AN ASSESSMENT OF THE SOMATOLOGY EXTENDED CURRICULUM PROGRAMME AT THE DURBAN UNIVERSITY OF TECHNOLOGY

Submitted in fulfilment of requirements of the degree of Master of Health Sciences: Somatology in the Faculty of Health Sciences at the Durban University of Technology.

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Declaration

I, the undersigned, Mokgadi Ursula Makgobole, do hereby declare that this dissertation is solely the result of my own work. This work has not been submitted to any other university for a degree or other purposes. All the authors whose work contributed to this study have been accordingly referenced.

I hereby give consent for this work to be made available for inter-library loan, photocopying, and made available to outside interested organizations and students.

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Abstract

Since the beginning of democracy in South Africa post 1994, the debate in South African Higher Education has progressed from, initially, increasing disadvantaged student access to higher education to improving student success and improving throughout rates and high attrition amongst the previously disadvantaged students. In order to increase access of students from disadvantaged educational backgrounds and improve success in higher education, institutions have introduced additional programmes such as Extended Curriculum Programmes (ECP). The ECP is an alternative curriculum structure that creates the space needed to equip underprepared students with skills to assist them to succeed in higher education. The Somatology programme at the Durban University of Technology (DUT) introduced the ECP in 2005. However, there is limited published research on the impact of the ECP in the Somatology programme since its inception. Using a mixed convergent parallel design, and following a post-positivist paradigm, this dissertation aimed to assess the impact of the Somatology ECP on students' throughput, success and dropout rates and to understand the general satisfaction of the students placed in the ECP with being placed in the ECP.

In order to establish quantitative data, a retrospective analysis of the student records of all students that had been registered at the Somatology programme at the Durban University of Technology for the period 2005 to 2013 was sourced from DUT's Institutional Management Information System (MIS). The throughput and dropout rates were analysed using descriptive statistics, ANOVA, and t-test. The data obtained is valid as access to the MIS system is restricted and only authorised DUT staff have access to MIS data. In contrast, the qualitative phase prospectively focus on students who graduated from the Somatology programme via the ECP. A simple random sampling technique was used to select a total of 15 participants who were interviewed using semi-structured interviews. The qualitative data generated was analysed using thematic content analysis.

The quantitative analysis found that there was a marked improvement in the throughput rate of students who enrolled via the ECP programme. However, no significant difference was recorded in the throughput ($P>0.05$) and dropout rates ($P>0.05$) of the ECP when compared with the mainstream cohort ($P>0.05$) over the

period under study. In addition, the overall success rate of the ECP cohort were comparable to that of the mainstream (P>0.05) showing that the interventions delivered on the ECP were successful for students entering the Somatology programme considered underprepared for higher education. In probing the factors that had influenced the improved throughput rate, a key finding from the qualitative analyses was that participating students attributed their ultimate success to the additional interventions given in the ECP. The ECP students felt they were at an advantage when it came to assessments compared to mainstream. In light of the study findings, this dissertation found that the Somatology ECP was a successful programme as there was an improvement in the academic success of the students in terms of their throughput and dropout rates of the cohort studied.

Dedication

This dissertation is dedicated to:

The memory of my late father and beloved mother who passed away during my research. Your memory will forever be with me. I love you.

All my friends; thank you for your invaluable support throughout my journey. I could never have done this without all your love and support.

"Have no fear of sudden disaster
or of the ruin that overtakes the wicked, for the LORD will be at your side
and will keep your foot from being snared." Proverb3:25-26

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"But thanks be to God!

He gives us the victory through our Lord Jesus Christ."

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Abbreviations

With reference to this study the following abbreviations apply:

CHE	Council on Higher Education
DET	Department of Education and Training
DHET	Department of Higher Education and Training
DOE	Department of Education
DUT	Durban University of Technology
ECP	Extended Curriculum Programme
HAI	Historically Advantaged Institutions
HDI	Historically Disadvantaged Institutions
HE	Higher Education
HEI	Higher Education Institutions

HESA	Higher Education South Africa
MIS	Management Information Systems
NCHE	National Commission on Higher Education
ND	National Diploma
NQF	National Qualification Framework
NSFAS	National Student Financial Aid Scheme
QEP	Quality Enhancement Project
SCM	Somatology Cohort Mainstream
UOT	University of Technology

Definition of terms

Success rate	The FTE Passed divided by FTE Enrolled expressed as a percentage.
Throughput rate	Tracks a cohort of students registering for the first time at a tertiary institution and completing in minimum time (3 years, minimum time + 1, minimum time + 2, etc).
Dropout rates	Tracks a cohort of students registering and not returning to completing their studies.

CHAPTER ONE: INTRODUCTION

Since democracy in 1994, the primary concern of the education system in South Africa is to improve the access and success rates of the previously disadvantaged students. In order to address these concerns the South Africa government has increased funding in the education sector, especially to those areas which could improve education for disadvantaged students. However, and despite government interventions, the South Africa education is still plagued by high attrition and low throughput rates. For example, several studies (Weybright *et al.* 2017; Department of Higher Education and Training 2016; Lewin and Mawoyo 2014) have evidently showed that dropout and non-completion rates amongst students to be as high as 50% across all South Africa Universities, whilst the average graduation rate is 15%.

Moreover, and as revealed in the White Paper for Post-School Education 2013, the South African education system continues to replicate the divisions of the past. According to the report, the institutional landscape is still a reminiscent of the apartheid, with disadvantaged institutions still disadvantaged in terms of infrastructure, teaching facilities and staffing (Department on Higher Education and Training 2013). In attempt to bridge this gap, the Extended Curriculum Programme (ECP) was introduced in South Africa higher education as an intervention to create the curriculum space needed to enable talented but underprepared students to achieve sound foundations of success in higher education. Whilst the Somatology ECP has been in place since 2005, there is however limited research that have assessed its impact on the Somatology programme. The purpose of this study was to assess the impact of the Somatology ECP on students' throughput and dropout rates and to understand the general satisfaction of the students placed in the ECP with being placed in the ECP.

In this chapter, the background and context of the education system in South Africa is discussed. Thereafter, the Somatology programme and its requirements are introduced. The chapter concludes with the rationale for the study, the aims and objectives and an introduction to the methodology used in this study.

1.1 Background and Context

The higher education landscape in South Africa continues to be plagued by low participation and high attrition rates (Mahali and Swartz 2018; Moodley and Singh 2015; Fisher and Scott 2011). Consequently, the continued interest in strategies to ensure that the output of higher education institutions meets the country's needs are understandable. Considering that South Africa's spending on education is one of the highest in the world at 6.2 percent of its Gross Domestic Product (GDP) as stated by the World Bank in 2013, its graduation rate of 15% has been described as unacceptable and too low when compared with international higher education sectors elsewhere (Lewin and Mawoyo 2014; Fisher and Scott 2011; Badat 2010). As a result of the high attrition rates at first year, low overall completion rates and low percentage of students who complete within the regulated time it is not surprising that various strategies such as curriculum reform have been advocated for by key stakeholders such as the Council on Higher Education (Council on Higher Education 2013).

For many students in developing countries like South Africa, a variety of factors such as poor academic literacy and inadequately resourced high schools heighten the challenge that students entering higher education face (Chimbganda 2011). This phenomenon has also been noted in developed countries[1] when immigrants enter universities in these countries (Wingate and Tribble 2012; Perez and Holmes 2010). In South Africa, a more peculiar situation is created by the legacy of apartheid. The legacy of apartheid created wide inequality between the different race groups in South African, with Black South Africans bearing the greatest burden of under-preparedness for higher education learning and consequently low throughput in higher education. In addition, the Black community in South Africa suffered largely from poverty and unemployment (Kraak 2013). Unfortunately, the inequality in education provision still exists today where many schools, disadvantaged by apartheid still bear the scars of the past and continue to deliver compromised education (Mouton, Louw and Strydom 2013).

Perhaps the argument put forward by Mouton, Louw and Strydom (2013) holds significant contextual application to the current educational challenges plaguing South

[1] Developed countries referred here include United Kingdom, United States, and Australia.

Africa. They state that it is nearly impossible to separate the country's current educational challenges from the legacy of apartheid. Apartheid laid the foundation for low enrolment rates of Blacks in academic institutions and poor academic performance when they did get admitted (Mouton, Louw and Strydom 2013).

Whilst the Council on Higher Education (2013) acknowledges that the dysfunction of schooling must continue to be the focus of corrective effort, it however advocates that the higher education sector undertakes to act on factors within its control to address the systemic conditions that are impeding student success. Currently, the debate in South African Higher Education has moved from increasing Black student access to increasing student success (Higher Education South Africa 2014; Lewin and Mawoyo 2014; Department of Higher Education and Training 2013). According to the Council on Higher Education (2013:16-17), "it is widely accepted that student underpreparedness is the dominant learning-related cause for patterns of poor performance in HE". Consequently, the Department of Higher Education and Training (DHET) through its agencies and affiliates, Higher Education South Africa (HESA) and Council on Higher Education (CHE), has instituted interventions that aim at enhancing the articulation gap of student entering academic programmes. While these have taken several forms (tutoring, mentoring, writing centres), the Extended Curriculum Programme (ECP) has been seen as an enduring feature of an evolving Higher Education (HE) system aimed at "enabling students to develop sound academic and social foundations for succeeding in HE" (Council on Higher Education 2013:18).

Although the ECP programme is being funded nationally by the DHET, each university sets its own guidelines for running the programme in order to meet local realities and fulfil the demands of the curriculum. Like every other university in South Africa, Durban University of Technology was established to meet the diverse needs of its students and to prepare them to fit into the world of work and the social world during their course of study and after graduation.

To date, no research has been done on the impact that the Somatology ECP has had on its student success or failure of the programme. Moreover, there has been limited research on other ECP programmes offered at the Durban University of Technology (DUT) on the success or failure thereof. Research on the performance of the Somatology ECP is important because it not only aims to graduate students but also

targets development of specific skills that are crucial for their employability. In light of this, this study aims to assess the impact of ECP on students' academic success in the Somatology programme at DUT.

1.2 Overview of the Somatology programme in South Africa

The name *Somatology* stems from the Greek word meaning the study of the body (Rammanhor 2015; Holetzky 2006). In the last decade, the Somatology profession has undergone tremendous changes and transformation with respect to the qualifications being offered as well as the name of the profession. Prior to 1996 the qualification was known as the National Diploma: Beauty Technology. After 1996 the name changed to National Diploma: Somatology because Technikons wanted to differentiate their qualification from those of private institutions (Campbell 2012). Somatology is currently offered at five Universities of Technology (UOTs) in South Africa and its curricula cover both theoretical and practical modules. The scope of practice of a Somatologist includes basic and advanced face and body care, numerous massage techniques, aesthetic enhancement techniques and marketing and managerial skills training (Department of Chiropractic and Somatology 2017).

Upon completion of the qualification, a Somatologist has the opportunity to find employment in various fields such as health and wellness centres, spas, retail sectors, pharmaceutical companies, cruise liners, work alongside dermatologists and plastic surgeons. Moreover, the profession supplies opportunities for Somatologists to become entrepreneurs within their profession (Borg 2009).

1.3 Somatology at DUT

The National Diploma: Somatology is offered at level six on the National Qualification Framework (NQF), with a 360 credit rating. Traditionally, the Somatology qualification is offered as a three-year full-time National Diploma, however in 2005 the department hosted their first cohort of ECP students. Borg (2009) states that the main drive for the implementation of the programme was to improve the enrolment of students from disadvantaged backgrounds as well as to enhance academic performance.

The ECP is a four-year full-time programme offered to underprepared students that show potential to succeed in higher education as well as to gain access to higher education (Rambharos 2015; Gill 2010). Both the three-year programme (SCM) and

the four-year programme (ECP) students register for the National Diploma: Somatology, however the ECP curriculum splits the first year of the programme over a period of two years. Appendix H elaborates further on the design of both SCM and ECP.

1.4 Entry requirements for Somatology

As shown in Table 1, students gain admission into Somatology programme by meeting the below minimum requirements after writing a Standardised Assessment Test for Access and Placement (SATAP).

Table 1- 1 **Entrance requirements for the Somatology programme.**

	NSC	Senior Certificate	
Subject	**NSC Rating**	**HG**	**SG**
English	3	E	C
Life sciences/ Biology	4	D	B
Maths literacy or Mathematics	3		
English First Additional Language	4		

Department of Chiropractic and Somatology (2017:50)

Students who meet the above entrance requirements but perform below par in the SATAP test are placed into the Extended Curriculum Programme (ECP).

1.5 Problem statement

Despite the increase in government funding for education, the South African Higher Education continues to be plagued by low throughput rates and high attrition rates (Mahali and Swartz 2018; Council on Higher Education 2013). Previous studies (Council on Higher Education 2013; Bass 2011) suggest that socio-demographic profile of the students could be responsible for the academic performance of the students both at high school and in higher education. In attempting to improve the throughput rates of students, the ECP programme was introduced to assists students in transitioning from high school to university, facilitating their integration with other students who are in the full curriculum (mainstream) as well as facilitating the acquisition of academic skills not received at school (Borg 2010; van Schalkwyk, Bitzer and van der Walt 2010). However, despite the laudable advantages of ECP programmes, Slabbert and Friedrich-Nel (2015), suggest that only 58% of the students completed the ECP programme within the extended timeframe. In light of the

aforementioned concerns, particularly the poor throughput rates amongst students in South Africa higher education, this study aims to assess the impact of Somatology ECP programme in improving throughput and, consequently, graduation of students into the Somatology profession.

1.6 The aim and objective of the study

Aim

To assess the impact of the Somatology ECP on students' throughput, success and dropout rates as well as the quality of Somatology graduates at the Durban University of Technology. In addition the study aims to understand the general satisfaction of the students placed in the ECP with being placed in the ECP.

Objectives

- To determine the impact of ECP on student throughput rates for the first 6 years of the Somatology ECP.
- To determine the impact of ECP on student dropout rates for the first 6 years of the Somatology ECP.
- To determine success rates for the first 6 years of the Somatology ECP and to establish whether these have been improved by the introduction of the Somatology ECP.
- To explore the perceptions and experiences of the ECP graduates in establishing the quality of the Somatology ECP.
- To establish areas of improvement and make recommendations with regard to the efficacy of the ECP.

1.7 Rationale for study

The South African government is taking steps to address student success and high dropout rates in higher education institutions (Council on Higher Education 2016; Department of Higher Education and Training 2013; National Planning Commision 2011). In 2013, the then Minister of Higher Education and Training, Blade Nzimande, pledged an additional R575 million in state subsidies to institutes of higher learning towards a teaching development grant, to assist in improving throughput rates, and R205 million for Foundation Programmes to increase the success rate of educationally

disadvantaged students (Department of Higher Education and Training 2014). In the White Paper on Post-school Education and Training, the Department of Higher Education and Training (2013) expresses an urgent need to ensure quality output in higher education. The CHE, through the Quality Enhancement Project (QEP), highlights the importance of institutional student academic support in enhancing the development of "personally, professionally, and socially valuable graduate attributes" among student cohorts (Council on Higher Education 2016: 111).

From these diverse policy statements, it is clear that the DHET objectives of improving qualitative success among students is predicated upon institutional intervention tending towards bridging the articulation gap to higher education of underprepared students. The DUT has embraced the DHETs mandate in order to help bridge the articulation gap currently generating concerns in the higher education institutions. This study, therefore, in line with the agenda of government, aims at assessing the effectiveness of one such intervention – ECP – on its impact on success, dropout and throughput rates among Somatology Diploma students at DUT as well as to determine the general satisfaction with the Somatology ECP with students graduated from the ECP. The Somatology ECP programme has been in place for ten years (since 2005). The results of this study will inform how effective the Somatology ECP is in delivering on its mission as well as meeting government objectives of improving the success of students in higher education.

1.8 Research methodology

This study adopted a post-positivist paradigm that entails both a quantitative and qualitative research approach. The quantitative phase comprises presentation and analysis of data on the throughout, dropout, and success rates of the ECP and mainstream students obtained through the Management Information System (MIS), while semi-structured interviews were conducted with 15 graduates of the ECP Somatology programme in the qualitative phase who were randomly selected to partake in the study.

1.9 Significance of Study

The findings of this study may have ramifications that will impact on DUT policy and ECP practices. The fact that student success in higher education is a strategic focus area in South Africa is undeniable. Hence, investigating this current educational debate and unravelling its relevance and internal dynamics may inform policy on academic development and student intervention. The success of ECP across the HE institutional landscape in South Africa is understudied. This study, upon effective evaluation, could improve the offering of ECP, not only at DUT and in Somatology, but across higher education – as an effective tool for improving student success rates. The study may also contribute to the arguments of those in support of ECP as an effective strategy for bridging the articulation gap in higher education.

1.10 Overview of Dissertation

The chapters in this dissertation are structured in the following manner:

CHAPTER 1: Introduction

Chapter one gives an overview to this research; which includes the background and rational for the study, aims and objectives, as well study methodology.

CHAPTER 2: Literature Review

Chapter two deals with literature relating to the history of South African Higher Education and student performance in this ambit. This chapter also reviews structure of the Somatology programme as well as Extended Curriculum Programmes.

CHAPTER 3: Research Methodology

Chapter three provides a detailed description of the process in which the research was carried out. The paradigm perspective is explained further as well as the research methods. Population size and sampling strategy are described as well as data collection tools, process and analytical method.

CHAPTER 4: Data Analysis

Chapter four deals with data analysis. Collected data is presented with the integration of relevant literature.

CHAPTER 5: Discussion, conclusion and recommendation

Chapter five discusses the findings in-depth, draws conclusions, and makes recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature related to academic access and success in higher education. While the focus of this study is on the South African Higher Education system, literature and comparisons will also be drawn globally and within South Africa. This literature review will include a longitudinal analysis of the development of the higher education sector in South Africa, from the apartheid era to post democracy since 1994. Based mostly on the post-1994 policy framework on Higher Education and Training, the aims and objectives of different policies regarding academic access and success will be referred to and analysed. Lastly, the scholarly analysis of these two aspects in the current HE context will be considered. This chapter will also describe Tinto's Student Integration Model, as the basis of the theoretical underpinnings of student academic access and success in South African Higher Education.

2.2 Brief history of South Africa

The 1600s marked the first occurrence of racial marginalisation between the Dutch settlers and the KhoiKhoi (O'Malley 2004). The marginalisation emanated from the Khoi-Dutch war which occurred in 1659-60. After the war, the Dutch settlers designed specific foot paths for the KhoiKhoi populace, which led to the restriction of movement of the KhoiKhoi community (South African History Online 2011). This saw the beginning of apartheid which later was to become more formalised. The marginalisation of Blacks continued to develop and in 1913, the Native Land Act was passed by the parliament of the time. The Act resulted in the dispossession of land owned by Blacks, and Blacks were compelled to settle in certain locations. This led to overcrowding in Black settlements and poor service delivery (including poor education) amongst other deprivations, such as the loss of dignity (De Vos 2012). In 1948, the National Party won the segregated national elections and formally introduced racial discrimination whereby the rights of Blacks were systematically eroded. This discrimination allowed access to quality education for Whites, while Blacks, Indians and Coloureds received inferior education with the Black community receiving the poorest education of all (Arendse 2011). South Africans were classified into four racial groups, Black, White, Coloured and Indian. Each racial group was allocated to certain

parts of South Africa to live in although, in reality, only the Black populace was largely segregated into self-governing homelands (Bunting 2006). Coloureds and Indians in terms of the Group Areas Act were forced to live in certain areas of cities and provinces as was the Black population not living in the self-governing homelands. Indians were forbidden to live in the Orange Free State but could live in the other provinces of South Africa.

