploration of CoP. By examining the dynamics and processes within these communities, they shed light on the intricate mechanisms through which individuals acquire knowledge and develop expertise. They expounded on this concept, providing valuable insights and expanding the understanding of how individuals engage in collective learning within social contexts and contribute to their growth. Lave and Wenger's influential work explores the complex dynamics that underlie the development and maintenance of communities through collective learning in shared activities. Consequently, their work stands as a significant milestone in advancing social learning theory and enriches the current understanding and knowledge construct within this field.

In recent years, scholars and researchers have observed a significant increase in acknowledging and embracing the concept that learning is a complex and profound process that occurs within a communal framework of practice. Moreover, existing research indicates that learning communities significantly influence crucial outcomes, including student engagement, involvement, satisfaction with the university experience and even career readiness (Engstrom & Tinto, 2008; Lord et al., 2012; Rocconi, 2011). The engagement of an individual's learning intentions and the construction of the meaning of learning are intricately intertwined with the process of fully integrating into a socio-cultural practice. This social process, as posited by Lave and Wenger (1996), encompasses acquiring knowledgeable skills. This phenomenon

could also apply to doctoral students, as it serves as a potential strategy to alleviate feelings of social exclusion and enhance their commitment to completing their degrees. This is achieved through the reciprocal exchange of knowledge and experiences among peers, which fosters a supportive learning environment.

Thus, when a group of doctoral students are encouraged to get together and form CoPs, they can mediate and alleviate the burden of the unknown. This may also allow them the opportunity to feel integrated with the university and have a sense of belonging that may encourage them to persist with their studies and graduate, thereby influencing the decision to depart or not. Perhaps such communities can take the form of reading groups, methodology discussion groups, social interaction groups and support groups. These CoPs may include academics and students, who together can work in shared spaces, fostering deep meaning-making and understanding. The construct of Situated Learning Theory (Lave & Wenger, 1991) has found learning to occur unintentionally within context, culture and activity. The model below might support HEIs to improve postgraduate students' throughput target rates and realign policy implementation frameworks.

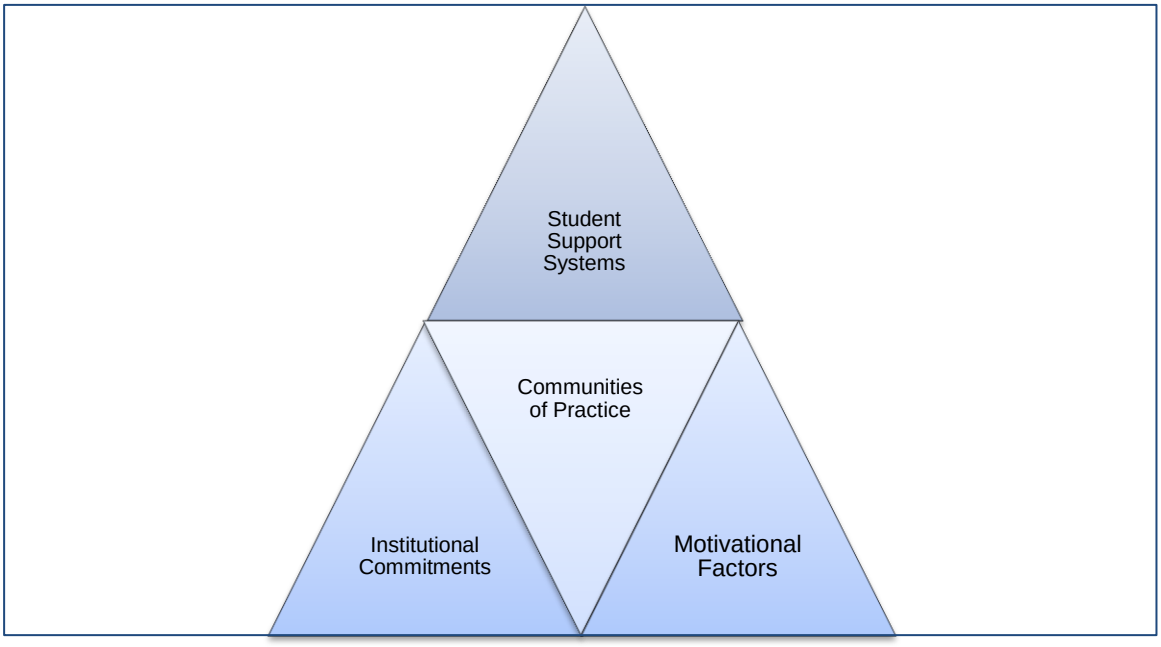

Figure 11. Model for doctoral student integration and success

Source: Author's own construct, adapted from Tinto (1993) and Lave and Wenger (1991)

Figure 11 above illustrates the interconnectedness between various elements and their interplay when striving for success in doctoral studies. These elements are

student support systems, institutional commitments and motivational factors. The establishment of CoPs can greatly contribute to the successful completion of doctoral studies within the designated timeframe by integrating various components, such as shared goals, collaborative learning and knowledge sharing; these communities create an environment that is conducive to academic achievement.