Educational policies introduced by the apartheid government promoted discrimination amongst different racial groups. Black people were severely marginalized. White people were allocated the largest portion of the educational budget while Blacks had the smallest share (Bunting 2006; Saul 2001). The Bantu Education Act was promulgated in 1953. The ideology behind the Act was to deprive the Black populace of quality education (Ocampo 2004). One way of achieving this objective was to close many schools, which led to overcrowding in Black schools. Ocampo (2004) reveals that in 1953, the teacher to student's ratio was 1:39 in Black schools compared to 1:18 in White schools. In 1982, the government spent only R146 per Black student, while R1211 was spent on each White student's education (Ndlovu 2012). The discussion now moves on to the evolution of South African higher education.

2.3 Evolution of South African Higher Education System

Higher Education in South Africa, like in many parts in the world, evolved from its colonial past. The shape it has taken in different contexts is a result of complex interactions between institutional objectives, state policy, societal expectations and market demands (Jansen 2004). While there existed several rudimentary Higher Education institutions (Universities) in different colonies in the 19th Century, a more robust improvement in the sector can be traced back to the post-1910 Union of South Africa (Msila 2007). Although Higher Education as a tool for social transformation could not be denied, the role this sector played in all the stages of South African development (Colonial Period, 17th century – 1947; apartheid era, 1948 – 1990, democratic era, 1990-present) deserves special attention. This is because the interpretation of academic objectives within the four stakeholders, state, society, institutions, markets, has largely been based on the conception of desired social transformation in each historical epoch (Reddy 2004).

2.3.1 Higher education before democracy

Significantly, Reddy (2004) points out that, while the stakeholder's role is largely true in many contexts, the role of Higher Education as a tool for social transformation has largely been the focus of ongoing debate in the post-apartheid era. Formally instituted in 1948, the apartheid era inherited a nascent Higher Education system from the Jan Smuts Government. In line with their dual objectives of entrenching Afrikaaner nationalism and promoting white supremacy, the National Party under D. F Malan undertook to put an indelible mark on Afrikaaner history in all sectors of society (Bunting 2006). This they did through giving schools and universities a pronounced Afrikaans character. While the primary objects were the English, who had ruled the Union since 1910, the indifference of the National Party (NP) to the welfare of other segments of society, particularly the Black majority, gave an impression that it did not care about them.

Bunting (2006) has noted the fragmentary nature of the system, which, in a way, was a mimicry of the whole society. For example, in the 1970s, the apartheid government created new universities in order to place students according to their racial group (Barnes 2006; Reddy 2004). This racial discrimination also had a negative effect on the funding of these universities, as Black universities were poorly funded as compared to the White universities. For Historically Advantaged Institutions (HAIs) which catered for White students, funding was given according to enrolment and field of study, while for the Historically Disadvantaged Institutions (HDIs) which catered for Coloureds, Indians and Blacks, funding was received on request and this distribution of funding was not equal, resulting in inferior educational facilities and associated perceived lower level academic offerings and a lower perception of the quality of qualifications received. In addition, HDIs found themselves financially incapable of offering a full-range of programmes (Barnes 2006). The racial discrimination and poor funding led to poor performance amongst the Blacks.

By 1984, the National Party introduced a Tricameral Parliament – in which the House of Delegates represented Indians, the House of Representative represented Coloureds and the House of Assembly represented Whites however there was no parliamentary representation for Africans. This system enabled these racial groups to deal with their *own affairs* while *general affairs* remained the prerogative of the national

executive. With respect to education, as far as these three groups were concerned all levels of education were declared 'own affairs' and the parliamentary representatives of each group had to legislate under their racial group. They commented on and regulated their own jurisdiction. This was unfortunately not the same with Africans. Their educational matters, were regarded as 'general affairs' and were controlled under the Department of Education and Training (DET), a White controlled authority (Bunting 2006). This meant that, firstly, while other racial groups had the latitude to shape their education systems as they saw fit, Africans did not. Secondly, while there were legal restrictions on educational racial mixing in HEIs; this was made stricter for African students – whose enrolment in other-race HEIs needed legal permission from the government (Bunting 2006). The institutions that were initially established in the late 19th century and the early parts of the 20th were transformed within the racial framework of apartheid (Bunting 2006).

Like the society, the HE system under the apartheid system was fragmented along racial and ethnic lines (Bunting 2006). Not only were HEIs separated along Black/white racial lines, there were also different institutions for Afrikaans speaking, English speaking and all other ethnic groups within the conglomerate 'Black' label, i.e Indians (Durban-Westville), Coloureds (University of Western Cape), Zulus (UniZulu), Xhosa (Unitra), Vendas (Venda) (Bunting 2006). Unlike the argument of 'separate but equal' made by some of the architects and advocates of apartheid, these separate institutions were anything but equal. As observed by Odhav (2009), in most Black institutions, Black researchers 'could not and did not' emerge since the epistemological approach was mainly geared to train students into civil servants in their own residential territories. The structural orientations of the apartheid HE system produced the following in the Black educational sector;

- Unequal access of staff and students with relation to race and gender;
- An unarticulated system not providing for student mobility within sub sectors
- Lack of relevance of various curricula,
- Failure to produce graduates with competencies requisite for a society in transformation, and a
- Wasteful system, unable to serve the country's human resources

(Odhav 2009: 35).

While the racial profiling of apartheid created, within the HE system, restrictions in educational mobility for many on the basis of racial and tribal ancestry (Bunting 2006) their objective of elevating Afrikaans speaking education was equally frustrating. Commenting on the six White-only Afrikaans universities, Bunting (2006) observed that these institutions were primarily training grounds, practically and ideologically, for the apartheid bureaucracy. This 'instrumentalist' role made them surrender their academic freedom and assume, as Jansen notes, a "pervasive and narrow problem-solving, application-based pedagogy" (Jansen cited in Bunting (2006: 40). The consequence of this was to further disadvantage higher education of the non-white student population.

The apartheid government administered over a HE system that was fragmentary at best and racially discriminatory at worst (Msila 2007); a system of "uneven quality – beset by duplications and inefficiencies" (Arimoto, Teichler and Cummings 2013: 66). In 1993, the national participation rate was only 17 percent, with that of Africans being 9 percent, Coloured 13 percent, while Indians and Whites had 40 percent and 70 percent, respectively (Higher Education South Africa 2014). Changing this picture was to become the primary objective of the new post-apartheid government.

2.3.2 Education after democracy, 1994 to present

The 1994 political transition was an opportunity window for many aspects in the South African society. Pityana (2003: 2) calls it 'a time of optimism'. The education system was one strategic area that needed extensive transformation. According to Odhav (2009: 34), the education system "needed to be made more functional, relevant and responsive''. Through different legislative and institutional frameworks (South Africa (1997a); South Africa (1997b); National Commission on Higher Education (1996); Ministry of Education (2001)), the democratic government aimed at transforming the HE system through ensuring that;

- Universities had to open doors to students of all races
- The curriculum was comprehensively re-designed
- There was training for growing numbers of different types of graduates essential for socio-economic development
- Higher education produces scholars able to tackle South Africa's problems.
- There was a profound reconstitution of the academic workplace

(Teichler, Arimoto and Cummings 2013: 66)

From 19 different departments of education and 36 fragmented universities, the new government wanted to make lasting change, and bring an end to a system that privileged some at the expense of others (Pityana 2003). This type of system was now conflicting with the new constitutional provisions that emphasized equality, non-discrimination, and improving the quality of life of all citizens through provision of access to opportunities for every person. In HE, whereas the objective was on integration and equity (National Commission on Higher Education 1996), the focus was on increasing access to previous underrepresented groups, particularly the Black female student (Higher Education South Africa 2014; Department of Higher Education and Training 2013). As Pityana (2003: 4) puts it, "it is the small voices that must be heard, the little men who must tower, not above but only to be equal…".Through various interventions a series of changes have been witnessed in South African HE. As an example, the allocation of government subsidy per student in higher education has consistently increased from R18,619 (2012) to R20,053 (2016) – this, irrespective of race (Universities South Africa 2016).

The South African Higher Education (HE) system can justifiably celebrate perceptible improvement in equity access since 1994. The Department of Higher Education and Training (DHET) acknowledges the "unprecedented" rapid expansion of enrolments in universities and colleges, desegregation and opening up of opportunities for Black and female students since 1994 (Department of Higher Education and Traning 2013: 1). This success story has been hailed elsewhere by the Council on Higher Education (Council on Higher Education 2015; Lewin and Mawoyo 2014; Msila 2007; Scott, Yeld and Hendry 2007). Lewin and Mawoyo (2014) point out that in 2011 Black students made up 81 percent of the student body, a significant increase from 1994 when Black students only made up 42.8 percent of the total student higher education sector. In 2011 enrolment headcounts of all HE institutions were 938 200 (Council on Higher Education 2013).

2.4 Higher Education Policy frameworks for student access and success

The transition from the apartheid HE system to the current took a number of legislative and policy reforms developed by the then Department of Education (DoE)[2] and the

[2] Now DHET

Council on Higher Education and its subsidiary bodies such as the National Education Policy Initiative (NEPI). While the route to transforming the HE system in post-apartheid South Africa probably starts with the report of the National Commission on Higher Education (1996), which paved the way towards a unified and coordinated HE sector and relevant policies on student access and success include the below: (Council on Higher Education 2015; DHET 2014; Ministry of Education 2001; South Africa 1997a, 1997b).

In 1997, the Department of Education (DoE) issued, among others, an *Education White Paper 3: A Programme for the Transformation of Higher Education,* which was meant to prescribe the route and extent of transforming the academic environment of higher education in South Africa. The *White Paper 3* focused on quality assurance, funding and integration in higher education. While bemoaning inequitable access and opportunity for students and staff along racial, class, gender lines, and the chronic mismatch between higher education outputs and societal needs, the *White Paper 3* expressed resolve in changing this situation through increased broadened participation and responsiveness to societal needs. Of importance to this study are declarations in Sections 1.14 (promotion of equity of success and fair chances of success for all through increased and broadened participation), 2.22 (equity and growth), 2.29 (promotion of public funding to support academically able but disadvantaged students) and 2.69 (Quality Assurance). In general, the *White Paper 3,* envisioned a holistic transformation programme, in which while redress and equity was achieved through broadened access, it would not come at the expense of quality and success (South Africa 1997a).

In Section 2.10 of the *White Paper 3,* DoE mandated the development of the National Higher Education Plan by DoE in consultation with CHE, to give effect to the goals and objectives of the *White Paper 3.* This came to pass four years later, in 2001, when the DoE issued a National Plan on Higher Education, meant to operationalise the objectives of *White Paper 3*. The National Plan, while acknowledging its role as the implementation framework for the *White Paper 3,* also noted that the dawn of the 21st century had brought with it new challenges, opportunities and urgencies to which the HE system had to respond. Of particular note was the role of HE in creating an information society through harnessing global development in information and

communication technology (ICT) (Department of Education 2001). As such, in addition to the implementation framework of the Transformation Programme, the National Plan also aimed at improving the quality of academic programmes, in line with new developments in ICT.

In 2003, the DoE Gazetted the new Funding Framework – *Funding of Public Higher Education* – which was aimed to be ancillary to the Transformation programme and thus the introduction of the Extended Curriculum Programme The new funding framework was aimed at attaching funding to the realisation of national objectives of improved student access, success and graduation rates. In 2009, the DoE was divided into two separate ministries - the Department Basic Education and the Department of Higher Education and Training (DHET).

The current HE policy is based on the *White Paper for Post-school Education and Training: Building an expanded, effective, and integrated post-school system* which is instituted to address the challenges of HE as South Africa celebrates two decades of democracy, and in line with the national Vision 2030 – National Development Plan. With all the reviews from CHE and other interests groups that have shown the shortcoming of the South Africa HE system, the DHET responded with attempting to create

> a single coordinated post-school education and training system …with expanded access, improved quality … with more stronger cooperative relationship between education and training institutions and the workplace.
> (Department of Higher Education and Traning 2014: xi)

The *White Paper for Post-school education* set three policy drivers – planning, funding and quality assurance – aimed at working with institutional interventions to contribute to student success (DHET 2014). Clearly, the focus of the current policy on HE is making sure that student success keeps pace, not only with equity of access, but also with government investment and contemporary national needs.

Lastly, the quality council of the DHET, the CHE has initiated a *Quality Enhancement Project* (QEP), in which it aims to improve student success in HE system. In 2015, CHE undertook a baseline study, through content analysis of Institutional Quality Enhancement Submissions. Through the QEP, CHE introduced four focus areas of

quality enhancement with the hope of creating a “more equitable, effective, transformative and successful undergraduate experience” (Council on Higher Education 2015: 14). These focus areas include: enhancing academics as teachers; enhancing student support and development; enhancing the learning environment and Enhancing course and programme enrolment and management. Through the QEP, CHE offered a holistic intervention on improving the teaching and learning environment in HE, with the hope that this in term will have positive spin-offs on the graduation and academic outcomes.

2.5 Contemporary challenges in South African Higher Education

Notwithstanding the effort and resources poured into realizing the objectives of post-apartheid transformation in the education system, Cloete (2004) contends that it became clear soon enough that government policy alone could not effect necessary changes. In its *Twenty Year Review South Africa: 1994 – 2014,* the office of The Presidency observed that while the overall education budget has increased by above 5 percent of the Gross Domestic Product (GDP) the resulting in increased access to education for many previously underrepresented groups, the South African education system still performs below its potential. This is due to the basic education system whose outputs, regardless of comprehensive resource-injection, still perform below expectation compared to other countries such as Brazil, Russia, India and China (Department of International Relations and Cooperation 2014). The success rate has definitely not kept pace with the enabled physical access; with low graduation rates, high dropout rates, and hard sciences and postgraduate programmes still skewed negatively according to gender and race. (Higher Education South Africa 2014).

The quantification of physical/ formal access can lead to premature celebration by the democratic government, as it hides many underlying challenges. For instance, only 27 percent (1 in every 4) of undergraduates complete their studies in regulation time, 15 percent of students graduate each year and more than 50 percent dropout before they graduate (Council on Higher Education 2013) . That is why Lewin and Mawoyo (2014) argue that even though physical access to HE, indicative of high enrolments, is positive there is still attention needed in ensuring that those admitted to HE institutions actually stay there until they complete their studies. It became clear soon enough to responsible authority that achieving physical equity access to many more students is

one thing; ensuring that those who have achieved access qualitatively is quite another (Council on Higher Education 2015). The lack of quality in HE system has also been recognised by the National Development Plan;

> The data on the quality of university education is disturbing… with low participation, high attrition and insufficient capacity to produce required levels of skill…The problem of graduate unemployment in the face of skills shortages is an indication that universities produce graduates who do not meet the needs of industry and society.
>
> (South Africa 1997a; National Planning Commission 2012: 317)

This has also been observed by the Special Task Team of the Council on Higher Education (2013) mandated to assess the relevance of the undergraduate curriculum in view of high attrition and low completion rates. According to their report, South Africa's graduate outputs have been severely compromised in terms of numbers, quality and the proportion of the student body that succeeds (Council on Higher Education 2013). While quantitative indicators of transformation were instrumental in demonstrating the depth and breadth of the replacement of the old with the new system, the quality of student throughput is indicative of real transformation (Council on Higher Education 2013). Hence, despite almost double enrolment numbers in two decades of democracy, "high attrition and low graduation rates have largely neutralized important gains in access" (Council on Higher Education 2013: 9). This has been noted in a number of government and independent reviews; hence now the focus is on ensuring quality and success in the HE sector (Council on Higher Education 2015; Higher Education South Africa 2014; Lewin and Mawoyo 2014).

The Presidency in the *Twenty-Year Review*¸ laid the blame for lack of success in higher education on the institutions. The review argued that universities have not done enough in terms of student support, particularly for those students from previously underrepresented groups (Council on Higher Education 2016). The South African Government News Agency states that:

> For some time, universities will have to provide study programmes to assist underprepared learners entering higher education. Funding should incentivize those institutions that carry out this work.
>
> (Anon 2014: 1*)*

While The Presidency recognizes the need for programmes to assist underprepared learners, and availing resources to complement institutional efforts, studies show that

many institutions in the country had already embarked on such programmes moving from increasing student access to increasing student success (Higher Education South Africa 2014; Lewin and Mawoyo 2014; Department of Higher Education and Traning 2013). According to the Council on Higher Education (2013: 16-17), ‘‘it is widely accepted that student under preparedness is the dominant learning-related cause for patterns of poor performance in HE”. As such, the DHET through its agencies and affiliates, HESA and CHE, has instituted interventions that aim at enhancing the articulation gap of student entering academic programmes.

These academic programmes for underprepared students have taken several forms such as the Extended Curriculum programme and bridging courses. However, the Extended Curriculum Programme has been seen as an enduring feature of an evolving HE system aimed at “enabling students to develop sound academic and social foundations for succeeding in HE” (Council on Higher Education 2013: 18). Through the Quality Enhancement Project, Council Higher Education (2015) observe and reiterate the responsibility of institutions in supporting students to have a successful university experience. According to this view, “student support is critical to student success” regardless of the quality of a particular student cohort (Council Higher Education 2015: 105).

Due to the success rate that is still skewed according to race and gender, universities are encouraged to disaggregate their interventions according to race and gender (Council on Higher Education 2015; Department of Higher Education and Training 2014; Lewin and Mawoyo 2014) . This is also captured in the National Planning Commission (2012) that, while envisioning an “expanded, effective, coherent and integrated HE system in 2030, calls for immediate urgent action with the system to ensure that all South Africans realise their full potential, in particular those previously disadvantaged by apartheid policies, namely Black people, women and people with disabilities (PWDs)” (National Planning Commission 2012: 296).

Basically the present shape of the South African Higher Education system and its aspirations, are captured in the National Planning Commission (2012), and the Department of Higher Education and Training (2014). According to the National Planning Commission (2012: 295) , “South African Education System needs urgent

action". This is attribute to the concern with low participation and success rates amongst South African students in higher education (National Planning Commission 2012: 317). However, in line with this gloomy picture, the National Development Plan (NDP) aims at altering this by increasing participation, enrolment and throughput rates by 2030. This can only be done if the teaching and learning is paid great attention to, particularly for underprepared students.

> Many individuals with poor schooling aspire to higher qualifications, but they are academically less prepared than their middle class counterparts. Extra support …will help them cope with the demands of higher education.
>
> (National Planning Commission 2012: 320)

In this reasoning, the NDP alludes to the schism that exists in the basic education system, where some learners, even though they have achieved university admission, emerge qualitatively unprepared. This has also been noted by Council on Higher Education (2016: 54), as a "tale of two school systems" – "characterised by unequal performance and resources endowment". According to the Council on Higher Education (2016), while this system is equally detrimental as its apartheid counterpart, the discriminating criterion is now socio-economic status of parents rather than their race. Unfortunately, the better performing and well-resourced schools can only be accessed by a few, leaving the rest trapped in a system that does not sufficiently prepare them for post-school education. It is these underprepared students that need extra support if their physical university access can be translated to socio-economic mobility.

On the other hand the Department of Higher Education and Training (2014) *White Paper for Post-school Education and Training,* while acknowledging the existence of several post-school avenues for South Africans of all ages, aims to expand access and improve quality in most HEIs. According to the *White Paper,* priority for access is still for Black and female students in all forms of HEIs, since cohort studies have shown that Black and female students still lag behind with regard to success rate indicators (participation, throughput and graduation) (Department of Higher Education and Training 2014). This was attributed to the poor family background of the Black students. As a consequence, these students tend to work in order to augment their meagre family income in order to provide essential living expenses, which in turn adds

to their stress levels and distracts them from their studies (Letseka and Maile 2008). As highlighted in the DHET manual, a platform is therefore created within the *White Paper,* to support underprepared students through large-scale targeting with student-support programmes.