The current study's findings illuminated doctoral students' perspectives on the factors impeding the successful completion of their degrees, as well as the strategies they employ to be resilient and maintain persverance. Sharing lessons learned can positively impact doctoral students who are beginning their academic journeys. This is because by being informed about persistence starategies, individuals can utilise the potential strategies suggested by this study, which may ultimately lead to the succesful completion of their doctoral programs.

The study contributes to new knowledge in the subject under investigation.

7.9 Recommendations relating to the study

Despite the study's limitations, the conclusions provide a good basis for making recommendations that could be used to ensure that strategies pertinent to the timely completion of doctoral studies at Namibian HEIs are implemented effectively. Such strategies may not need to be constituted in national policies for HEIs, however, they can be discussed at meetings or conferences where institutions of higher learning come together to address issues concerning student throughput targets. The following recommendations may be considered:

- HEIs should ensure that the formulation of policies and strategies, as well as their respective implementations, involve active participation from academics and students to foster a greater level of understanding among all parties involved. Understanding these policies will equip students and HEIs with the possible resolutions required to address the challenges that contribute to the high attrition rate among doctoral candidates.

- Doctoral candidates should undergo an orientation at the commencement of their studies to determine whether they are adequately prepared for the demands of doctoral studies and if they are ready for the commitment of becoming independent scholars. Such programmes need to include research methodology components to bridge the gap between taken for granted

knowledge of students that is assumed to be in place from the completion of their Masters degrees.

- HEIs need to monitor supervision activities by checking that all students enrolled in doctoral programs are making progress with their supervisors and remain committed to providing support to students where necessary until they achieve their goals. Support structures and strategies can occur not only on a one-on-one basis, between mentor and mentee, but also between Departments and faculty initiatives. This can help students to integrate into the culture of the institution and thereby assist them in making progress in their studies to help them complete their studies and avoid dropping out. A combined focused approach to address the core business and function of the university to foster critical thinkers and contribute to uplifting society by developing expert-level knowledge in the chosen field is imperative for the economic sustainability of emerging and growing economies.

- HEIs should implement early at-risk alert systems to track enrolled doctoral students. To be aware of and deal with the emotional and social strain on students, the university should make available to students free counselling services. Having experts and life coaches available to provide guidance to postgraduate students will lessen the high rate of attrition.

- A reality of emerging economies is a lack of funding being allocated for research. It is recommended that government and HEIs contemplate alternative streams of income provision for subsidies of tuition fees. This will require a thorough review of the funding structure for HEIs in Namibia, in contrast to an approach that solely relies on enrolment statistics. By regarding the potential research output and accredited journal publications that should emanate from empirical research, the incentive for universities to support postgraduate student success may increase.

7.10 Recommendations for further research

This study recommends that future research be carried out in the following research areas:

- This study was limited to the thoughts and experiences of doctoral students at the two selected Namibian HEIs only. Thus, a study on the perceptions of executives and supervisors of doctoral student attrition could be studied on a larger and more significant sample to be able to generalise the findings.

- Supervision in higher education has been a topical issue and a pedagogical challenge. Therefore, future research could consider investigating both doctoral student and supervisor experiences that may contribute to reduced attrition rates within doctoral education.

- University administrators play a vital role in shaping the policies and strategies of an institution. They are responsible for overseeing various aspects of the university, including academics, finance, facilities and student services. Thus, it would be valuable for future research to delve into the perspectives of university administrators regarding the attrition of doctoral students at their respective institutions. Their unique insights, experiences and decision-making authority can contribute to more comprehensive and actionable findings.

7.11 Conclusion of the study

This study aimed to investigate and analyse factors that contribute to high attrition rates among doctoral students enrolled at Namibian HEIs and recommended possible strategies associated with increased perseverance towards completion. The study highlights that research supervision challenges significantly hinder academic growth and success, alongside the lack of financial resources and students' inability to balance work, study and family. This finding calls attention to the critical need for educational institutions and funding agencies to address the multifaceted obstacles that interfere with student progress toward achieving their academic goals. Namibia's higher education policymakers and institutions must devise strategies to increase the proportion of doctoral students who graduate on time to lessen the financial costs of education. The study argues for a structured postgraduate student support office that is formalised at HEIs to address the psycho-social development needs of the student body. Counselling services, coaching, peer support and developing communities of practice may be innovative plans of action to add to institutional planning to foster collaboration, resilience and throughput.

The attrition of doctoral students will continue to be a challenge unless appropriate measures to improve the situation are developed and implemented efficiently. This study supports the United Nations (UN) Sustainable Development Goals (SDGs) and Agenda 2063, which emphasize the crucial role of education in sustainable development and its influence on socioeconomic, political, and cultural aspects of society. Likewise, the study is aligned with a commitment to achieve Namibia’s Vision 2030, which aims to transform Namibia into a knowledge-based society. As Namibia's economic structure and societal demands evolve, universities have a pivotal role and responsibility to produce highly skilled graduates who can become contributing members of society.

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APPENDICES

APPENDIX A:
REQUEST FOR PERMISSION TO THE MINISTRY OF HIGHER EDUCATION, TRAINING AND INNOVATION

The Minister of Higher Education
Ministry of Higher Education, Training and Innovation
Private Bag 13406
Windhoek, Namibia

09 November 2020

Dear Sir/Madam

RE: PERMISSION TO CONDUCT A PHD STUDY AT TWO SELECTED HIGHER EDUCATION INSTITUTIONS IN NAMIBIA

I, Esther Nuuyoma, a PhD (Education Policy Studies) student at the University of Pretoria hereby wish to request permission to conduct a research study at two selected Higher Education Institutions in Namibia which will serve as fulfilment of the requirements of a PhD degree at the University of Pretoria.

The study's title is: **Doctoral student attrition in Namibian Higher Education Institutions**. The study will investigate factors that cause doctoral student attrition and suggest attributes for improved persistence to completion at Higher Education Institutions in Namibia. Research has been done on this topic internationally; however, I hope to explore it in a Namibian context. The study will add new insight and knowledge on the factors that influence attrition and completion rate of doctoral students in the Namibian context where it is currently lacking and will stimulate further academic debates and research in Namibia and beyond.

I will collect data from doctoral students who could not finish their studies or are still in the process but have gone beyond the prescribed time limit. Data will be collected through semi-structured interviews and document analysis. Semi-structured interviews will be conducted through any platform most suitable and preferred by the participants such as: face-to-face, WhatsApp video call/zoom/google meet/Face Time/ Facebook Messenger/ or any valid suggestion. Document analysis of the university's reports, internet sources, policies and guidelines, newspaper reports articles, progress reports postgraduate policies, annual reports, graduation statistics will also form part of this research.

Participation in the study will be entirely on a voluntary basis and all data collected will be treated confidentially. The participating institution will have the opportunity to access and verify the recorded views and the transcriptions of interviews made if needed. The study is scheduled to take place between the 1st of February 2021 and the 30th of March 2021 (depending on the ethical clearance from the University).

Attached please find the copies of research permission letter and the Ethical Clearance Certificate from the University of Pretoria. If there are any questions, please do not hesitate to contact me or my supervisor. Please sign the form below to indicate whether permission to collected data from the two institutions is granted or not.

Kind regards,

E. Nuuyoma

_____

Ms. Esther Nuuyoma

E-mail address: sshekupeh@gmail.com

Contact number: +264 812865766

Supervisor: Dr Nevensha Sing

E-mail address: nevensha.sing@up.ac.za

Contact number: +27 (0)82 877 2564

The Minister of Higher Education Consent form

I, _____, the Minister of Higher Education **agree/do not agree** (delete what is not applicable) to allow Esther Nuuyoma to conduct research on her study on **Doctoral student attrition in Namibian Higher Education Institutions.**

I understand that:

- Participation in this study is voluntary.
- Participants may refuse to answer any questions they would prefer not to.
- Participants may withdraw from the study at any time.
- Semi-structured interviews will be audio recorded for the purpose of transcription.
- Confidentiality and anonymity will be guaranteed. Within transcribing and reporting the data confidentiality and anonymity will be guaranteed as recordings will be transcribed in a private setting or with the use of

headphones and participants will be coded so that no names will be included in the transcriptions or report. If direct quotes are used in the report, no identifying information will be included. All gathered data will be securely stored on a password-protected computer and will only be accessed by my supervisor and me.