In spite of several successes recorded in transforming the HE system from its apartheid shape to its current form, there are several self-identified challenges, namely increased access and dropout rates and decreased throughput rates (Reddy 2004; Pityana 2003). In the past two years, for example, the aforesaid challenges facing Higher Education have been elevated by many student demonstrations; ranging from lack of transformation to racism. While the extent of the inconveniences caused due to these student protests have tended to foreground several challenges in HEIs, many studies that have been conducted since the early 2000s have warned of the many challenges in the HE system (Higher Education South Africa 2014; Badat 2010; Odhav 2009; Letseka and Maile 2008; Cloete 2004; Reddy 2004; Pityana 2003)

More so, and as highlighted in the *Education White Paper 3: A Programme for the Transformation of Higher Education:*

> In South Africa today, the challenge is to redress past inequalities and to transform the higher education system to serve a new social order, to meet pressing national needs, and to respond to new realities and opportunities. It must lay the foundations for the development of a learning society which can stimulate, direct and mobilise the creative and intellectual energies of all the people towards meeting the challenge of reconstruction and development.
>
> (South Africa 1997a)

In the above quote, it can be identified that the Department of Education was still riding the euphoric cloud of transition and aligning the transformation in the HE sector with the prospective gains of the government's Reconstruction and Development Programme (RDP). The major redress that was envisioned at that point was transformation of the quantitative outlook of the HEIs to reflect the national demographics. The *White Paper 3* (Section 1.4), thus identified as a major setback the existence of "an inequitable distribution of access and opportunity for students and staff along lines of race, gender, class and geography".

In 2003, Professor Barney Pityana reiterated this observation, as he argued that "a higher education system that privileged some and continued to disadvantage others was not sustainable", particularly in a democratic dispensation (Pityana 2003: 8). Pityana (2003) however, observed that this challenge of inequitable access had to some extent been alleviated through the decade of democracy. He observed for instance that;

> South African Universities are now benefiting from scholarships from all over Africa and attracting students and scholars from other African universities, building research partnerships and academic networks.
>
> (Pityana 2003: 7)

However, when coming to domestic dynamics, Pityana, noted with concern, that the challenge still remained of creating an academic environment not alienating to the majority of staff and students. This was indicated by the number of students who dropped out of HEIs without completing their studies.

The challenge of the low student success rate was therefore identified as a systemic challenge for the HE system in South Africa (Letseka and Maile 2008; Cloete 2004). While regarding HE as a key distributor of opportunity in the new South Africa, Cloete (2004) observed that many students enrolled in HEIs were ill-disposed to realise this ideal. This was due to the appallingly low success rates of most institutions.

In a policy brief compiled for the Human Sciences Research Council, Letseka and Maile (2008) argue that while a lot had been achieved in the South African HE system since the fall of apartheid, high dropout rates were a threat to the future of the country. While they observed that the national dropout rates were bad enough at 50 percent, they expressed concerned because of the racial undertones of the dropout distributions. In particular, they alleged that Black students are most likely to dropout as a consequence of their poor family background. In addition, for the 2000-2003 cohort, for example, Letseka and Maile, observed that the graduation rate of white students was double that of Black students. This, they argue, threatened to reverse the gains of democracy towards achieving non-racialism in the South African society.

Odhav (2009), in a study that assessed the post-apartheid policy with regard to HE, observed that while pre-1994 institutional change was needed to make the system

more functional, relevant and responsive, 'the articulation of liberation-led policies' did not translate to the required re-structuring. Odhav (2009), argues that while access to HEIs had to be disaggregated in terms of race, gender, class and disability, the overall populist inclinations of the ANC led to exclusive fascination with numbers at the expense of qualitative change, particularly to previously marginalized institutions. This has compromised not only the success of previously underrepresented students but the quality of prospective academic staff.

This challenge of student success in many HEIs in South Africa has been engaged with by many studies and government policies in the second decade of the 21st century. Consequently, many scholars have also gone further than offering a mere description of the appalling student success rates, and tried to find reasons behind the status quo, and even suggest ways of alleviating challenges regarding student success (Lewin and Mayowo 2014; Nala 2010 and Tyson 2010).

2.5.1 Student Success

The *White Paper for Post-School Education and Training: Building an Expanded, Effective and Integrated Post-School System,* while acknowledging the effort, financially and institutionally made by the government and various departments in the past two decades, has expressed departmental concern at the low participation and success rates in South African universities. It argues that;

> Student access, success and throughput rates are a very serious challenge for the university sector and must become a priority focus for national policy and institutions of HE – especially for those groups whose race, gender and disability status had previously disadvantaged them.
>
> (Department of Higher Education and Training 2014: xiv)

In this regard, the Department of Higher Education and Training (2014) suggests that HEIs expand the already-available student interventions and institutionalise them, especially in historically Black universities where they are needed the most.

In a report written for *Inyathelo: The South African Institute for Advancement*, and *The Kresge Foundation*, Lewin and Mawoyo (2014) unpacked the relationship of student access and success in a bid to propose relevant interventions for South African HEIs.

They observe that with only 27 percent of undergraduate students who complete their studies in regulation time, there is a serious concern with equity of outcomes in the HE system. While acknowledging that equal access had largely been achieved in South Africa since 1994, Lewin and Mawoyo (2014) contend that this positive result has been compromised by low graduation and throughput rates and success rates. However, they contend that success rates should not only be looked at in term of numbers;

> Success also relates to the quality of the programmes and the teaching of these programmes, the kinds of skills and attributes with which students leave university, including their preparedness for the world of work and their ability to enter employment as successful graduates.
>
> (Lewin and Mawoyo 2014: 13)

While success rates can loosely be conceptualized as a function of graduation and throughput rates, Lewin and Mawayo note that the DHET has a specific description of what constitutes success rates, which is determined by calculating Fulltime Equivalent (FTE) passes in a particular category of courses as a proportion of the FTE number of enrolled students for each category of courses (Lewin and Mawoyo 2014).

With this conceptualization, and data gathered from Higher Education Management Information System (HEMIS) data produced by the Department of Higher Education and Training (2013), Lewin and Mawoyo (2014) point out that success rates of African students are 10 percent lower than those of their white counterparts. This cannot be seen as an encouraging development given the effort put by the post-apartheid government in creating a multi-racial society.

Lewin and Mawoyo (2014), in their explanation of the relationship between access and success, borrow Wally Marrow's concept of *epistemological access* to the academic ways of knowing what sustain the universities (Lewin and Mawoyo 2014: 13; Collins and O'Brien 2011). Epistemological access, which will be discussed below in greater detail, argues that while it may be true that many students are able to get physical access to many HEIs and different departments, understanding subject epistemologies remains key in ensuring student success. However, if the articulation gap between what the student brings and what the university offers is not closed soon enough, the student may not realise the full value of the academic programme.

2.5.2 Epistemological Access

Collins and O'Brien (2011: 126) explain that epistemology is derived from the Greek word “episteme”, a branch of philosophy that deals with the theory of knowledge. Moreover, the phrase “epistemological access” was coined by early work of Morrow (1993) and has a particular relevance in South Africa in terms of high student dropout rates. For example, Bozalek, Garraway and McKenna (2011) clearly show that epistemological access is concerned with how students get access to acquire the knowledge offered within the university. It would seem that epistemological access is the foundation for student success. Hutchings and Garraway’s *Beyond the University Gates* undertook to show that foundational or extended curriculum programmes in universities are more aimed at achieving epistemological access and closing the articulation gap in underprepared students. They argue that physical access has to be complimented by something more substantial in ensuring that students are prepared for academic success in their programmes (Hutchings and Garraway 2010).

McKenna (2010) explains the mechanics of achieving epistemological access. According to her, academic literacy is not one, but many things; it is the language of academic disciplines. McKenna (2010: 14) notes as far as many disciplines in HE are concerned, academic literacy is “no-one’s mother tongue”. To be accepted, ideologically to one or the other disciplinary ‘tribe’, a student has to acquire this language. Academic access as a code language of epistemological access in many disciplines has to do with “ways of using language but also the beliefs, attitudes and values of the group” (McKenna 2010: 10). While many students come with no knowledge of specific disciplinary literacies, some come with literacy practices that closely approximate them to allow them to crack the code of the literacy of the discipline they want to join. Others on the other hand, “will keep on using wrong literacy practices until they are kicked out by the disciplinary tribe” (McKenna 2010: 9). It is therefore the responsibility of institutions to ensure that every student that gains access to “university gates” is able to achieve the acquisition of values, beliefs and attitudes for the discipline they want to join, if they are to last successfully beyond the university gates (Mckenna 2010: 10).

In 2011, Bozalek, Garraway and McKenna, compiled a series of case studies on how extended curriculum programmes in various universities have a potential of enhancing

epistemological access for students. They realised that many of these foundational programmes enabled students to “learn to become successful participants in an academic practice” of their choice (Bozalek, Garraway and McKenna 2011: 3). Many of the case studies show that students in science and technology disciplines can benefit a lot from extended curriculum programmes if they are structured in a way that bridges the articulation gap of students.

Higher Education South Africa (2014) in a report presented to the National Assembly, Portfolio Committee of Higher Education and Training also observed the need to bridge the articulation gap between students and various critical skills disciplines in HEIs if student success was to keep pace with access. It argued that the access and success among Black students must be improved, as they fall under the group whose previous experience excluded them from being inducted into dominant ways of constructing knowledge (Higher Education South Africa 2014). As such, the reiterated objectives from both DHET and National Development Plans are that these underprepared students need special programmes aimed at enhancing their level of coping with the demands of university study.

Although different interventions were introduced previously such as bridging courses and foundation courses to help prepare students for higher education challenges, Reynolds (2008) points out that these courses existed outside the mainstream discipline or discourse. As a consequence, Nala (2010) alleges that most institutions abandon the completely separate programme for a semi integrated programme introduced during the late 1990s, in favour of an integrated programme currently being offered in most institutions. Moreover, De Klerk, Van Deventer and Van Schalkwyk (2006) explain that the integrated programme such as the extended curriculum programme takes a more holistic approach to teaching and educating. They argue that the integrated programme does not separate the skills that are taught from the subject content, hence the view of the whole picture is always taken into consideration. Additionally, De Klerk, Van Deventer and Van Schalkwyk (2006) emphasise that integrating academic development into the mainstream curriculum which supports the learning of the student and cultivates a wide range of life skills, can be extremely beneficial in enhancing students’ performance.

2.6 International academic intervention programmes

Lewin and Mawayo (2014) noted that student access and success are primary concerns of higher education institutions (HEIs) throughout the world. This is more so with the globalization of education and strong efforts to increase rates of participation in higher education. Murray and Nallaya (2014) reported that the demographic of students studying in universities nowadays has become diverse in terms of their background, culture, age, socioeconomic status, and their entry pathways of which they arrived at university.

However, the success rates and completion of underprepared and students from underprepared backgrounds to have become a challenge confronting HEIs in recent years (De Kadt 2013; Smith 2012). As a consequence, several HEIs have been looking at and implementing interventions in the form of academic development programmes to help these categories of students to seamlessly fit into the university environment. In Southern Australia for example, in a bid to widen the participation and completion rates of socially and educationally disadvantage students, the government embedded academic literacies into the education curriculum from 2012 to 2013 (Murray and Nallaya 2014).

In the United States of America, academic intervention also have been implemented to support students. For instance, the Michigan State University of Osteopathic Medicine offers an Extended Curriculum Programme for students having academic difficulties, family or work obligations, health issues, and or off campus employment or financial difficulties (Naidoo 2011). While the programme may appear different from the South African ECP programme that is generally designed to help underprepared and disadvantaged students in their transition to universities, nonetheless, the intervention suggest that HEIs are beginning to recognize the importance of academic support to increase their throughout rates.

Equally important, the Oxford College of Marketing in the UK has a graduate programme that help assists students in the preparation for the Chartered Institute of Marketing (CIM) qualification. The programme offered students the opportunity to revise basic theory that is often covered in lower level courses (Naidoo 2011).

The Lancaster Foundation Programme is another HEIs intervention programme that is offered both in Nigeria and China. The programme is geared towards providing

academic support for foreign students, particularly from the developing countries studying through the UK universities (Lancaster University 2019). In this programme, students are introduced to academic and study skills, a comprehensive introduction to computer skills, the British culture and the International English Language Testing System (IELTS) examinations (Lancaster University 2019).

From the foregoing, it can be deduced that academic foundation programmes have become prominent in HEIs. While this programme offered in the developed countries (UK and US) are designed to assist students find a balance between their daily life challenge and their academics, the programmes in the developing countries (Nigeria and China), however, serves as a bridge to prepare students for the higher education. It is worth mentioning that the South Africa experience and context of ECP programme slightly differs from what is obtained elsewhere. In particular, and as previously stated, the historical past of South Africa, particularly the apartheid system of education created a dire situation that left many South Africans disadvantaged and under-prepared for higher education. The next section examines the ECP programme from the context of South Africa.

2.6.1 South African Foundation Programmes

Although, the ECP has occupied in present time the HEIs debate on providing interventions and access to higher educations for underprepared and disadvantaged students in South Africa, nonetheless, it was worth stating here that the ECP was not the only access programme that have been implemented to help support these categories of students. Bass (2011) noted that various foundation programmes have been established in the past to widen access and promote success for disadvantaged students in higher education. In some instances these foundation programmes are offered in the traditional South Africa universities to widen access to students without matriculation exception and thus considered as being underprepared for higher education (Wood and Lithauer 2005; Hay and Marais 2004). Among the foundation programmes, the Science Foundation Programme (SFP) and the University Foundation (UFP) Programme are used as a standpoint for foundation programmes in South Africa.

The SFP was noted to have been introduce in 1991 in the University of Natal (Pietermaritzburg) now (University of KwaZulu-Natal) (Grussendoff, Liebenberg and Houston 2004). The SFP offers students without matriculation exception into a year long programmes. In this programme, students offered subjects like Physics, Chemistry, Biology and Academic communications (Bass 2011). The students who successfully completes the programmes are allowed to enroll into any of the specific related science degrees.

On the other hand, the UFP established in 1999 and offered by the Nelson Mandela Metropolitan University offers streams leading to all (Business, Sciences and the Humanities) the main mainstream academic programmes (Wood and Lithauer 2005). Typically, students are taught as the core subjects; English for academic purpose and life skills.

From the above, it can be surmised that both programmes have some subtle differences, nevertheless, the SFP and UFP share same fate in that they are not qualify for the DOE subsidy for foundation programme (Bass 2011). The lack of government subsidy available for these foundation programmes may have given emergence to the ECP.

2.7 South African ECP programmes.

According to the Council on Higher Education, extended curriculum programmes;

> are a South African higher education intervention that have been in existence in various forms for three decades (and are) designed to deal with systematic obstacles to equity and student success.
>
> Council on Higher Education 2013: 70

ECP programmes started in 1980s, as academic support programmes aimed at enhancing access opportunities for “talented but underprepared students….. in order for them to achieve sound foundations for success in higher education” (Council on Higher Education 2013: 70). The understanding then, as it is now, is that there exists a gap between school-exit capacities and the requirements for success in HE. Over the past twenty years, these have been mainstreamed in the transformed HE as a tool for achieving equity in, mainly, access. As such, many programmes at universities have course specific ECP programmes whilst some have general university ECP programmes.

A point worth stressing here is that the ECP academic support programme were originally called Foundation Programmes or Bridging programmes. Students registering for these programmes but were not guaranteed entry to the main stream programme. According to Bass (2007), the introduction of ECP students registered in a programme is a first year of study that is a combination of credit bearing and academic development and writing skills programme that guarantees entry into the qualification and thus offers the students the opportunity to earn credits towards their qualification whilst on the ECP.

From the studies that have been done of ECPs, the belief has been that these have been successful in enhancing academic access particularly for a group of students who would otherwise not have managed to cope with the rigours of traditional curricula (Council on Higher Education 2013). Chetty (2014), assessing the impact of ECP in a Physics programme at the University of KwaZulu-Natal, has argued that this has been a success, not only in achieving equity of access but in enhancing student performance. This confirms a study of the Dental Technology ECP at DUT (Bass 2007).

In 2013, the CHE released a proposal of reforming undergraduate curricula, which in essence meant a fusion of the current traditional curriculum with an extended curriculum. Moreover, there was a pressing need to reverse the trends, particularly the need for more graduates of good quality to take forward all forms of social and economic development. In reality, the access, success, completion rates of graduates post-apartheid were still continuously skewed racially, with white completion rates being an average 50 percent higher than those for Africans (Council on Higher Education 2013). Against this backdrop the CHE appointed a task team to conduct a comprehensive investigation into a possible intervention. The report of CHE's Task Team on Undergraduate Curriculum Structure, *A Proposal for undergraduate curriculum reform in South Africa: The Case for a flexible curriculum structure,* while acknowledging great strides accrued since the dawn of democracy, notes the challenges of high attrition and low graduation rates that have threatened to neutralize the important gains in access (Council on Higher Education 2013). Noting that the

current HE system, together with its interventions, is not compatible with South African needs, the CHE Task Team hoped that the proposed curriculum structure will be a desired intervention and be able to align the graduation and success rates to South Africa's financial efforts and needs (Council on Higher Education 2013) .

The CHE's Task Team has largely argued that while there is national disappointment in the poor returns on HE investments by a government determined to overturn the skewed developments of the apartheid era, this situation is likely to continue as the curriculum structure for undergraduates was designed almost a century ago (Council on Higher Education 2013). They argue that while many aspects of South Africa and the global context have changed, the colonial-era curriculum's *inflexible* structure is still expected to meet contemporary needs of a democratic South Africa. The Task Team has therefore argued that modifying the current undergraduate curriculum to something more flexible has higher prospects of improving graduation rates and academic outputs. The "flexible curriculum structure" while extending the formal academic time by a year, allows capable students to complete their courses in less than the formal time (Council on Higher Education 2013: 19). In this way the curriculum will be flexible enough to cater for the diversity within the HE sector, thereby eliminating the needs for parallel, discriminatory, programmes like ECP.

In January 2014, CHE compiled extensive responses from 22 universities on the proposed curriculum. Most HEIs, while acknowledging the challenge of low participation and high attrition rates, argue that the problem of the articulation gap resides with poor basic education. So, most argue that interventions of improving student preparedness have to be implemented there, and not within HEIs (Council on Higher Education 2014). Others contend that while HEIs have a responsibility of teaching the students they receive, an intervention aimed at rectifying the articulation gap has to be a holistic one – extending to both departments of education (Council on Higher Education 2014). Many institutions preferred to give current institutional interventions – ECPs – another dose of life and resources; giving more support to academic and support staff in pedagogy and effective epistemological access initiatives (Council on Higher Education 2014).

2.8 Extended Curriculum Programme-Student Experience

With the dwindling government funding, high attrition rates and increasing in number of Black student enrolment in HEIs, argument for and against the discontinuation of ECP in the higher education has currently dominated the academic debate (Uduak 2017). Some have called for the discontinuation of the ECP and have questioned the extent of the academic success of the ECP. According to argument, the massive budget allocation towards the ECP is yet to be justified in terms of the student's throughputs (Boughey 2010).

On the other hand, while the ECP is being questioned, Uduak (2017) noted that its value in terms providing support to underprepared students cannot be undermined. In light of these, several authors (Uduak 2017; Boughey 2010; Tyson 2010) have advocated for the expansion of the ECP to all higher education students. Boughey (2010) argues this point despite questioning the value of ECP as stated earlier. In a literature review (Mohadedbhai 2014; Firfirey and Carolissen 2010; and Sennett *et al.* 2003), it was suggested that in order to widening access to higher education, the experiences of students, particularly the factors that affect their successes and failures should be of paramount interest to academic scholars. In light of these, some of the experience of students in the ECP is discussed below.