- No information that may identify participants will be included in the research report, and participants' responses will remain confidential.

- **We also would like to request your permission to use your data,** confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis and using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

THE MINISTER OF HIGHER EDUCATION PERMISSION FOR RESEARCH
I, _____, hereby give permission to Ms. **Esther Nuuyoma** to conduct a study at the two selected Higher Education Institutions in Namibia for her research on **Doctoral student attrition in Namibian Higher Education Institutions.** Signature: _____ Date: _____

APPENDIX B:
REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE TWO SELECTED HEIs

09 November 2020

Dear Sir/Madam

RE: PERMISSION TO CONDUCT RESEARCH AT YOUR INSTITUTION

I am Esther Nuuyoma, a PhD (Education and Policy Studies) student at the University of Pretoria, South Africa. The title of my study towards my PhD degree is **Doctoral student attrition in Namibian Higher Education Institutions**. The aim of the study is to investigate factors that cause doctoral student attrition and make recommendations for improved persistence to completion at Higher Education Institutions in Namibia. I am working under the supervision of **Dr Nevensha Sing,** from the Department of Education Management and Policy Studies at the University of Pretoria.

This study is significant as it will add new insight and knowledge on the factors that influence attrition and completion rate of doctoral students in the Namibian context where it is currently lacking and will stimulate further academic debates and research in Namibia and beyond.

I am hereby seeking your consent to approach doctoral students who could not finish their studies or are still in the process but have gone beyond the prescribed time limit to participate in this study. There are two parts to this research. Firstly, semi-structured interviews will be conducted through any platform most suitable and preferred by the participants such as: face-to-face, WhatsApp video call/zoom/google meet/Face Time/ Facebook Messenger/ or any valid suggestion. I will be flexible to accommodate what would suit the participants best. The interviews should take approximately 45 minutes to an hour. Secondly, document analysis of the university's reports, internet sources, policies and guidelines, newspaper reports articles, progress reports postgraduate policies, annual reports, graduation statistics will also form part of this research.

Students will receive a letter informing them about the research to be conducted and that their participation is voluntary and can be withdrawn at any point during the research study without any consequences or explanations. Confidentiality and anonymity will be guaranteed always by using pseudonyms to the participants during the transcription phase. **No participant names or personal information will be reported in the findings.**

Interviews will be audio-recorded with the participants' permission. The purpose thereof is to make transcription of data valid and authentic. The recording will be safely kept in password-protected computer devices which only my supervisor and I will have access to. After completion of the study, the materials will be stored at the

University of Pretoria, Department of Education Management and Policy Studies as per the policy requirements.

If you have any concerns regarding the data collection procedures, please do not hesitate to contact my supervisor or me. As the participating institution, you will have the opportunity to access and verify the recorded views and the transcriptions of interviews made if needed. Please sign the form below to indicate whether permission to collected data from your institution is granted or not.

Kind regards,

E. Nuuyoma

_____

Ms. Esther Nuuyoma

E-mail address: sshekupeh@gmail.com

Contact number: +264 812865766

Supervisor: Dr Nevensha Sing

E-mail address: nevensha.sing@up.ac.za

Contact number: +27 (0)82 877 2564

Vice Chancellor Consent form

I,_____(your name), the Vice Chancellor of _____ **agree/ do not agree** (delete what is not applicable) to allow Esther Nuuyoma to conduct a research on her study on **Doctoral student attrition in Namibian Higher Education Institutions.**

I understand that:

- Participation in this study is voluntary.
- Participants may refuse to answer any questions they would prefer not to.
- Participants may withdraw from the study at any time.

- Semi-structured interviews will be audio recorded for the purpose of transcription.

- Confidentiality and anonymity will be guaranteed. Within transcribing and reporting the data confidentiality and anonymity will be guaranteed as recordings will be transcribed in a private setting or with the use of headphones and participants will be coded so that no names will be included in the transcriptions or report. If direct quotes are used in the report, no identifying information will be included. All gathered data will be securely stored on a password-protected computer and will only be accessed by my supervisor and me.

- No information that may identify participants will be included in the research report, and participants' responses will remain confidential.