In a study exploring the experiences of an ECP programme in Humanities at the University of KwaZulu-Natal, the students perceived that the ECP contributed to their social and academic integration which in turn influence their academic success (Tyson 2010). Similarly, and in a separate report by Nala (2010), the ECP students noted that the programme equipped them with the academic writing skills needed to excel in higher education. Owing to the aforesaid skills, the students were able to outperform and even assist their peers in the mainstream students in their own academic writing (Nala 2010).

Nevertheless it has been reported that ECP students studying Nursing at the Durban University of Technology expressed stigmatisation and lack of confidence for being placed in the programme (Sibiya and Mahlanze 2018). Their work supports the report of Uduak (2017) who noted that stigmatisation and lack of confidence amongst the ECP students gravely affected their motivation and the quality of their success. Other studies have found otherwise. As an example, ECP students at the University

Stellenbosch's did not feel stigmatized for being placed on the programme (De Klerk *et al.* 2005). Corroborating further, Bass (2007) found little evidence to suggest that stigmatization negatively impacted on ECP students in the Dental Technology programme at DUT.

Given the contradictory reports on the impact of stigmatization on students' academic performance, this study will be assessing whether the placement of students in the Somatology ECP programme contributed to any form of stigmatization and if such stigmas impacted on their confidence and academic performance.

Equally important, a study found that the duration of the ECP to be a concern for the students (Uduak 2017). This they attributed to the financial challenges and the stigma associated with the ECP. According to his finding, many were not satisfied and question the extra year they have to spend in the programme. They consider the extra year as a waste of time to their career and progress in life.

Equally concerning, and despite the appreciation by the students that the ECP ease their transition from high school to the university, they have considered the ECP programme for not being challenging enough during the second and third years. According to Uduak report (2017), the ECP students noted that they felt lazy because of the reduced work load compared to the mainstream students. As a consequence of this, the students noted to show less efforts in their academic work.

Drawing from the above experiences, it is reasonable to assume that although the ECP aids student transition into higher education, the social integration of the students in their institution remains questionable with different ECP research reaching opposite conclusions. Particularly, the impact of stigmatisation on the academic performance of the students still remain contentious. The next section therefore examines Tinto's position on student integration in the higher education institution.

2.9 Tinto's Student Integration Model

While this study appreciates all the scholarly work that has been done with regard to student access and success, the employment of Tinto's Student Integration Model, (SIM) hopes to add a new angle to the current debate. Tinto's Student Integration Model, was developed in 1975 from inspiration from Emile Durkheim's suicide theory

(Tinto 1975) . According to Durkheim an individual's likelihood to commit suicide is directly linked to his/her level of integration or isolation from the society (Tinto 1975). The more isolated he is, the more likely he is to commit suicide and vice versa.

Tinto's model takes the academic environment as a microcosm of the society – a society in its own right. As such, the level of integration a student experiences to either the social or academic aspects of the academic environment will determine the extent to which the student is prone to attrition (dropout). The more isolated in one of the two the student is, the more likely she is to drop out from the academic institution. However, for Tinto, the balance in integration between these two faces of the academic society is also important, as any form of imbalance in integration can cause similar effects to isolation (Tinto 1975).

The other change is the gradation in the causes of withdrawal from university. Owing to the level of integration, isolation or the quality of the balance between the two, a student can choose to do a voluntary or non-voluntary drop out, permanent (transfer) or temporary dropout (Tinto 1975). Student dropout – defined as "the failure of individuals, of given skills and abilities to have intentions and goal commitment, to achieve desired educational goals" (Tinto 1975: 78) - is influenced by three aspects; student characteristics (background, family and psychological health), interaction of student, and institution, and institutional character (Tinto 1975).

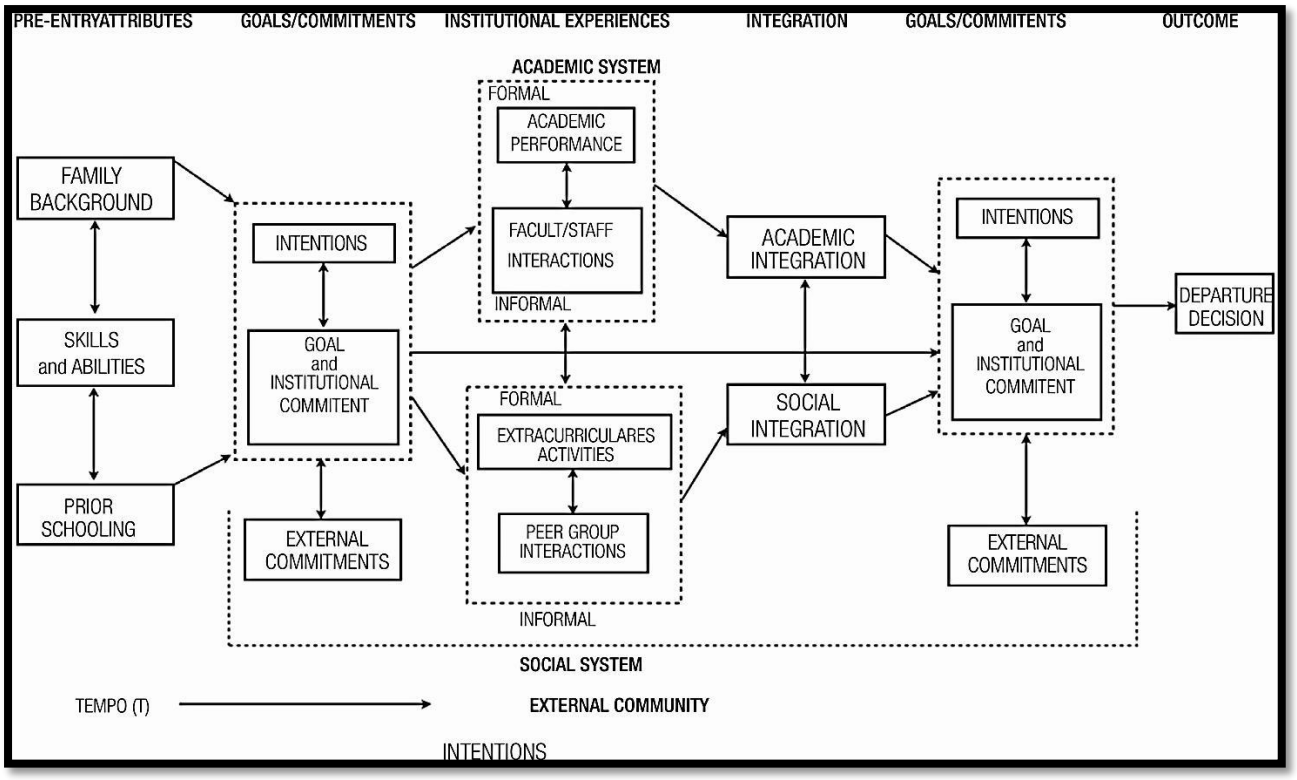

Figure 2- 1: **Tinto's modified Student Integration Model Source: Tinto (1993)**.

However, over the past three decades, Tinto has been able to revise this model, by analysing the dynamics of student goal commitment and the ability of the institution to meet the needs of the student, to avoid a dropout. As such, the above Tinto model is streamlined to add value in assessing the impact of ECP in student success rates in the Somatology Programme. This model will allow assessment of the participants' pre-entry attributes, their institutional experience and integration levels in view of their pre-determined goal commitments of becoming Somatologists. Hence, the Tinto model serves as the conceptual framework underpinning this study.

2.10 Conclusion

This chapter reviewed relevant literature (policy documents, legislation and scholarly work) with regard to student success and access. This debate was foregrounded within the South African HE transformation process. While many studies showed how ECP intervention has increased equity of access in HE in the past three decades, there is still thin literature, despite continuous preference, of the extent to which these

ECP programmes actually enhance student success. The discussion now turns to Chapter 3 in which the methodology used in this study is reported on and discussed.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The previous chapter presented a literature review which critically reviewed the evolution of the higher education system in South Africa, and provided the rationale behind the development and implementation of ECP. This chapter describes and explains the methodology employed in this study including the paradigm, design, population and sampling techniques adopted, instruments of data collection, and methods of data analysis. The ethical requirements taken into consideration are also described.

3.2 Research Paradigm

This study uses a post-positivist paradigm including methods and strategies from both qualitative and quantitative approaches.

According to Cohen, Manion and Morrison (2000), research is about understanding the world, and this inevitably depends on the views of it and the assumptions therein. The different frameworks of pre-determined assumptions employed in viewing the world are referred to as paradigms (Creswell and Clark 2007). Barker (2003) defines a paradigm as a way of viewing a natural phenomenon that includes a set of philosophical assumptions and a design for gathering and interpreting data. Paradigms influence how research is designed and conducted; they provide significant lenses to inspect the practices of research, based on three levels-the ontological, epistemological and methodological.

Check and Schutt (2011), describe two commonly used research paradigms, namely the positivist and interpretivist. A positivist paradigm assumes that reality exists apart from the perception of those who observe it and it can be observed, measured and scientifically studied. As such, positivist paradigms are commonly associated with quantitative methods, which use numerical data and statistics to objectively describe and explain the observed reality and make generalized predictions on phenomena (Leedy and Ormrod 2005). On the other hand, the interpretivist paradigm conceives reality as a set of socially constructed phenomena. It is assumed within this worldview, that in as much as reality may exist externally of perceiving subjects, it is only given meaning through inter-subjective interpretations (Kratochwill 2013). Therefore,

effective research methods will be those that aim at eliciting meaning of certain phenomenon from people involved.

Appreciating the strengths and weaknesses of each paradigm, and the aims and objectives herein, this study has employed a post-positivist paradigm. Post-positivism aims to transcend the weaknesses of positivism through embracing some strength from interpretivism. According to Creswell (2009: 6), post-positivism is a "milder form of positivism that follows the same principles but allows for more interaction between the researcher and the participants". It, therefore, still aims at generalizability while capturing perceptions of participants about the meaning and significant of certain observables.

3.3 Research Methodology and Design

A research approach can be conceived as a "plan or proposal to conduct research, which involves the intersection of philosophical assumptions, research strategies and specific methods" Creswell (2009: 5). Three approaches are usually identified as quantitative, qualitative and mixed methods (Creswell and Clark 2007). While in the past quantitative and qualitative studies have been pitched against each other as polar opposites, recent realisation has re-conceptualised these two approaches as two ends of a single continuum (Creswell 2009) – complementary rather than conflicting (Kratochwill 2013). Based on the philosophical assumption underwriting the aims of this study, this study used the mixed method approach.

A mixed method approach is defined as:

> More than simply collecting and analysing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of the study is greater than either quantitative or qualitative research used in isolation.
>
> (Creswell 2009: 4)

Investigators (Creswell 2009; Creswell *et al.,* 2011) have noted that the mixed methods approach allows the researcher to build knowledge on pragmatic grounds thereby promoting the use of both quantitative and qualitative assumptions. Both qualitative and quantitative methods were employed in this study because different methods allowed optimal discovery at different stages of the research to gain a more holistic view of the phenomenon.

A quantitative research approach is defined by Maree (2007: 145) as “a process that is systematic and objective in its ways of using numerical data from only a selected subgroup of a universe to generalise findings to the universe that is being studied”. Significantly, and as pointed out by Yin (2009), the quantitative research method is deemed appropriate when accurate data is required. Maree (2007) however, stresses that a limitation of the analysis of quantitative data is that it does not give depth to the data through the experience and perception of participants. The design used in this study was a quantitative approach (chart analysis) – in which a numerical description of trends in success rate was obtained through a retrospective review of student data.

Sharma (2009: 28) avers that the qualitative research approach by contrast, is used to seek understanding of the participants’ perceptions and experiences in selected settings, which provides detailed information about how the affected population perceives its problems. The qualitative data was gathered through semi-structured interviews because it allowed for some planning to achieve the desired outcome. Cohen, Manion and Morrison (2007) suggest that during qualitative interviews fresh perceptions and understandings may arise, therefore, semi-structured interviews will enable the researcher to probe more. The semi-structured interviews were conducted in English and recorded on a digital Smartphone (LG-G4) with the informed consent of the respondents. Each participant signed a consent form and was informed that participation in this study was voluntary and that the anonymity and confidentiality of information would be maintained (See Appendix C). Students also consented to be recorded during the interview. Anonymity of the students was further protected, as the interview questions did not require their names (See Appendix E).

By using the convergent mixed method design, this study took advantage of the numerically-inclined quantitative strategies and methods to quantify the relationship between student success rates (dropout, throughput and graduation). At the same time, the study through qualitative strategies and methods captured the perceptions and experiences of ECP students behind the numbers. Creswell and Plano-Clark (2011) state that convergent mixed method design uses concurrent timing to implement the quantitative and qualitative approaches during the same phase of the research process.

3.4 Target population and sampling

3.4.1 Quantitative sample

The quantitative data was sourced from the Institutional Management information system (MIS). This data included ECP and mainstream students enrolled with the Somatology programme from 2005 to 2010.The mainstream student numbers are included as the research results include comparative data analysis between ECP and mainstream cohorts for information purposes. A total of 281 students were registered in the Somatology programme in the period under study (See Table 3-1 below).

Table 3- 1: **Numbers of ECP and SCM students enrolled in the Somatology programme year by year from 2005- 2010**

Year	ECP	Mainstream
2005	18	35
2006	22	25
2007	18	24
2008	18	27
2009	26	22
2010	20	26
Total	122	159

The census method was chosen by the researcher as the best method for quantitative data collection. The census sampling method consists of data obtained from the entire population in a selected area (Maree, 2007: 6). For this study, this required an analysis of the enrolment, throughput, dropout rates and success rate, for the selected cohorts from 2005 to 2010 and the quality of secondary education obtained by these participants. The small student numbers (Table 3-1) in Somatology supported census sampling (Check and Schutt 2012: 96).

3.4.2 Qualitative sample

For the qualitative aspect of the research, simple random sampling ensured that all participants had an equal chance of being selected for the study (Check and Schutt 2012). One hundred and twenty-two students originally enrolled in the ECP between 2005 and 2010. Of this number 69 graduated from the programme with a qualification, representing a 56.56 percent pass percentage of students originally enrolled. The selection involved a process whereby a sample frame was established which included 69 paper slips of the same size and colour, each one containing a participant's name. The paper slips were folded and placed into a hat after which a blindfold selection was made (Polit and Beck, 2004). After each name was drawn and coded participants were contacted telephonically and invited for an interview at a convenient date, time and venue. However, if the selected students declined, the next participant on the sample list was contacted. Interview selection was discontinued when the required number of participants for interviews was obtained. The discussion now turns to a discussion on the quantitative and qualitative aspect of the study.

3.5 Research Approach and Methods

3.5.1 Part 1: Retrospective quantitative study

This part of the study required an analysis of the student records of all students that had been registered in the Somatology Programme at a selected University of Technology for the period from 2005 to 2010. The data was sourced from DUT institutional Management Information System (MIS). The specific data (Appendix F and G) that was obtained from the MIS for the purpose of this research included:

a) Demographic profile of students
b) Enrolment rates
c) Dropout rates
d) Throughput rates
e) Success rates

Data obtained from MIS is provided only by authorised staff. Various systems checks are provided that verify data on an ongoing basis. Access to the MIS is restricted and only authorised staff may alter or change data.

3.5.2 Part 2: Prospective study: Qualitative data

Blanche, Durrheim and Painter (2006) state that an interview is an accepted process that enables interaction with the respondents to obtain meaningful data. Semi-structured interviews give the researcher an opportunity to know the respondents well in order to comprehend how they reason and feel. The focus of the semi-structured interviews in this study was to gain understanding of the students' perception and experience of the ECP. It is very important to have this understanding as their perception and experience might have had an impact on their success. Moreover, qualitative data provides an understanding as to whether the students' experience of the ECP marry with the perception of the university for its graduates.

The interview schedule (Appendix E) consisted of pre-determined questions including follow-up questions to elicit appropriate responses about the interviewees' experience and perception of ECP (Polit and Beck, 2004). The duration of each interview varied from 30 to 45 minutes, depending on the dynamics of each interview. All interviews were conducted by the researcher. The interviews were recorded using a smartphone (LG-G4) and notes were written as back-up for the recordings (Maree, 2007). All recordings were transferred to a USB immediately after the interview and deleted from the phone to ensure confidentiality and security of data.

All interviews were transcribed and given to participants to read. This gave them the opportunity to validate the transcribed data and ensure that it correlated with what they said.

3.5.3 Trustworthiness of data generated by qualitative research

The quality of qualitative research is based upon trustworthiness. Maree (2007) explains that validity and reliability in qualitative research is based on the trustworthiness of the research. Bass (2007: 119) states that "Guba developed a model for the trustworthiness of qualitative research". This model has four criteria to

pursue a trustworthy study, namely, credibility, transferability, dependability and conformability (Bass 2007). Trustworthiness in research makes reference to the confidence in the truth of the data and its interpretation (Maree 2007).

In this study, trustworthiness was ensured by piloting the interview schedule to ensure that there were no pitfalls or errors. This also assesses reliability of the questions with regard to the interview's ability to collect the information that answers the research questions. The researcher administered the interviewer to ensure clarity is given to questions that are not understood.

Accuracy of the transcription was ensured by listening to the recordings again and comparing with the transcription. Participants were allowed to read the transcription should they wish to and validate that what was transcribed correlated with what they said.

Given the number of qualitative interviews conducted, the data obtained can be assumed to be valid and thus trustworthy given that the literature suggests that saturation in qualitative interviews occurs between six and 18 interviews (Guest *et al*., 2006; Kelly, 1999). Saturation is determined when no new data is generated from those being interviewed. This study interviewed 15 ECP graduates.

3.6 Pilot Study

To validate the method of data collection, a pilot study was conducted prior to the study. Bassavanthappa (2007) is of the opinion that pilot studies provide a researcher with adequate knowledge and experience of the research setting and population in ways that would help them better manage unforeseen circumstances that may emerge during the study. The pilot study involved interviewing two ECP graduates, who were consequently excluded as data generating participants from the study. Two participants were chosen for the pilot study. This number represents 10 percent of the sample of 15 participants. Connelly (2008) argues that 10percent is an appropriate pilot sample size for a study population that is less than 300 in number.

3.7 Data Analysis

The aim of data analysis is to construct data in a meaningful way so that a significant conclusion is produced. Without analysis and interpretation, data is simply a string of numbers and words. Analysis and interpretation give data specific meaning by casting the relationships of variables and concepts emerging from data within a specific theoretical or conceptual framework. It is only then that the study aims and objectives can be answered by the given data (Polit and Beck 2006). Since the current study used both quantitative and qualitative, data analysis also ensured the employment of appropriate methods for each set of data collected.

3.7.1 Quantitative data analysis

Rouhani (2014), in describing quantitative methods, states that the method is unique in that it utilizes the additive approach in regression analysis to examine the individual effects of various factors (for example, demographic variables) on a given outcome when controlling for other variables in the model. Quantitative data, was analysed using both descriptive and inferential statistics. Lind, Mason, and Marchal (2002) point out that descriptive statistics describe, organise and summarise a particular set of quantitative data. Although such statistics make no inference or predictions they are, however, useful in summarising results for any quantitative data. Information obtained as descriptive statistics is presented using Microsoft Excel, which is offered in bar and line graphs.