- **We also would like to request your permission to use your data,** confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis and using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

VICE CHANCELLOR PERMISSION FOR RESEARCH
I, _____, hereby give permission to Ms. **Esther Nuuyoma** to conduct a study at our institution for her research on **Doctoral student attrition in Namibian Higher Education Institutions.** Signature: _____ Date: _____

APPENDIX C:
LETTER OF INFORMED CONSENT TO STUDENTS

09 November 2020

Dear Student

RE: PERMISSION TO CONDUCT A RESEARCH STUDY

I am Esther Nuuyoma, a PhD student (Education and Policy Studies) at the University of Pretoria, South Africa. The title of my study towards my PhD degree is **Doctoral student attrition in Namibian Higher Education Institutions**.

The aim of the study is to investigate factors that cause doctoral student attrition and make recommendations for improved persistence to completion at higher HEIs in Namibia. I am working under the supervision of **Dr Nevensha Sing,** from the Department of Education Management and Policy Studies at the University of Pretoria.

As one of the participants, I kindly invite you to participate in this study. There are two parts to this research. Firstly, semi-structured interviews will be conducted through any platform most suitable and preferred by you such as: face-to-face, WhatsApp video call/zoom/google meet/Face Time/ Facebook Messenger/ or any valid suggestion. I will be flexible to accommodate what would suit you best. The interviews should take approximately 45 minutes to an hour. Secondly, document analysis of the university's reports, internet sources, policies and guidelines, newspaper reports articles, progress reports postgraduate policies, annual reports, graduation statistics will also form part of this research.

Your participation in this study is voluntary and confidential. You have the right to withdraw at any point during the research study without any consequences or explanations. Confidentiality and anonymity will be guaranteed always by using pseudonyms to the participants during the transcription phase. **No participant names or personal information will be reported in the findings.**

In participating in this research study, your permission to make audio recordings of the interview is requested. The purpose thereof is to make transcription of data valid and authentic. The recording will be safely kept in password-protected computer devices which only my supervisor and I will have access too.

If you have any concerns regarding the data collection procedures, please do not hesitate to contact my supervisor or me. As a participant, you will have the opportunity to access and verify the recorded views and the transcriptions of interviews made if needed. Please indicate your consent to participate by signing the form below.

Kind regards,

E**. Nuuyoma**

_____

Ms. Esther Nuuyoma

E-mail address: sshekupeh@gmail.com

Contact number: +264 812865766

Supervisor: Dr Nevensha Sing

E-mail address: nevensha.sing@up.ac.za

Contact number: +27 (0)82 877 2564

Participant Informed Consent form

I, _____consent to participating in a semi-structured interview by Esther Nuuyoma for her study on **Doctoral student attrition in Namibian Higher Education Institutions.**

I understand that:

- Participation in this study is voluntary.
- I may refuse to answer any questions I would prefer not to.
- I may withdraw from the study at any time.
- The semi-structured interviews (edit/delete) will be audio recorded for the purpose of transcription.
- Confidentiality and anonymity will be guaranteed. Within transcribing and reporting the data confidentiality and anonymity will be guaranteed as recordings will be transcribed in a private setting or with the use of headphones and participants will be coded so that no names will be included in the transcriptions or report. If direct quotes are used in the report, no identifying information will be included. All gathered data will be securely stored on a password-protected computer and will only be accessed by my supervisor and me
- No information that may identify me will be included in the research report, and my responses will remain confidential.
- **We also would like to request your permission to use your data,** confidentially and anonymously, for further research purposes, as the data

sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis and using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

PARTICIPANT INFORMED CONSENT FOR RESEARCH
I, _____, hereby give permission to Ms. **Esther Nuuyoma** to conduct a study at our institution for her research on **Doctoral student attrition in Namibian Higher Education Institutions.** Signature: _____ Date: _____

APPENDIX D: SEMI-STRUCTURED INTERVIEW GUIDE

1. What are the reasons for the attrition of doctoral students at Namibia's Higher Education Institutions?

1.1 When did you first register for your doctoral studies?

1.2 What are the main challenges you have been facing since the inception of your study?

1.3 What effect will non-completion of your study will have on you as an individual and also on the country as a whole?

1.4 How are you coping with these challenges?

2. How do doctoral students experience their institution's policies structures and strategies aimed at supporting the successful completion of their studies?

2.1 What type of assistance did you receive from your faculty or the institution to help you in completing your studies?

2.2 What policies, procedures or strategies are you aware of that address doctoral studies at your institution and how effective are they being implemented?

2.3 Do you think your institution is doing enough to address the challenges you are facing?

3. How do existing policies address the issue of doctoral student attrition?

3.1 Are the existing policies, procedures or strategies addressing doctoral student attrition?

4. What strategies would help doctoral students to successfully complete their studies?

4.1 What do you think can be done in order to improve the completion rate among doctoral students at your university?