With reference to the inferential statistical analysis, Johnson and Christensen (2012) explain that inferential statistics, by contrast, use the laws of probability to make inferences and draw statistical conclusions about the data. Basically, inferential statistical tests are used to examine the hypothesis in a study (Creswell 2009). In testing the hypothesis for this study, Barnes (2011) indicates that the independent t-test is the most appropriate parametric test to identify the mean differences, and for testing any significant differences between two variables. The independent t-test was used to analyse the differences in throughput and dropout between ECP and Somatology mainstream cohorts, with $p<0.05$ set as statistically significant. Additionally, comprehensive cohorts of ECP were analysed by univariate analysis of variance (ANOVA). Although ANOVA is used in analysing the differences between

three or more sample means, McHugh (2011) points out that ANOVA output does not provide any analysis of pairwise differences. In order to compare the difference in the throughput and dropout rates in terms of gender and race, multivariate statistics (multiple comparison) using Bonferroni test was further used to examine pairwise differences in all the ECP cohorts (p= 0.05). All analyses were performed using SPSS (Version 24®).

3.7.2 Qualitative data analysis

Spencer, Ritchie and O'Connor (2004) aver that there are two fundamental approaches to analysing qualitative data (although each can be handled in a variety of different ways); the deductive approach and the inductive approach. This study was deductive in nature. William, Bower and Newton (2004) suggest that when using a predetermined framework to analyse data, the approach is said to be deductive. This is because the researcher imposes their own structure or theories on the data and then uses these to analyse the interview transcripts.

Qualitative data from interviews was transcribed and analysed following thematic content analysis. Thematic content analysis focuses on identifying themes or patterns that emerge from different responses by the respondents (Maree, 2007). The results were interpreted and analysed against existing literature using thematic content analysis.

The aim of this analysis was to explore the perceptions and experiences of the Somatology ECP graduates. Obtained data was grouped according to identifiable themes and presented in relevant categories.

The researcher started by reviewing all transcribed data (responses) repeatedly. This allowed the researcher to underline the themes and words that emerged from participants. The identified themes were then grouped into categories and sub-categories.

3.8 Ethical considerations

Any research conducted has to adhere to a specific set of ethical norms and standards in order to avoid doing harm through the process of researching or the impact of the

research outputs (Polit and Beck 2012). The researcher in this study followed the protocol set by the DUT Institutional Research Ethics Committee (IREC). A letter of request (Appendix A) was summited to IREC to conduct research and to gain access to ECP information (Appendix B).

With regard to the participants, a letter of information (Appendix C) and a consent form (Appendix D) were distributed. The consent form had to be signed to confirm that they understood the following, that:

- Participation in the study was voluntary.
- They could withdraw any time before or during the interview.
- There will not be any harm to either their physical or psychological wellbeing as a result to their participation of the study.
- Confidentiality and anonymity of information was assured to enhance the participants' right to privacy.
- There was no remuneration for participating in the study.

3.9 Confidentiality and anonymity

Confidentiality and anonymity are key parts of any successful study. Mouton (2002) argues that these build participant confidence and ensures greater validity of the study. Thus, in order to adhere to these, all transcripts were also coded in order to avoid the possibility of attaching certain statements to certain participants. In collaboration with the supervisor, the researcher put in place a mechanism that guaranteed that the data obtained would be stored for five (5) years - to protect the right of participants to anonymity and to uphold the promise of confidentiality – after which it would be disposed of accordingly.

3.10 CONCLUSION

This chapter provided a detailed explanation of the precise strategies and methods used to collect and analyse data as well as a brief explanation of the procedure of the study. The rationale for using the specific methods has been explained through the use of relevant literature. The discussion now turns to Chapter 4, the results and finding of this study.

CHAPTER FOUR: RESULTS

This chapter reports the results on the study which investigated the Somatology Extended Curriculum Programme (ECP) student dropout, throughput and success rates for the period 2005 to 2010 at the Durban University of Technology. The results obtained were then compared to the mainstream Somatology student Cohort (SCM) for the same period in order to gauge if the Somatology ECP has met its objective to better throughput rates and reduce dropout rates. The quantitative data is presented in the form of line graphs. In addition, trends in the data over the years under investigation are detailed. The qualitative data is reported as narratives supported by quotations from transcripts of the participants interviewed.

4.1 Demographic profile of ECP and SCM student

The success, throughput and dropout rates for mainstream (SCM) and foundation (ECP) first-time entering National Diploma in Somatology cohorts for the years from 2005 to 2010 were reviewed.

Table 4-1 provides the demographic profile of ECP and SCM cohorts in terms of their enrolment year, gender, and race. The majority of students enrolled in both programmes year on year for the period under study was female with few males in the ECP as seen in Table 4.1

Table 4- 1: **Demographic characteristics of ECP (n=122) and SCM (n=159) participants**

	Characteristics	2005 n (%)	2006 n (%)	2007 n (%)	2008 n (%)	2009 n (%)	2010 n (%)	Total n (%)
	Gender (n=122)							
	Female	16 (88.8)	20 (90.9)	16 (88.8)	18 (100)	20 (76.9)	18 (90)	**108(88.5)**
	Male	2 (11.1)	2 (9.0)	2 (11.1)	0 (0)	6 (23.0)	2 (10)	**14(11.5)**
ECP	***Race***							
	Black	16 (88.8)	9 (40.9)	17 (94.4)	13(72.2)	22 (84.6)	18 (90)	**95 (77.9)**
	Indian	2 (11.1)	11 (50.0)	1 (5.5)	5 (27.7)	4 (15.3	2 (10)	**25(20.5)**
	Coloured	0 (0)	2 (9.0)	0 (0)	0 (0)	0 (0)		**2(1.6)**
	Gender (n=159)							
	Female	34 (100)	25 (100)	24 (100)	27 (100)	22 (100)	26 (96.1)	**158(99.4)**
	Male	0 (0)	0(0)	0 (0)	0 (0)	0(0)	1 (3.8)	**1(0.6)**
Mainstream	***Race***							
	Black	13 (38.2)	5 (20)	10 (41.6)	18 (66.6)	17 (77.2)	12 (44.4)	**75(47.2)**
	Indian	18 (52.9)	14 (56)	7 (29.1)	8 (29.6)	3 (13.6)	13 (50)	**63(39.2)**
	Coloured	1 (2.9)	2 (8)	1 (4.1)	0 (0)	1 (4.5)	0 (0)	**5(3.1)**
	White	2 (5.8)	4 (16)	6 (25)	1 (3.7)	1 (4.5)	2 (7.6)	**16(10.1)**
Total		**52(18.5)**	**47(16.7)**	**42(14.9)**	**45(16.0)**	**48(17.1)**	**47(16.7)**	**281 (100)**

4.2 Performance

The tables below represent data from 2005 to 2010. The mean over this six year period was compared using t-test between ECP and SCM.

4.2.1Throughput rate

The minimal time throughput rate of ECP and SCM together with plus one year and plus two years are presented in Table 4-2.

Table 4- 2: **Throughput rate of ECP and SCM**

	Throughput					
	Minimum		**+1**		**+2**	
Year	***ECP n (%)***	***SCM n (%)***	***ECP n (%)***	***SCM n (%)***	***ECP n (%)***	***SCM n (%)***
2005	6 (33)	15 (43)	3 (17)	4 (11)	0	2 (6)
2006	8 (36)	9 (36)	4 (18)	2 (8)	0	1 (4)
2007	8 (44)	8 (33)	4 (22)	5 (21)	1 (6)	2 (8)
2008	7 (39)	10 (37)	3 (17)	8 (30)	1 (6)	0
2009	7 (27)	9 (41)	5 (19)	6 (27)		0
2010	8 (40)	9 (35)		6 (23)		

As table 4-2 shows overall more students completed in minimal time in their enrolled cohort; the ECP throughput rates in minimum time and +1 are comparative to mainstream however more mainstream students complete in +2 when compared to ECP.

4.3 Assessment of the throughput rate

The independent t-test for the performance for ECP and SCM cohorts are given in Table 4-3. Although the average throughput score at minimal time for ECP (36.5±5.96) was lower than (37.5±3.78), the t-test score in Table 4-3 failed to show a significant difference beyond the 0.05 interval level ($p>0.05$). Similarly, and in respect to the throughput rate at +1, the average throughput score for ECP (18.6±2.07) was lower than for the SCM (19.4±9.68). The t-test score also failed to show significant difference beyond the 0.05 interval level ($p>0.05$).

With regard to the throughput rate at +2, the independent t-test showed no significant difference between the ECP and SCM cohorts (p>0.05). Table 4-3: t-Test: Two-Sample Assuming Unequal Variances (minimal time)

Table 4-3: **t-Test: Two-Sample Assuming Unequal Variances (minimal time)**

Cohort	Throughput								
	Minimum time			+1			+2		
	Mean	SD	*P (value)*	Mean	SD	*P (value)*	Mean	SD	P (value)
ECP	36.5	5.96	0.737	18.6	2.07	0.860	3	3.64	0.560
SCM	37.5	3.78		19.4	9.68		4.5	3.42	

4.3.1 Assessing the throughput rate by race

The one-way ANOVA, mean, standard deviation by race at minimum time, is shown in Table 4-4. No statistically significant differences were found in the throughput rate by race at minimum time (p>0.05).

The White (SCM) had the highest (69.5±40.2) throughput rate recorded at minimal time, while the lowest (24.3±14.5) throughput rates were measured among the Black ECP and SCM cohorts, respectively.

Table 4- 4: **ANOVA Throughput rate by race at minimum time**

	N	Mean	Std. Deviation	P (value)
Black (ECP)	6	34.1667	6.64580	0.109
Black (SCM)	6	34.1667	5.03653	
Indian (ECP)	6	55.8333	22.00379	
Indian (SCM)	5	34.4000	4878524	
Coloured (SCM)	5	40.0000	41.83333	
White (SCM)	6	69.5000	40.01875	

P ≤ 0.05 is considered statistical significance

The one-way ANOVA, mean, standard deviation by race at +1 time is shown in Table 4- 5. Statistically significant differences were found in the throughput rate by race at +1 time ($p<0.05$).

The Indian (SCM) had the highest (41.75±41.69) throughput rate recorded at +1 time, while the lowest (5.0±11.2) throughput rates were measured among the White and Coloured (SCM).

Table 4- 5: **ANOVA Throughput rate by race at +1 time**

	N	Mean	Std. Deviation	P(value)
Black (ECP)	5	22.8000	6.64831	0.04
Black (SCM)	5	18.0000	13.91043	
Indian (ECP)	5	5.4000	12.07477	
Indian (SCM)	4	41.7500	41.69233	
Coloured (SCM)	5	5.0000	11.18034	
White (SCM)	5	5.0000	11.18034	

P ≤ 0.05 is considered statistical significance

The one-way ANOVA, mean, standard deviation by race at +2 time is shown in Table 4-6. No statistically significant differences were found in the throughput rate by race at +2 time ($p>0.05$).

The Indian (SCM) had the highest (17.67±19.35) throughput rate recorded at +2 time, while no throughputs were recorded for Coloured and White (SCM) cohorts.

Table 4- 6: **ANOVA Throughput rate by race at +2 time**

	N	Mean	Std. Deviation	P (Value)
Black (ECP)	4	1.7500	3.50000	0.12
Black (SCM)	4	4.5000	5.25991	
Indian (ECP)	4	5.0000	10.00000	
Indian (SCM)	3	17.6667	19.34770	
Coloured (SCM)	4	0.0000	0.00000	
White (SCM)	4	0.0000	0.00000	

P ≤ 0.05 is considered statistical significance

4.4 Assessment of the dropout rate

Part of the CHE (2013) mandate was to ensure that students enrolled into higher education institutions complete their qualification. The previous section has shown that the throughput rates for ECP and SCM were more or less the same. This section assessed the dropout rate of the ECP cohort in comparison with the SCM. As illustrated in Table 4-9, the dropout rates for the ECP cohort were higher than those for the SCM, overall.

Table 4- 7: **Dropout rate of ECP and SCM cohort**

	ECP		SCM	
	Enrolment	***Dropout***	***Enrolment***	***Dropout***
	n= 122	***n (%)=50 (40.9)***	***n =159***	***n (%)= 52 (32.7)***
2005	18	9 (50)	35	14 (40)
2006	22	10 (45)	25	13 (52)
2007	18	5 (28)	24	9 (38)
2008	18	7 (39)	27	9 (33)
2009	26	12 (46)	22	0
2010	20	7 (35)	26	7 (27)

P ≤ 0.05 is considered statistical significance

4.4.1 Comparative analysis of the dropout rate between ECP and SCM

In order to draw a comparison in the dropout rates between the ECP and SCM cohorts, the mean over 5 year period (Table 4-7) was compared using t-test.

The independent t-test for the dropout rates between ECP and SCM cohorts is given in Table 4-8. Although the average dropout for ECP (40.5±8.12) was higher than that for SCM (31.7±17.60), the t-test score in Table 4-8 failed to show a significant difference beyond the 0.05 interval level (p>0.05).

Table 4- 8: **t-Test: Two-Sample Assuming Unequal Variances (drop out)**

Cohort	Dropout		
	Mean	SD	P (value)
ECP	40.5	8.12	0.29
SCM	31.6	17.60	

P ≤ 0.05 is considered statistical significance

The one-way ANOVA, mean, standard deviation dropout rate by race is shown in Table 4-9. No statistically significant differences were found in the dropout (p>0.05).

The Coloured (ECP) had the highest (100.0±0.0) dropout rate, while the White (SCM) recorded the lowest dropout rate (26.33±38.87).

Table 4- 9: **ANOVA Dropout rate by race**

	N	Mean	Std. Deviation	P (value)
Black (ECP)	6	42.7333	9.44493	
Black (SCM)	6	36.1667	21.24539	
Indian (ECP)	6	36.1667	19.90394	
Indian (SCM)	5	31.2000	20.64461	0.373
Coloured (SCM)	5	35.0000	41.83300	
White (SCM)	6	26.3333	38.86730	
Coloured (ECP)	1	100.0000	0.0000	

P ≤ 0.05 is considered statistical significance

The trend analysis in Figure 4-1 further confirms the differences in dropout rates by race between ECP and SCM cohorts.

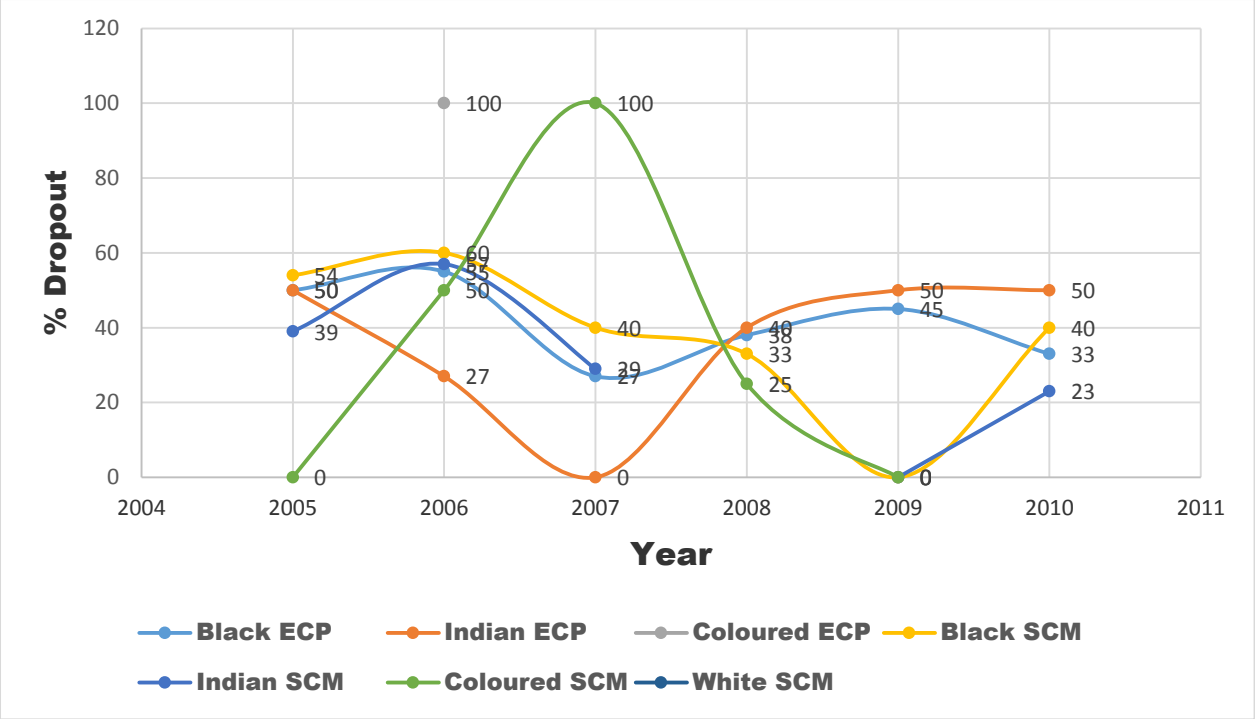

Figure 4- 1: **Trend analysis for ECP and SCM cohort showing dropout**

As gleaned from the above graph, the dropout rate for Coloured ECP, for example, shows a similar trend to their SCM counterpart. However is must be noted that participation rates for Coloureds is extremely low. A similar trend was also observed for Black ECP and SCM. There were, however, differences in the trend for Indian and SCM dropout rates. In summary, it can be gathered the performance of the ECP cohort was nearly comparable to their SCM counterpart. Although, the ANOVA results reveal no significant differences in respect to the race of the students from both cohorts at minimal time, it was gathered that White students had the highest throughput rate while the Black students recorded the lowest throughput rate at minimal time.

With regard to the dropout rate, the t-test analysis suggests that the dropout rates recorded for both ECP and SCM cohorts were statistically the same. Despite this, the ANOVA results indicate that Coloured ECP students had the highest dropout rate while White (SCM) students recorded the lowest dropout rate.

4.5 Assessment of the success rate

This section assessed the success rate of the ECP cohort in comparison with the SCM cohort. As illustrated in Table 4-10, it can be gathered that the success rates of ECP

were better than that of the SCM in 2005, 2006, 2008, and 2009. In contrast, the SCM showed better success rates in 2007 only. The success rates for ECP and SCM were, however, comparable in 2010.

Table 4- 10: **Success rate of ECP and SCM cohorts on year for the period 2005-2010**.

Year	ECP %	SCM %
2005	82	80
2006	87	84
2007	93	94
2008	92	89
2009	91	90
2010	86	86

The overall success rate between the ECP and SCM cohorts (Table 4-10) were further compared using t-test. The result is presented in Table 4-11. Although the mean (88.5±4.23) values for the ECP success rate were higher than for the SCM (87.2±4.92), there was, however, no significant difference between the success rates (P >0.05).

Table 4- 11: **t-Test: Two-Sample Assuming equal Variances (success)**

Cohort	Success		
	Mean	SD	P (value)
ECP	88.5	4.23	0.625
SCM	87.2	4.92	

In order to delve deeply into the factors that influenced the outcome that emerged from the quantitative analysis, the findings from the qualitative data will be discussed below.

4.6. Qualitative data analysis

From the interviews, themes that emerged from the interviews form the basis upon which the analysis is grounded. The themes and sub-themes are presented in the table below and described in more detail below.

Table 4- 12**: Identification of themes and sub-themes**

Theme	**Sub-theme**
1. Factors influencing student throughput and academic performance.	• Influence of social integration on ECP student throughput • Influence of reduced academic work-load and excess time on ECP student throughput
2. Factors influencing student dropout.	• Constructing their identity • Financial challenges • Transferring to other programmes • Awareness of programme
3. Factors influencing student academic success.	• Support subjects • Staff and mentor support

4.6.1 Theme 1: Factors influencing ECP student throughput rate and academic performance

The underlining motive behind the ECP programme is to create access and academic success for previously disadvantaged students. During the interviews, all participants kept referring to the ECP as the "Wellness" programme. The term "Wellness" was used to identify themselves within the ECP programme. As such, it was used to distinguish themselves from the SCM. This is reflected by a student who said:

> *As a wellness student……*
>
> [Participant L]

Whether the use of "Wellness" to identify ECP had a positive or negative impact on individual students was unclear, however the significance of this will be discussed in chapter five.

4.6.1.1 Sub theme 1:1 Influence of social integration on ECP student throughput

A minority[3] of the interviewees stated that being on the ECP served as an academic advantage when compared to the mainstream programme. One student stated that:

> *It was good, we interact a lot as an ECP class, compared to when we are grouped together with the mainstream,*

[3] Minority means less than 50% of the number of students interviewed.

other [mainstream] students lost their confidence. But with ECP classes we did a lot of presentation[s] and helped to prepare so when we did presentations with mainstream we were confident and scored better marks than them.

[Participant M]

the fact that we were small in class (sic) we became friends [and] motivated each other as some of us stayed at res together and we still are friends even now…we were like a small family, home away from home how as teacher Y would say…

[Participant F]

From the above theme, it sufficient to assume that social integration was not widespread with some students disagreeing that the ECP helped their social integration.

4.6.1.2 Sub theme 1:2 Influence of reduced academic work-load and excess time on ECP student throughput

The ECP was structured to spread the academic programme over a period of four years compared with three years in the mainstream. This allows ECP students to focus more on academic development subjects as well as some credit bearing subjects and thus achieve academically.

ECP students have a reduced academic workload with the aim that a reduced credit bearing workload will improve student academic performance. A majority of the students remarked and appreciated that participating in a programme with reduced workload gave them more time to focus on their studies and increased their chances of passing all credit bearing subjects.

…And when you're getting more subjects then you are bound to fail or you're prone to failing, but if you're getting lesser subjects you perform better…

[Participant D]

Moreover, another participant succinctly pointed out:

…Because I had a lot of free time on my hands, I had a lot of time to study the subjects in-depth [and] as they were only 3 [subjects] hence passing with distinctions.

[Participant I]

Significantly, a minority (2) of students were of the view that the reduced work-load had little impact in their academic performance.

> *To be honest, I did not see it bringing any benefits to me. I think it was one year that I lost out on.*
>
> [Participant C]

> *The modules that were presented in the ECP, it was quite simple. It was modules that I could have done in a fulltime programme, as well as, it was not a very full programme where there was a lot of modules. So there was a lot of free time which was not good enough because you go to campus and you expect to have to have a full day of work and then you have free time in between and then you have to find something else to do*.
>
> [Participant F].

In addition, factored into the ECP is the intention to allow students free time which they can use to integrate more fully into campus life. However this was not always appreciated by a minority (2) of ECP students.

> *I had end up going, if I didn't go to the cafeteria to get something to eat, I end[ed] up going to [the movies][4]. So, it's not a good thing to have that free time because you can lose track of time and then some people would feel like you know what, let's just go watch a movie and miss the next lecture. So, having those big breaks in between modules is not the best idea.*
>
> [Participant G]

Student G's position was corroborated by that of student I who had a similar position:

> *More time for a person like me at first it was interesting that the first couple of, like probably the first two months was interesting having a lot of time on your hands, not being busy as much, but then after that, it started to just get annoying because you study and then that's it, throughout the rest of day you would just be done, finished. So, it started out as nice, you have a lot of time on your hands and then, and then it just, everything started to be repetitive, you wake up go to school and then after that you are done*

[4] Audio recording is unclear. Sounds like "movies" and is assumed as this as interviewee later speaks about the movies.

for the rest of the day. So, it started to get boring and very slow.

[Participant I]

However, Participant J had a different view from participants G and I.

Being new in Durban and coming from a rural area, after classes I would go to the computer lab or the library with some of my Wellness mates to do assignments, if we didn't have assignments we would go to Steve Biko or ML Sultan for lunch. Sometimes explore Durban with my new friends (chuckle). During my time here I also played for the DUT female soccer team…

[Participant J]

The most noteworthy finding resulting from this theme is that the way and manner in which students managed their time was critical to their academic performance. For example, it emerged from the interview that too much available time for academic activities resulted in laxity amongst some of the ECP students.

4.6.2 Theme 2: Factors influencing student dropout rate

One of the challenges faced by the ECP programme was the rate at which students dropped out of the programme. With reference to the perceived factors influencing the ECP student's dropout rate, some of the interviewed students[5] gave various reasons for dropping out of the programme, such as financial challenges, transferring to other programmes and lack of awareness of what the programme entailed. The students' positions are presented in the following sub-themes:

4.6.2.1 Sub-theme 2:1 constructing their identity

The majority of students felt that one of the challenges that the ECP posed was that of the stigma of being considered inadequate by belonging to a class of students with academic need. Some of the students believed that they were placed in the category of potentially 'underperforming' students and that carried with it some form of social stigma.

[5] This study did not interview students that had dropped out of the ECP. The results presented are the perceptions of the successful graduates on why some of their fellow students dropped out.

> *Unfortunately, other students thought because we were ECP, we were dull[6] students; that made it difficult to adjust into the programme.*
>
> [Participant A]

> *The mainstream looked at the ECP students as if they were 'DOM' or what, or that they are better than them.*
>
> [Participant H]

Similarly, participant B and participant D remarked that the programme made those involved feel inferior to the mainstream students because of their belonging to the ECP programme.

> *…I felt a bit below, below them [the mainstream students], even though I had, in, like even though we had the same lectures, only for three subjects, I felt like they were more superior.*
>
> [Participant B]

> *….I felt stupid because I thought that I am not capable of doing more than three subjects…*
>
> [Participant D]

Participant K further explained that the lecturers in the Somatology programme themselves distinguished between ECP and SCM students which also gave students a feeling that they were different and consequently, inferior. Thus their identity as part of the greater student body in the Somatology programme was compromised, as they felt alienated from the Somatology programme.

> *I think when it comes to including people, ECP people were very excluded in many things at school. There were times where you [lecturer] would say okay, Somatology students please stay, except Wellness, Wellness can go, the mainstream can stay, you know and you know, we didn't know much about anything...*
>
> [Participant K]

The way that lecturers identified the two groups was perceived to be reinforcing the separation in status between the two groups. Hence they felt excluded from the Somatology programme. In addition, it can be assumed that the academic lecturer's unintentional categorization of ECP and SCM students was associated with the

[6] Dull in this context refers to students that are not academically competent

perceived inferiority highlighted by the interviewees among the ECP students. The anomaly of students being unhappy in the programme but passing will be discussed further in chapter 5.

Apart from the perceived stigmatization and marginalization pointed out by the interviewed ECP students, a sense of dissatisfaction was noticed among the interviewed students. For instance, a majority of participants were unhappy about being placed in the ECP and remained so up to the time of being interviewed. They expressed that they had planned to study for three years not four and as a result felt demotivated, inferior and shattered. Participant G stated that:

> *When I found out that it was an extended programme, I wasn't very happy because I wanted to finish in three years. The fact that I will take four years to complete my studies shattered my spirit…*
>
> [Participant G]

A similar experience was shared by participant F regarding the disappointment of not completing within a stipulated time.

> *Thinking of four years was heart breaking especially when there are other students that get the opportunity to complete in three years. I felt I was inferior and [felt I] wasn't as smart as the mainstream students.*
>
> [Participant F]

Although students felt inferior, this did not affect their academic performance as they all graduated. It emerged from the quantitative findings that the minority completed in minimum +2 years. The discussion now turns to the financial challenges faced by ECP students.

4.6.2.2 Sub-Theme 2:2 Financial Challenges

As in most higher education institutions, particularly among the previously disadvantaged students, financial security has been cited as one of the major contributing factors influencing student dropout rates (Letseka and Maile 2008) . Somatology students are no exception. When asked why nearly 41 percent of their

peers dropped out, the majority of participants said that the common cause was the financial challenges that their peers faced.

Participant B explained how the National Student Financial Aid Scheme (NSFAS) affected student dropout:

> *Tertiary fees expensive and NFSAS take long to respond to applications, if they respond at all (chuckle), plus in first year it is very hard to secure a NSFAS loan. Most students left because NSFAS declined them.*
>
> [Participant C]

Participant C added opinion by giving an insight into personal experience regarding financial impact on the extra year of ECP:

> *…but in my opinion, it's, it does cause some financial constraints on, on people. And the registration fee is like almost R2000, some change? And most of people, most of the people don't have that money to pay registration fee every year. Travelling costs is another problem. I mean, you're paying like almost R20 to R30 a day to travel. And it's not, it's difficult. It's not easy at all.*
>
> [Participant B]

4.6.2.3 Sub-Theme 2:3 Transferring to other programmes

During the interviews participants explained that some of their peers did not necessarily dropout but transferred to other programmes.

Participant F clarifies:

> *My friend didn't dropout, she moved to Radiography.*
>
> [Participant F]

Another reason for dropping out was offered. Participant J stated as follows:

> *most of them drop out because it takes them four years whereas a diploma is for three years, so they see it as a waste of time, so then they just move to other courses…*
>
> [Participant J]

The question arising is, when did the students drop out of Somatology and move to other courses and how did it impact on the years it would take to complete the new chosen qualification. This will be discussed in chapter 5.

4.6.2.4 Sub-theme 2:4 Awareness of the Programme

The participants were asked to explain their understanding of the ECP and whether or not they knew why they were placed in the programme instead of the mainstream. Most of the sampled participants agreed that they did not have a clear understanding of what ECP was and why they were enrolled in the programme.

> *I just understood that I was going to be studying for four years instead of three. What ECP was and what the programme was all about I had no idea.*
>
> [Participant C]

> *No, I didn't even know there was such a thing as ECP [when I was placed on the ECP].*
>
> [Participant B]

Generally, most participants had no prior knowledge of ECP. This could be a similar case with students who dropped out. Despite the perceived lack of understanding of the ECP programme, some of the students voiced that the nature of the Somatology programme, particularly with the male students, could have influenced their dropping out. The excerpt from a student's statement about possible male dropout is captured below.

Participant D explains:

> *Not exactly but, I think it is because of Aesthetics[7], because we do waxing and make-up, I think they didn't like that, maybe they did something that they did not expect.*
>
> [Participant D]

Participant F remarked on dropout of males;

> *In class there was just two males and a lot of females, the males were uncomfortable to work with females in class and felt embarrassed to do practicals and walk around with their [cosmetic] kits…*

[7] A subject taken by students

From the above, it is important to note that the dropout may not have been a consequence of the ECP as such but of the nature of the programme. For instance, divergent views were expressed by the students regarding the circumstances that led to the drop out of some of their peers. It emerged that the nature of the ECP programme and the content of the Somatology programme were both contributing factors in the recorded dropout rate.

4.6.3 Theme 3: Factors influencing student success

The main goal of the ECP was to create access to those who had been academically disadvantaged at their schools and facilitate success through structuring the programme over a longer time period. Thus, the interview questions sought to find out from the students whether or not they felt the programme was worth participating in. The students' remarks were as varied as their experiences were. Participants were asked about what they found beneficial in the ECP programme. Upon reflection, different aspects emerged as discussed below:

4.6.3.1 Sub-theme 3:1 Support Subject

Some of the students stated that the programme had a beneficial effect on their social and computer skills. Some claimed that because they came from the rural areas, they lacked basic computer skills and the programme helped to bridge the knowledge gap.

> *The first thing that was exciting was that I was going to do [use a] computer, I am coming from rural areas so our schools didn't have that kind of equipment. So doing computer literates, it was ja… and there are modules that help to understand about tertiary life including academic literacy, library information studies, they teach you how to get information from the library, and in academic literacy there are topics that has debates on tertiary life that helps you to interact with students.*
>
> [Participant E]

Participants D and J, emphasised how the ECP lecturer assisted in academic and work preparedness;

> *Plus, okay, I just want to note this, there's these subjects, they're called… what do you call these subjects, I forgot it, it's Wellness 1 and Wellness 2, the lecturer was X[8]. So she*

[8] Name withheld for confidentially reasons.

sort of like teaches you how to plan for your studies and how to reflect on such things as happening in school and how to like be… or to assimilate in a tertiary level. So that sort of like helps.

[Participant D]

Yes, I can say they [lecturers] did help me, because sometimes you have to be challenged to think about other stuff you do not consider on daily basis, like when it comes to looking out for work, how to draft a professional looking Curriculum Vitae, and how to present yourself when you are appointed for an interview, and all those stuff.

[Participant J]

However, Participant F and participant B were not challenged by being placed on the ECP;

I find [the subject] Wellness[9] not challenging. I find it, I really do find that it's a waste of time. Most of what we did, I had already done them in high school. I already knew them…

[Participant F]

..it was boring as when we attended subject like ANP Wellness and Nutrition Wellness, they would repeat the same thing we did when we were with the mainstream…

[Participant B]

It is worth noting upon reflection, that students that did not find ECP support subjects beneficial were English first language speakers whilst English second language speakers found it beneficial. The acceptance of first language students on the ECP would appear as a deviation from the raison d'être of the ECP. This will be further discussed in Chapter 5.

4.6.3.2 Sub-theme 3:2 Mentors

The integration of students into the university and the Somatology programme identified by the students was achieved by the collaborative relationship of mentors and lecturers interacting with the ECP students.

[9] Wellness refers to academic literacy aspect of the Wellness subject

Participant G remarked that lecturers and mentors were cooperative in ways that allowed students to settle well in school. The participant remarked as follows:

> *I think, I think mentors played an instrumental role because as much as they, they gave you like a guideline of okay this is what you can do, and if you are struggling or you sense a bit of discrimination or anything then you can contact them, it was, lecturers… I mean mentors played a significant role in just being there for you as a first year and as well as an ECP, because if I am not mistaken the mentor we had was also an ECP [senior ECP student] so she sort of understood what happens in ECP so you could go to her anytime to basically just talk to you if you are finding anything that is not right or you are struggling or anything. So apart from the modules, I really think mentors played a good role for ECP students.*
>
> [Participant G]

Participant F also echoed student G's position

> *The mentors, I found that they helped me a lot because at times I wouldn't understand you know when you first get into a programme …… so they helped me a lot the mentors, they helped me understand the, the like the whole programme of the subjects and all those things.*
>
> [Participant F]

4.7 Conclusion

This chapter was aimed to assess the impact of ECP on dropout and throughput rates and also explore students' perceptions and experiences. Overall, the quantitative findings indicate that the throughput rates of the students by cohorts (ECP and SCM) were statistically the same. Furthermore, it emerged from the quantitative results that race of the students had no significant influence on the throughput rate at minimum as well as +2 time. The influence of race was, however, noticeable with more Indians from the SCM cohort completing the Somatology programme at + 1 time. In addition quantitative results suggest that race as well as cohorts had no significant bearing on the dropout rate.

From the qualitative findings, it emerged that the close relationship shared by ECP students contributed to their academic performance. Equally important, the thematic findings reveal that academic staff and mentors contributed positively to the students'

academic retention and success. Notwithstanding this, the qualitative results revealed that ECP students felt that the lack of awareness of the ECP, content of the Somatology programme, and a dearth of financial support contributed to the large number of dropouts. These results will be discussed in the next chapter.

CHAPTER FIVE: DISCUSSION

The present study assessed the impact of the Extended Curriculum Programme on the dropout, throughput and success rates of the Somatology programme. It also explored the experiences of the Somatology ECP graduates at the Durban University of Technology. In the study, student academic records, obtained through the MIS system, were analysed and interpreted retrospectively, while thematic analysis was used to analyse the qualitative data that captured the experiences and perceptions of the Somatology ECP graduates. The dropout, throughput and success rates of the ECP students were compared against their mainstream counterparts. This chapter provides the discussion of findings regarding the impact of ECP on overall Somatology students' dropout, throughput and success rates.

5. Discussion on quantitative Data

5.1 Demographic profile of ECP and SCM

According to Council on Higher Education (2011) the participation rate in South African Higher Education has been relatively slow to increase enrolment. Statistical evidence shows that in 2005 there was only a 16 percent participation rate of the total eligible students. In 2010, this number had risen to 18 percent participation rate, a 2percent increase in enrolment over five years. The demographic profile of the students measured in this present study, show that the enrolment of students to the Somatology programme was relatively low. For instance, the first-time entry between 2005 and 2010 in the Somatology programme shows that there were 281 students in both ECP and SCM of which 122 was ECP. It emerged that the number of students admitted into both Somatology programmes fluctuated from year to year (Table 4-1). The fluctuation in numbers could be attributed to the lack of potential students who met the Somatology enrolment criteria for certain years and that more students with the requisite criteria applied in 2009. It is a policy of the department to only take students in the programme who have the requisite criteria. Alternatively in discussion with Borg, the programme leader of Somatology at the said period, she stated that it was policy to take a fixed number into the ECP and SCM which varied according to enrolment targets as determined with the Faculty. However, Borg stated that in some years the programmes took more than the allotted number of students. This she stated was on request and to help the faculty meet first time enrolment targets. She suggested that

the variations on reported numbers could be also attributed to students deregistering from the two programmes before the institutional census date[10] and thus the numbers reflected differed from what should be the standard. However, it remains unclear why there were these fluctuations in numbers over the different years. However, the observed fluctuations in the enrolment numbers does not in any way impact on the study objectives.

Parts of the CHE transformation policies on higher education include equality in enrolment with respect to gender and race. In terms of enrolment to the Somatology programme by gender, it was observed that enrolment differed for male and female students for both the SCM and ECP cohorts. For example, the entire ECP enrolment over the study period 2006-2010 (n=122) comprised 11.5 percent males and 88.5 percent females. Whilst for SCM enrolment (n=159), male constituted 0.6 percent and females 99.4 percent.

Over the period of this study the majority of students entering Somatology were female students with male students constituting less than 12 percent (Table 4-1) of enrolments. These enrolment statistics are not surprising in that Somatology is a profession preferred by females (Rammanhor 2014). Consequently, females are more likely to seek admission into Somatology programme when compared to males. This influences the disparity in the recorded enrolment numbers by gender. However this study does not pass comment on male gender enrolment as this was not the focus of the study. Despite this, and as reported in Table 4-1, more males were enrolled in ECP cohort in 2009 when compared to other years. The increase in enrolment of male Somatology students could be attributed to the changes in the beauty industry. For instance, Somatology has moved from just beauty therapy to providing holistic and wellness health services relating to stress management, hormonal imbalances, fatigue, and insomnia, muscular and joint related treatment – treatments where males are more comfortable with delivery. These changes have witnessed an increase in participation of males into Somatology as a profession (Rammanhor 2014).

With regard to the race of the students, black students dominated the total number of enrolled students for both cohorts (ECP and SCM). Consequently one of the aims of introducing a ECP was successful in that increased access to previously

[10] The time period which students that deregister will not reflect as a dropout on the programmes' statistics.

disadvantaged students was achieved. The proportion of Black students enrolled to ECP, for example, when compared to Indians was 4:1, whereas that of Blacks to Coloureds was 49:1. There were no White students enrolled in the ECP. Moreover, and as illustrated in Table 4-1, the proportion of Blacks and Indians was higher than other races in the SCM cohort.

The high enrolment of Black students in both ECP and SCM reflects the current racial demographics of KwaZulu Natal (KZN). Statistics South Africa (2011) reported that the majority of the population in KZN is Black (86%) followed by Indians (7%), White (4%) and Coloured (1%). This large number of Black students in the Somatology programme also meets the Department of Higher Education and Training (2014) directive where priority for access is for black and female students in all forms of HEIs.

The data revealed that White student enrolment was only in the SCM cohort. This may be attributed to the SATAP[11] testing as it is used to determine whether the students will require extra support to academically integrate into the institution. In a conversation on 31 July 2018, Borg explained that the majority of the White students applying for Somatology come from well-resourced schools and consequently did not need extra academic support. However, the exclusion of White students from ECP was more probably consequence of addressing the access and academic success of disadvantaged students as was the policy of the Faculty at that time.

5.2 Evaluating the impact of ECP on the throughput rates of Somatology students

5.2.1 Assessing throughput rate by cohort

As stated in Chapter Two, Section 2.4, the foundation programmes is a South African higher education intervention that has been in existence in various forms for three decades, designed to deal with systemic obstacles to equity of access and student success, particularly through addressing the articulation gap. Chetty (2014) suggests that ECP has been a success, not only in achieving equity of access but in enhancing student performance. In support of this author, the quantitative data in this present study, show that performance of ECP Somatology students was statistically comparable with their SCM counterparts ($p>0.05$). Given that students were placed on the ECP would suggest that these students had poorer school leaving certificate

[11] Standardised Assessment Test for Access and Placement

and consequently should have performed poorer when compared to the SCM students. The equality in academic performance indicates that the ECP made up for the academic differences on entry into Somatology. Accordingly, it can be seen that ECP had a positive impact on the success of Somatology ECP students. This is an agreement with other studies (Uduak 2017; Nala 2010; Tyson 2010) that ECP contributes positively to students' academic performance.

Moreover, a study by Slabbert and Friedrich-Nel (2015) from Central University of Technology, Cape Town in the Faculty of Health Sciences reports that an estimated 58 percent of the ECP cohort graduated within the extended time frame[12]. Contrary to the above finding, this study established that only 36.5 percent (Table 4-3) of the enrolled Somatology ECP cohort graduated within minimum time frame. Bass (2007) with respect to a sister ECP programme in the Faculty of Health Sciences at DUT, found that 39 percent of Dental Technology ECP students graduated within the same time frame. Whilst the Somatology graduation percentages are similar to a DUT norm they are lower than the findings of Slabbert and Friedrich-Nel (2015). This study could however not established why the graduation rate was so low among the Somatology student. This could be an opportunity for future study.

Cohort studies have shown that Black and female students still lag behind with regard to success rate indicators (participation, throughput and graduation) (Department of Higher Education and Training 2014). Similarly, this study found that in the Somatology ECP the graduation rate was low. However, it is noteworthy to argue that the students that graduated would not have passed without the ECP and some would not have graduated at all as entry into the mainstream programme would have been denied. Moreover, it is also noteworthy that some of the ECP cohort under study have continued to post-graduate programmes, namely Bachelor of Technology as well as Masters degrees.

The performance of the students (ECP and SCM) shows no significant differences by race ($p>0.05$). Arguably, and contrary to the general perception that SCM students are academically sound and well equipped for higher education (van Schalkwyk, Bitzer

[12] The extended time frame is the normal time for a qualification plus 2 additional years, i.e. 5 years

and van der Walt 2010), the findings from this study show that Black ECP students (34.17±6.64) graduated in the minimum time period, similarly to their SCM Black counterparts (Table 4-4). Equally significant, it emerged that fewer Black ECP students (1.75±3.50) were requiring extra two more years to complete the Somatology ND programme when compared against the Black SCM cohorts (4.50±5.25) (Table 4-6). This is be attributed to the positive impact of the ECP programme in improving the throughput rates of students. This finding further support the work of Nala (2015), Tyson (2010) and Bass (2007) that ECP students tend to perform better than their counterparts.

From the perspective of bridging the success gap in higher education, and consistent with Council on Higher Education (2013) reports, the disparity in the performance of the White students and other races is still evident (Figure 4-4). For instance, and in respect of race, White students had the highest (69.59±40.01) throughput rates while the lowest were recorded for Black students (34.17±6.65). The academic success of the White students could have been influenced, as stated earlier, by their educational background, family income and social status (Koen 2007). However, these results regarding White students need to be reviewed in context, as the number of White students (14) was very low. While this present study was centred on the academic performance of Somatology students, it is noted that the effects of social and economic factors were not investigated. As revealed by Tinto's model (2008), the aforesaid factors could have a bearing on the success and throughput rates of the students. The influence of Tinto's model on students success rate will be explained in details in subsequent sections.

5.3 Evaluating the impact of ECP on the dropout rates of Somatology students

In South Africa much success has been achieved in terms of giving access to higher education for previously disadvantaged groups. Lewin and Mawoyo (2014) caution that the quantification of physical/ formal access can lead to premature celebration, as it hides many underlying challenges such as the low throughput rates and success rates recorded for Black students. Although there were more students that dropped out from the ECP when compared to the SCM cohorts, the findings from this study suggest the differences were however not statistically significant ($p>0.05$).

Arguably, and contrary to the report by Council on Higher Education (2013) that 50 percent of students drop out before they graduate, the findings from this study suggests that Somatology students are less likely to drop out from the programme (Table 4-8). Notwithstanding this, it emerged that the dropout rate for ECP (40.5±8.12) was higher than that for the SCM (31.6±17.60). The difference in the dropout rate between the two cohorts may be associated with the nature of the ECP programme, namely, students entering the Somatology ECP had academically, lower entrance marks. As highlighted in Table 1-1, the ECP curriculum divides the first year of the programme over a period of two years. This could have contributed to the increase in the dropout rate measured in ECP cohorts.

In a personal conversation with the Somatology programme leader on 1 August 2018 regarding the high dropout rate of students from the ECP programme, Borg stated that at the start of the ECP, most students could not get NSFAS loans and student residences also did not give preference to ECP students as the residence policy was that in order to qualify for residence students had to be registered for a certain number of credit-bearing subjects and ECP students simply did not have sufficient credits for entry into residences. From above revelation of Borg, it is reasonable to assume that the students who are denied residence in the university could opt for private accommodation which may affect their interpersonal connection within the university. In addition, private residences are more expensive when compared to the DUT residence and so enrolled students may likely dropout if they could not afford continued payment. These assertion support the findings by Brits *et al*. (2011) who observed that 95 percent of students at the Vaal University of Technology staying outside the university residence dropout from their study when compared against 5 percent observed for those residing within the university residence.

While ECP has achieved much success in terms of giving access to higher education for previously disadvantaged groups (Table 4-1), the results from this study show that more ECP students (Black, Coloured, and Indian) dropped out when compared to their SCM counterparts (Table 4-9). For instance, amongst the total number of Coloured students that enrolled in 2006, 100 percent dropped out from ECP while there was a 50 percent dropout from SCM. However, these results should be seen against the low

number of Coloured students (four) that enrolled in the ECP. Since the ECP programme was predominantly Black and Indian (Table 4-1), poor social integration and different value systems may have influenced the dropout rate amongst the Coloured students. However, this remains speculation and this study did not investigate this issue in depth.

Equally, amongst the Black students, only a slight variation in the dropout rate was observed between the ECP and SCM cohorts ($P>0.05$). Overall, the total number of Black ECP that dropped out (42.7%) was higher than the SCM (36.2%). The higher number of dropouts measured amongst the ECP Black students could be attributed, as previously stated, to the lack of funding and provision of residence. This strongly supports the work of Murray (2014) that students who have financial aid and accommodation within the institution are more likely to complete their qualification

Among the Indian Somatology students, a similar variation was observed between the ECP and SCM cohorts (Figure 4-4). The total number of dropouts from the ECP cohort (36.2%) was not significantly different from the SCM dropouts (31.2%) ($P>0.05$). During interviews with ECP Indian graduates, the reason for dropping out amongst Indian student mooted was that some students didn't find the Somatology programme sufficiently challenging, so they moved to, presumably, more challenging programmes.

Although no ECP White students were admitted in all the enrolment years, the analysis of the SCM cohort gave the researcher an insight into their dropout rate. As reported in (Table 4-9) the dropout of Whites was lower than that of any other race. The finding further supports the report of Council on Higher Education (2010) that the dropout rates of White students are lower than those for other racial groups in South Africa. This notwithstanding, it emerged from the trend analysis that the dropout rate of the White students differs with the year of enrolment (Figure 4-4). For example, there was a 25 percent increase in the dropout rate in 2006, while an 8 percent increase was recorded in 2007. In 2008, there was a 67 percent increase in the dropout rate while no dropout was recorded in both 2009 and 2010. The reason behind this could be attributed to the poor academic performance of the students in the respective years. Murray (2014) reveals that White students are more likely to drop out in HEIs if they

fail modules in their enrolment year whilst Indian students are more likely to come back for second attempt.

The discussion now turns to a discussion on the qualitative data generated in this study.

5.4 Assessing the factors influencing ECP student throughput rate and academic performance

The quantitative results reveal that ECP has had a positive influence in the throughput rate of previously disadvantaged groups. This section aims to assess the factors that could have contributed to the throughout rate recorded amongst the ECP cohort. In contrast to the quantitative data the qualitative data indicates that ECP has served as an academic advantage when compared to the SCM. It emerged that social integration, workload and extra free time contributed to their improved programme retention. The ECP students acknowledged that the small size of the ECP classes as well as close social relationships formed amongst their peers instilled confidence when working within an ECP group compared to when they were integrated with the SCM cohort and had to interact with SCM students. These factors may have contributed to the good performance of the ECP students compared with that of their SCM counterparts. This study confirmed through confirmatory interviews with students the work of Nala (2010) and Borg (2009) who found that the small size of ECP classes had a positive influence on the students in terms of their confidence, and motivation, which accordingly contributed to the students' success.

Scott (2008), when discussing workload and free time, emphasizes that the aim of ECP was to create a programme that accommodated the general syllabus programme while providing additional contact and learning time as well as non-credit bearing subjects to help students to raise academic performance. From interviews, it emerged that the majority of the students expressed appreciation regarding the impact of a reduced work load as well as the non-credit bearing subjects and more time to devote to their academic studies. This finding further supports Borg (2009) who found that the reduced workload afforded students the opportunity to focus solely on the fewer subjects registered for, and perform well in them.

Despite the above-mentioned influence that a reduced workload had on ECP academic throughput, some of the students nevertheless stated that they believed that

they had too much free time that consequently impacted negatively on their academic performance. The negative impact of not being fully occupied could have associated with poor time management on the part of these students by not using their free time constructively for academic purposes. According to Yilmaz, Yoncalik and Bektas (2006), time management, attitude and skills levels of higher education students influenced their academic performance. Yilmaz, Yoncalik and Bektas (2006) found that the majority of higher education students lack proper time management skills. This could explain the effects on ECP students having too much time available and not using this time for academic purposes. This study found that for some not having a full and intensive workload negatively impacted on them and consequently their performance was poorer.

5.5 Assessing factors influencing student's dropout rate

A central aim of ECP provision is to provide access for previously disadvantaged Black students. According to Harris (2017), during apartheid the use of "Black'' included African, Indian and Coloured people. Accepting this definition of Black, Indian and Coloured students are found in ECP and, consequently, the Somatology ECP has fulfilled its mission in this regard (Table 4-1). The findings reveal that ECP Indian, Coloured and Black student's dropout rates were higher than the SCM dropout rates. The discussion on what factors that contributed factors that could have contributed to the high rate of attrition amongst ECP students follows.

Engelbrecht *et al.* (2014) reveal that ability is not always the core factor why students discontinue with their studies. According to their report, high attrition rates may be affected by their time management, availability of resources, psychological and/or physical health reasons, lack of funds to continue or simply no interest in the degree they are doing. This study found that the inability to form a positive student identity within the higher education environment, financial challenges, transferring to other programmes, and lack of awareness of Somatology emerged as the factors influencing the high attrition rate as reported by the interviewed students (Theme 2).

Most of the students remarked that their biggest misgivings about the ECP was that they were not pre-informed of their participation by the programme. Most said they were just thrust into it and were expected to settle into the programme. The general perception from the students was that they probably would have performed better

academically and adapted socially if they were pre-informed of their involvement as this would have made them prepare adequately, both mentally and socially as this lack of information contributed to dropout rates.

With regard to establishing an acceptable and comfortable identity, the students felt that being placed in ECP created a perception in the minds of other students that they were inferior academically. Moreover, the ECP students felt that while the mainstream students were moving forward academically, they were wasting their time. However, recorded performance of these students does not bear out this assertion as they ultimately performed academically soundly (Table 4-10).

During interviews it was revealed that some students were uncertain if they truly or really wanted to continue with the programme. This could be attributed to the challenges of being at one with their choice of Somatology programme as a career choice. This finding is consistent with the *Social Identity Theory* as expounded by Leary and Tangney (2011) that an individual strives for positive distinctiveness that is predicated by an individual's motivation for self enhancement.

In addition, the interviewed felt that the Somatology lecturers were probably inadvertently unduly influencing their perceived stigmatization and marginalization of the ECP students by the use of "Wellness" to differentiate the ECP from the mainstream Somatology students (Theme 1). By using the term "Wellness" they were identified as a group, which differentiated them, and they believed that this identification could have contributed to the SCM seeing them as inferior and less academically talented. Interviewed participants argued that students in the mainstream programme were not educated enough about the ECP and its objectives; thus, they assumed that it was designed for academically disadvantaged students. This perceived idea could have contributed to the higher attrition rate recorded by the ECP cohort when compared against the SCM (Table 4-7). This finding further lends support to *Social Identity Theory* in that self enhancement motivation is based on inter-group comparisons, which are determined by an individual's fundamental need for positive self-esteem that influences the social identity process (Leary and Tangney 2011). Furthermore, and in support of Hogg (2005), it can be assumed that some of the ECP students had a low self-esteem which could have contributed to their social identification and inter-group behaviour.

Several studies (Masehela and Mabika 2017; Jones *et al.* 2008; Koen 2007) report that finances are a critical factor that determines the attrition and retention rate of students. In support of these authors, it emerged that financial constraint was a contributing factor given by the interviewed ECP graduates as why they understood that some students dropped out of the Somatology programme. Those interviewed[13] noted, in their opinion that the difficulties in securing NSFAS loans and the high registration costs caused some of the Somatology students to drop out from the ECP.

Although some of the ECP Somatology students had transferred to other courses, the interviewed students felt that this did not necessarily constitute dropout by students. They failed to see the difference between dropping out of a course (which was the focus of this research) and not dropping out of higher education as two different matters. Nevertheless, their views in part support the work of Grayson (1997) that transfers should not be seen as failure on the part of the students or the programme from which they transferred. Moreover, some ECP students transferred in their first year or in the first few weeks of the academic year. Consequently this immediate transfer cannot be seen as supporting Grayson's statement and should be seen as a failure of Somatology in terms of ECP student selection procedures in that the lack of understanding or unrealistic expectations of Somatology may have contributed to the transfer of some of the students to other courses or programmes. Resonating with the findings of Engelbrecht, Harding and Potgieter (2014), it is postulated that students who transferred could have used their academic achievement in the Somatology ECP programme for access to faculties and courses that they would otherwise not originally have qualified for. While the transfer of the students from the ECP may be seen as a loss to the Somatology programme, Engelbrecht, Harding and Potgieter (2014) note that students moving to other faculties and subsequent graduation should be seen as successful and the Somatology ECP transfers should be seen as a positive influence to this perceived success. However, as noted in the discussion on the quantitative data, most transfers appear to have been made in the early weeks before the institutional census date.

Suffice to add that although the views of the graduates differed, most of the students' perceptions were generally positive. Thus, when the researcher sought to know from

[13] This research did not interview students who dropped out.

the graduates whether or not they would recommend the programme to other students, the responses were varied but the majority stated that they would rather advise other students to enrol in the mainstream programme as they did not see any significant difference in terms of academic performance. Given this belief of graduates of ECP it does suggest that from the graduate's point of view that the ECP was not appreciated by the majority of those interviewed. This is in contrast to the findings of much of the South African ECP research that found the opposite (Uduak 2017; Nala 2010; Tyson 2010).

5.6 Evaluating the factors influencing students success

Tinto's student integration model (2008) states that social integration as well as academic integration play a major role in student retention in higher education. To determine the perceptions and experiences of the ECP graduates, this section will focus on the possible association between students' perceptions of the ECP and the success rates of the ECP cohort. Tinto's integration model (2008) was used as the underpinning theoretical basis in establishing the relationships between the success rates recorded and the perceptions of the ECP students.

The research results showed that being ECP students who remained and qualified from the ECP was good for their social integration into higher education. As expressed by the students, through the ECP programme, the students felt good, interacted better in ECP classes, felt they were well oriented with tertiary lifestyle, had a good relationship and support from academic staff and peers. In addition, the students developed their own identity as *Wellness* students, despite the negative connotations of being identified as *Wellness* students, which gave them a sense of belonging.

From the foregoing, and consistent with Tinto's social integration model (2008), the students' perception of the ECP programme reflects that students were socially integrated into the institution which in turn promoted better student retention and success. Furthermore, the Somatology students' perceptions indicate that they were quickly oriented to the university life which had contributed to their success (Table 4-11). The support systems students developed with fellow students and staff members is a factor for noting ECP success. The smaller sizes in the ECP classes enabled the formation of close relationships among the students as well as between students and

lecturers that are difficult to cultivate in mainstream studies as large class sizes do not allow the lecturer to interact with all students' individual needs.

Apart from social integration, another factor that probably explains the improved success of Somatology ECP students is linked to the academic integration experienced by these students. As theorised by Tinto's model, there are two aspects to academic integration. These include meeting the standards of the institution, and the students' ability to identify with the beliefs, values and norms of the academic system. The Somatology students interviewed were of the view that the ECP non-credit bearing subjects that were part of the programme such as academic literacy and computer skills had helped them to learn to write academically and to use computers hence bridging the knowledge gap of students who have not had experience with computers and library facilities. When comparing themselves to mainstream students they felt that they were better equipped with skills that their mainstream counterparts lacked.

Equally important, the provision of a dedicated ECP coordinator and senior student mentors contributed to the integration of students into the life of the university as well as the Somatology programme and consequently contributed to ECP student success. It emerged that having mentors and a dedicated ECP coordinator (a staff member) gave students an opportunity to have one on one attention to enhance understanding of subject content and to help with academic and social integration. This supports Tinto's model (2008) that the ability of students to identify beliefs, values and norms of the academic system contributes to academic performance' and consistent with Julius (2017), to build trust and working relationships. During a personal discussion on 16 March 2018, Borg, Head of Somatology programme, stated that the dedicated ECP coordinator was responsible for managing the running of the programme and its entities, working with the academic subject lecturer to determine integration of content and reinforce subject content using different teaching and learning strategies. Furthermore, Borg (2018) adds that the coordinator identifies students with potential but who need support and refers them to faculty and institution support services. Although no students discussed the value of a dedicated ECP coordinator, the management of the department is of the opinion that this contributes positively to the social and academic integration of the ECP student.

Similarly, with regard to mentors, a greater emphasis was placed on knowing each student better on an individual level. This may be associated with some ECP graduates reference to the previous experiences of the mentor, as some of the mentors were themselves graduates from the ECP. Consequently, students found it easier to identify/ have a relationship with them as they saw them as people they could look up to and who understood what the students were going through and were able to advise them accordingly. This notion echoes the report of Donald (2002) that having important people in one's lives greatly enhances knowledge as well as development. Giving more credence, Julius (2017) reports that a caring attitude and supportive learning environment encouraged ECP students to excel academically, as some of them would not hope to disappoint the time and effort invested by their mentors thereby unlocking their hidden potential.

Of interest, Tinto and Engstrom had cautioned that, "it is not enough to be competent in class; students also have to believe in their competence" (Engstrom and Tinto 2008: 49). The dedicated ECP coordinator and the presence of mentors contributed to the ECP success although this was not appreciated by the ECP graduates. From the qualitative analysis, it can be gathered that the ECP students felt they were at a slight advantage when it came to assessments compared to mainstream. This academic achievement and perception of competency adds greatly to students' overall academic integration.

The students' positions formed the basis of the recommendation put forward in the next segment of this research. In attempting to proffer recommendations for future studies and for how to better manage the ECP, it is pertinent to note that the graduates of the programme provide a very valuable resource on the way forward, given their direct involvement in the ECP.

5.7 Conclusion

A comparative analysis of students' throughput and dropout rates for both the mainstream and ECP students was undertaken and the findings show that although there was a marked improvement in the percentage of students who graduated in the ECP cohort, the dropout rate showed reason for concern and need improvement.

Moreover, the participating students perceived that their ultimate success was due to the ECP. Even though some students felt they probably would have done even better compared to their counterparts if placed in the SCM, most asserted that being in the ECP served as an advantage and was beneficial to those who stayed to complete their Diploma. However it is noted, given the above, that the majority of ECP graduates would not recommend ECP participation over SCM participation.

The views of the graduates throughout the study differed, however students' perceptions were generally positive. The students' positions formed the basis of the recommendations put forward in the next segment of this research. In attempting to proffer recommendations for future studies and for how to better manage the ECP, it is pertinent to note that the graduates of the programme provide a very valuable resource on the way forward, given their direct involvement in the ECP.

5.8 Recommendations

It is clear that the intentions behind the ECP are to facilitate access to disadvantaged students, to increase throughput and success rates and to build holistic students fully integrated into higher education. However, as was established in this study, the programme could be improved both academically and administratively. The recommendations that follow below are established from the results of this study:

I. Marketing of the programme should be improved in order to ensure that applicants are well informed about the programme. This may result in a reduced dropout rate.
II. A better selection process should be put into place. Students selected should have a greater understanding of the Somatology programme and what it entails before registering for the programme.
III. The students recruited in the ECP programme needs to be educated on what ECP is and why they were placed into the programme.
IV. The programme should be designed to ensure workload is distributed equally amongst the years of study.
V. Time management skills should be emphasized to ensure that students utilize their free time effectively.

VI. Increase engagement between university management and NSFAS to reduce student financial burdens more effectively.

VII. Lecturers in the programme need to be conscious of not labelling students (ECP or SCM) in order to promote group integration as opposed to group division.

VIII. ECP lecturers should be carefully selected for their various teaching practices in order to create an environment in which the student can develop holistically.

IX. The Somatology course should decide on whether the recruitment of males is a priority and if so redesigned the programme in a way that it attracts more male students.

5.9 Recommendation for further research

I. An investigation into the perceptions of academic staff regarding ECP programme as to the value and necessity of the Somatology ECP.

II. Review if the current Somatology ECP is still meeting the institutional and national objectives.

III. Establish reasons for the Somatology dropout rate by conducting research with Somatology students who dropped out of the programme.

IV. A comparative study of the ECP throughput and dropout in Somatology compared with other DUT Health Sciences ECP programmes.

V. To conduct research as to whether students registered for ECP would graduate if registered directly into the mainstream Somatology programme.

VI. Develop an integrated ECP model that measures factors influencing ECP success and or failure in South Africa higher education context.

VII. Compare the success of the DUT Somatology ECP with similar programmes in other universities to benchmark its quality.

5.10 Concluding Remarks

It has been severally argued in this study that the ECP is a laudable and commendable programme with a potential to significantly increase throughput and success rates whilst reducing dropout rates if properly implemented. In support of this, while the graduation rate in South Africa has been put at 15 percent, the findings from this study revealed that Somatology ECP recorded a throughput rate of 35 percent. Significantly,

and in line with the first object of this study (1.8.1.) namely to trace the throughput rate of students in the first six years of inception, this study strongly confirmed that the investment in higher education, particularly in the ECP is gradually paying dividends in terms of student throughput.

Equally important, the dropout rates of students were noted to have reduced greatly within the measured time frame. This suggests that the ECP had been a success in terms of reducing the high attrition rates that were hitherto endemic amongst the previously disadvantaged groups. In particular, and in line with achieving this study's objective (1.8.2), that is to determine the dropout rate and throughput rate over the past 6 years, it was further found in this study that the throughput rates of the previously disadvantaged group in ECP slightly increased when compared with the mainstream rate over the 6 years period.

Despite the gains made so far in the ECP, it emerged that disparity in Black throughput compared to other racial groups is evident. Similarly, the dropout rate was found to be higher when compared to other racial groups. Moreover, it was found that the dropout rate of ECP students was higher than that of the mainstream. Essentially, and in achieving objective 1.8.3, which was to determine the perceptions and experience of ECP graduates, the high attrition rate of ECP students was cited to be influenced by poor social support, financial constraints, attitudes of the students and staff, and the general perception of the ECP Somatology programme Furthermore, the findings from the study suggest that participating students had limited knowledge and understanding of the ECP programme and what it aimed to achieve. Hence, and in keeping to objective 1.8.4, that is to establish areas of improvement and make recommendations with regard to the efficacy of the ECP, this study highly recommends better marketing of the programme in order to ensure that prospective students are well informed about the programme. Equally important, it is also recommended that the university management should strongly engage NSFAS more effectively to reduce student financial burdens. Lastly, it is advisable that all Somatology lecturers in the programme need to be conscious of not labelling students (ECP or SCM) in order to alleviate the perception of ECP students that they were stigmatized as being part of the ECP.

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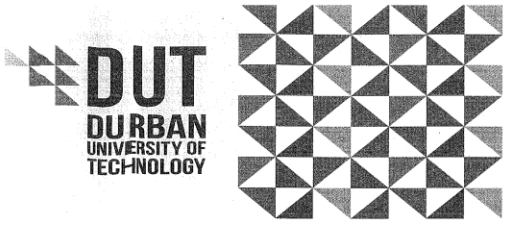
APPENDICES

Appendix A: IREC Approval Letter



Institutional Research Ethics Committee
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Gate 8, Ritson Campus
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P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2900
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http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

25 February 2015

IREC Reference Number: **REC 88/14**

Ms M U Makgobole
417 Block GG
Soshanguve
0152

Dear Ms Makgobole

An assessment of the Somatology Extended Curriculum Programme at the Durban University of Technology

The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

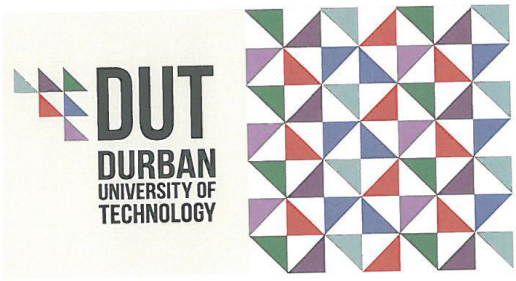
Please note that you may now proceed with research on the proposed project.

Kindly ensure that participants used for the pilot study are not part of the main study.

Yours Sincerely,

Prof M N Sibiya
Deputy Chairperson: IREC

Appendix B: Research Permission Letter



Directorate for Research and Postgraduate Support
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Fax: 031-3732946
E-mail: moyos@dut.ac.za

30th March 2015

Ms Mokgadi Ursula Makgobole
c/o Department of Somatology
Durban University of Technology

Dear Ms Makgobole

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted provisional permission for you to conduct your research "An assessment of the Somatology Extended Curriculum Programme (ECP) at the Durban University of Technology", at the Durban University of Technology.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies.

Kindest regards.
Yours sincerely

PROF. S. MOYO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT

Appendix C: Letter of Information

LETTER OF INFORMATION

Title of the Research Study: An assessment of the Somatology Extended Curriculum Programme at the Durban University of Technology.

Principal Investigator/s/researcher: Ms. Mokgadi Ursula Makgobole, M Tech Somatology

Co-Investigator/s/supervisor/s: Prof T Puckree; Mr. G Bass

Brief Introduction and Purpose of the Study: The Extended Curriculum Programme (ECP) was developed to assist under-prepared matriculates gain access to higher education. This programme provides a curriculum that equips students with the academic and learning skills they need to succeed in their chosen field of study.
The purpose of this study is to assess the impact of ECP on the success and throughput rate among Somatology students at the Durban University of Technology.

Outline of the Procedures: An interview will be conducted once-off at place convenient for both the researcher and participant. The duration of the interview will be approximately 45minutes to an hour. Interviews will be recorded.

Risks or Discomforts to the Participant: None

Benefits: The findings and recommendations of this study will assist in improving the ECP to ensure students success and throughput rate while reducing dropout rate in the department of Somatology and other departments within the Faculty of Health Sciences. Possibly might further to other Faculties in DUT.

Reason/s why the Participant May Be Withdrawn from the Study: The researcher foresees no reason for withdrawing the participant from the study. The participants may withdraw at any time as participation is voluntary.

Remuneration: No remuneration will be received by participant for participating in this study.

Costs of the Study: Participants will not bear any costs by participating in the study.

Confidentiality: Names of participants will remain anonymous in this study.

Research-related Injury: No injuries can be expected in this study

Persons to Contact in the Event of Any Problems or Queries:
Ms. Mokgadi Makgobole (Researcher) – 0732849315 or mokgadim@dut.ac.za
Mr. G Bass (Supervisor) – 0313732033 or gregb@dut.ac.za
Prof T Puckree (Supervisor)-0313732704 or puckreet@ac.za

Appendix D: Research Consent Letter

CONSENT

Statement of agreement to participate in the research study:

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

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

I, Mokgadi Ursula Makgobole, herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	**Date**	**Signature**
_____	_____	_____
Full Name of Witness	**Date**	**Signature**

Appendix E: Interview Schedule

Interview Schedule

Key research Aim:

- To explore the perceptions, attitudes and experiences of Somatology ECP graduates.

Interview question	Prompt
When you were accepted in the Somatology ECP did you know why you were placed in the programme?	• What do you understand by ECP • Did you do any research about the programme • How do you perceive (See) ECP.
How did you feel about being placed in the programme?	
How did you feel about being placed in the programme?	
Did you perceive any differences in your lecturer's attitude between ECP and mainstream students when you sat in class together?	• What were your experiences when you sat together in the same class?
What was your subject lecture's attitude towards ECP students?	• Was ECP students acknowledged?
Which aspect of the ECP did you find beneficial in adjusting to your university studies	
Which aspect did you not find helpful	
Some of your classmates dropped out, do you know why?	• Could you share some of the reasons that might lead to student dropout in ECP
Is there any modules you would have liked to be added to have a better experience of the ECP	• Which modules would you have liked to be added
Would you recommend a student to enrol in the Somatology ECP programme rather than the mainstream? Why?	
Would you like to add anything regarding this topic	• What suggestions do you have in regards to ECP in the future

Appendix F: SOMATOLOGY EXTENDED CURRICULUM PROGRAMME DATA

Faculty of Health Sciences

Department : Chiropractic and Somatlogy

Programme : Somatology (Foundation)

Cohort Study of ND First-time Entering Students for 2005 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2005	No. Graduated in :			No. Enrolled in 2011	No. Dropped out	Dropout Rate	Throughput Rate		
				2008	2009	2010				Min Time	Min Time + 1	Min Time + 2
ND SOMATOLOGY (FOUNDATION)	Female	African	14	5	2	0	0	7	50%	36%	14%	0%
		Indian	2	1	0	0	0	1	50%	50%	0%	0%
	Male	African	2	0	1	0	0	1	50%	0%	50%	0%
Total			18	6	3	0	0	9	50%	33%	17%	0%

Cohort Study of ND First-time Entering Students for 2006 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2006	No. Graduated in :			No. Enrolled in 2012	No. Dropped out	Dropout Rate	Throughput Rate		
				2009	2010	2011				Min Time	Min Time + 1	Min Time + 2
ND SOMATOLOGY (FOUNDATION)	Female	African	7	3	1	0	0	3	43%	43%	14%	0%
		Coloured	2	0	0	0	0	2	100%	0%	0%	0%
		Indian	11	5	3	0	0	3	27%	45%	27%	0%
	Male	African	2	0	0	0	0	2	100%	0%	0%	0%
Total			22	8	4	0	0	10	45%	36%	18%	0%

Cohort Study of ND First-time Entering Students for 2007 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2007	No. Graduated in :			No. Enrolled in 2013	No. Dropped out	Dropout Rate	Throughput Rate		
				2010	2011	2012				Min Time	Min Time + 1	Min Time + 2
ND SOMATOLOGY (FOUNDATION)	Female	African	15	6	4	1	0	4	27%	40%	27%	7%
		Indian	1	1	0	0	0	0	0%	100%	0%	0%
	Male	African	2	1	0	0	0	1	50%	50%	0%	0%
Total			18	8	4	1	0	5	28%	44%	22%	6%

Cohort Study of ND First-time Entering Students for 2008 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2008	No. Graduated in :			No. Enrolled in 2014	No. Dropped out	Dropout Rate	Throughput Rate		
				2011	2012	2013				Min Time	Min Time + 1	Min Time + 2
ND SOMATOLOGY (FOUNDATION)	Female	African	13	5	3	0	0	5	38%	38%	23%	0%
		Indian	5	2	0	1	0	2	40%	40%	0%	20%
Total			18	7	3	1	0	7	39%	39%	17%	6%

Cohort Study of ND First-time Entering Students for 2009 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2009	No. Graduated in:		No. Enrolled in 2014	No. Dropped out	Dropout Rate	Throughput Rate		% Still in Progress
				2012	2013				Min Time	Min Time + 1	
ND SOMATOLOGY (FOUNDATION)	Female	African	16	4	5	2	5	31%	25%	31%	13%
		Indian	4	2	0	0	2	50%	50%	0%	0%
	Male	African	6	1	0	0	5	83%	17%	0%	0%
Total			26	7	5	2	12	46%	27%	19%	8%

Cohort Study of ND First-time Entering Students for 2010 - Foundation

Qualification	Gender	Race	No. of First-time entering in 2010	No. Graduated in 2013	No. Enrolled in 2014	No. Dropped out	Dropout Rate	Throughput Rate - Min Time	% Still in Progress
ND SOMATOLOGY (FOUNDATION)	Female	African	16	6	4	6	38%	38%	25%
		Indian	2	1	0	1	50%	50%	0%
	Male	African	2	1	1	0	0%	50%	50%
Total			20	8	5	7	35%	40%	25%

Appendix G: SOMATOLOGY COHORT MAINSTREAM DATA

Faculty of Health Sciences

Department : Chiropractic and Somatlogy

Programme : Somatology

Cohort Study of ND First-time Entering Students for 2005

Qualification	Gender	Race	No. of First-time entering in 2005	No. Graduated in :			No. Enrolled in 2010	No. Dropped out	Dropout Rate	Throughput Rate		
				2007	2008	2009				Min Time	Min Time + 1	Min Time + 2
ND: SOMATOLOGY	Female	African	13	4	1	1	0	7	54%	31%	8%	8%
		Coloured	1	1	0	0	0	0	0%	100%	0%	0%
		Indian	18	7	3	1	0	7	39%	39%	17%	6%
		White	2	2	0	0	0	0	0%	100%	0%	0%
		Other	1	1	0	0	0	0	0%	100%	0%	0%
Total			**35**	**15**	**4**	**2**	**0**	**14**	**40%**	**43%**	**11%**	**6%**

Cohort Study of ND First-time Entering Students for 2006

Qualification	Gender	Race	No. of First-time entering in 2006	No. Graduated in :			No. Enrolled in 2011	No. Dropped out	Dropout Rate	Throughput Rate		
				2008	2009	2010				Min Time	Min Time + 1	Min Time + 2
ND: SOMATOLOGY	Female	African	5	2	0	0	0	3	60%	40%	0%	0%
		Coloured	2	1	0	0	0	1	50%	50%	0%	0%
		Indian	14	4	1	1	0	8	57%	29%	7%	7%
		White	4	2	1	0	0	1	25%	50%	25%	0%
Total			**25**	**9**	**2**	**1**	**0**	**13**	**52%**	**36%**	**8%**	**4%**

Cohort Study of ND First-time Entering Students for 2007

Qualification	Gender	Race	No. of First-time entering in 2007	No. Graduated in :			No. Enrolled in 2012	No. Dropped out	Dropout Rate	Throughput Rate		
				2009	2010	2011				Min Time	Min Time + 1	Min Time + 2
ND: SOMATOLOGY	Female	African	10	3	2	1	0	4	40%	30%	20%	10%
		Coloured	1	0	0	0	0	1	100%	0%	0%	0%
		Indian	7	1	3	1	0	2	29%	14%	43%	14%
		White	6	4	0	0	0	2	33%	67%	0%	0%
Total			**24**	**8**	**5**	**2**	**0**	**9**	**38%**	**33%**	**21%**	**8%**

Cohort Study of ND First-time Entering Students for 2008

Qualification	Gender	Race	No. of First-time entering in 2008	No. Graduated in :			No. Enrolled in 2013	No. Dropped out	Dropout Rate	Throughput Rate		
				2010	2011	2012				Min Time	Min Time + 1	Min Time + 2
ND: SOMATOLOGY	Female	African	18	6	6	0	0	6	33%	33%	33%	0%
		Coloured	8	4	2	0	0	2	25%	50%	25%	0%
		White	1	0	0	0	0	1	100%	0%	0%	0%
Total			**27**	**10**	**8**	**0**	**0**	**9**	**33%**	**37%**	**30%**	**0%**

Cohort Study of ND First-time Entering Students for 2009

Qualification	Gender	Race	No. of First-time entering in 2009	No. Graduated in :			No. Enrolled in 2014	No. Dropped out	Dropout Rate	Throughput Rate		
				2011	2012	2013				Min Time	Min Time + 1	Min Time + 2
ND: SOMATOLOGY	Female	African	17	7	5	0	3		0%	41%	29%	0%
		Coloured	1	0	1	0	0		0%	0%	100%	0%
		Indian	3	1	0	0	0		0%	33%	0%	0%
		White	1	1	0	0	0		0%	100%	0%	0%
Total			**22**	**9**	**6**	**0**	**3**		**0%**	**41%**	**27%**	**0%**

Cohort Study of ND First-time Entering Students for 2010

Qualification	Gender	Race	No. of First-time entering in 2009	No. Graduated in:		No. Enrolled in 2014	No. Dropped out	Dropout Rate	Throughput Rate		% Still in Progress
				2012	2013				Min Time	Min Time + 1	
ND: SOMATOLOGY	Female	African	10	3	0	3	4	40%	30%	0%	30%
		Indian	13	4	5	1	3	23%	31%	38%	8%
		White	2	2	0	0	0	0%	100%	0%	0%
	Male	African	1	0	1	0	0	0%	0%	100%	0%
Total			**26**	**9**	**6**	**4**	**7**	**27%**	**35%**	**23%**	**15%**

Appendix H: THE NATIONAL DIPLOMA: SOMATOLOGY CURRICULUM

Progression period	**Full Time Programmes**	**Extended Curriculum Programme**
Year of Study	**Three Year Minimum**	**Four Year Minimum**
YEAR ONE	Aesthetics I Anatomy and Physiology I Biotics I Communication Skills 1 Nutrition I Science I Soma Techniques I	Aesthetics I Anatomy and Physiology I Communication Skills 1 Wellness Module 1
YEAR TWO	Anatomy and Physiology II Biotics II Business Practice I Nutrition II Science II Socio-Psychology I Soma Techniques II Beauty Technology Practice II	Biotics I Nutrition I Science I Soma Techniques I Wellness Module II
YEAR THREE	Applied Bio. Science (Module 1) Applied Bio. Science (Module 2) Biotics III Nutrition III Socio-Psychology III Soma Techniques III Soma Techniques Project III	Anatomy and Physiology II Biotics II Nutrition II Science II Socio-Psychology I Soma Techniques II Business Practice I Beauty Technology Practice II
YEAR FOUR		Applied Bio. Science (Module 1) Applied Bio. Science (Module 2) Biotics III Nutrition III Socio-Psychology III Soma Techniques II Soma Techniques Project III