DESIGNING AN ACADEMIC SUPPORT AND DEVELOPMENT PROGRAMME TO COMBAT ATTRITION AMONG NON-TRADITIONAL MEDICAL UNDERGRADUATES

by

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DECLARATION

I declare that the thesis submitted here is the result of my own independent investigation and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references. I further declare that the work is submitted for the first time at the University of the Free State towards the Philosophiae Doctor degree in Higher Education Studies and that it has never been submitted to any other university/faculty for obtaining a degree.

…… ……

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DEDICATION

This thesis is dedicated to:

- My Lord and Saviour, Jesus Christ. I would not have done this without His grace, mercy, courage and strength.
- A very strong, wise and courageous woman in my life, my mother, who has been there for me even in her old age.
- My dear and special angels, my children, who have been a very strong source of inspiration and have given me the will to grow stronger each day of my life.

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Mpho Moagi-Jama **Bloemfontein**

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LIST OF ACRONYMS AND ABBREVIATIONS

ASS	Arrive Stay and Succeed
ANC	African National Congress
B.Sc.	Bachelor of Science
CAAS	Central Academic Advisory Service
CASE	Community Agency for Social Inquiry
CATE	Colleges of Advanced Technical Education
CEPD	Centre for Educational Policy Development
CHE	Council for Higher Education
CPP	Career Preparation Programme
DoE	Department of Education
DSLD	Division of Student Learning Development
EPI	Educational Policy Institute
FHS	Faculty of Health Sciences
FSPG	Free State Provincial Government
FYE	First Year Experience
HBI	Historically Black Institution
HEFCE	Higher Education Funding Council of England
HEQAA	Higher Education Quality Assessment Agency
HERD-SA	Higher Education Retention Data – South Africa
HESA	Higher Education South Africa
IDEALL	Integrated Development of English Language Academic Literacy and Learning
JCU	James Cook University
LDP	Learning Development Programme
MEDP	Medical Education Development Programme
MoE	Ministry of Education
NCHE	National Council on Higher Education
NECC	National Education Coordinating Committee
NEPI	National Education Policy Investigation
NPHE	National Plan for Higher Education
NSFAS	National Students Financial Aid Scheme
PCN	Pathway to College Network
RSA DoE	Republic of South Africa Department of Education
RSA MoE	Republic of South Africa Ministry of Education

SA	South Africa
SSS	Student Support Services
TBVC	Transkei, Bophuthatswana, Venda and Ciskei
TEFSA	Tertiary Education Fund of South Africa
UFS	University of the Free State

SUMMARY

Key words: Student retention, student attrition, student dropout, retention theories, traditional students, non-traditional students, academic performance, mixed methods research, student academic support, student academic development, integrated and holistic approach, programme, programme of action.

The overall aim of this study was to design an integrated and holistic programme for the academic support and development of non-traditional undergraduate medical students. The study was motivated by the need to increase the retention rate of these students. The conceptual framework of this study is based on the theories of Spady, Bean and Tinto. These theories were used to design a retention theory called "Circles of Progression" for non-traditional students in the South African context. As a framework, this theory has guided the empirical investigation and the outcome of this study.

The study adopted a case study design to gain an in-depth understanding of the non-traditional undergraduate medical students in the medical school at the University of the Free State. A mixed methods approach was used to conduct the study. Data was collected by means of are a questionnaire and extensive engagement. These methods allowed triangulation and improved the reliability and validity of data and findings.

From this study, it became clear that student retention is not due to an isolated factor, but it is a result of a whole range of interrelated factors and therefore there is no one single explanation and solution to student attrition. Based on the literature, generalisations about student retention can be misleading because each country, each institution and each student is unique. South Africa, for instance, cannot be compared to other countries because of its previous political history, its uneven schooling system and the different social backgrounds of the various population

groups. Moreover, issues related to retention in the different higher education institutions will not be precisely the same because of different educational systems that existed before political transformation started in 1994. Unfortunately, there is a tendency among both academics and non-academics to provide a single bold answer when asked why students do not perform well. One example of a common answer is that “students do not study”. This answer is often provided without even considering other interrelated factors. The question is “do institutions understand the nature of the problem?”

If institutions and the key stakeholders in these institutions could understand the nature of problems faced by non-traditional students, especially undergraduate medical students, they could collaborate, communicate and work together as a team to provide an integrated and holistic programme of action to support and develop these students and therefore, increase their retention rate. The programme of action as proposed in this study could start even before the students enter the university and continue up to their clinical years where they begin to specialise and become professionalised in the medical field.

When you see an empty soda can on the ground, it is your responsibility to pick it up and throw it in the trash. Administrators, professors and staff members should feel the same responsibility for promoting student retention. Everybody has to think about it. “Not ‘it’s a nice thing to do’, but a responsibility” (Mr. Paul Orehovec, vice president for enrolment management at the University of Miami).

OPSOMMING

Sleutelwoorde: Studentretensie, studenteverlies, studentwegvalling, retensieteorieë, tradisionele studente, nietradisionele studente, akademiese prestasie, gemengdemetodenavorsing, studente-akademiese ondersteuning, studente-akademiese ontwikkeling, geïntegreerde en holistiese benadering, program, aksieprogram.

Die oorhoofste oogmerk van hierdie studie was om ‘n geïntegreerde en holistiese program vir akademiese odersteuning en ontwikkeling van nietradisionele voorgraadse mediese studente te ontwerp. Die studie is gemotiveer deur die behoefte om die retensiekoers van hierdie studente te verhoog. Die konseptuele raamwerk van hierdie studie is gegrond op die teorieë van Spady, Bean en Tinto. Hierdie teorieë is gebruik om ‘n retensieteorie genaamd “Sirkels van Progressie” vir nietradisionele studente in die Suid-Afrikaanse konteks te ontwerp. As ‘n raamwerk het hierdie teorie die empiriese ondersoek en uitkoms van hierdie studie gerig.

Die studie het die vorm van ‘n gevallestudie aangeneem ten einde ‘n diepgaande begrip van die nietradisionele voorgraadse mediese studente aan die mediese skool by die Universiteit van die Vrystaat te verkry. Daar is van ‘n gemengdemetodebenadering gebruik gemaak om die studie uit te voer. Die drie data-insamelingsinstrumente wat gebruik is, was ‘n vraelys, omvattende kontak en eweknie-assessering. Hierdie metodes het voorsiening gemaak vir triangulasie en het die betroubaarheid en geldigheid van data en bevindinge verbeter.

Uit hierdie studie het duidelik geblyk dat studentretensie nie deur ‘n geïsoleerde faktor teweeg gebring word nie, maar dat dit die gevolg is van ‘n hele reeks verwante faktore. Dus is daar geen enkel verduideliking en oplossing vir studenteverlies nie. Volgens die literatuur kan veralgemenings oor studentretensie misleidend wees omdat elke land, elke instelling en elke student uniek is. Suid-

Afrika, byvoorbeeld, kan weens die land se politieke geskiedenis, ongelyke skoolstelsel en die uiteenlopende maatskaplike agtergronde van die verskillende bevolkingsgroepe nie met enige ander lande vergelyk word nie. Daarbenewens sal kwessies wat verband hou met retensie in die verskillende hoëronderwysinstellings nie presies dieselfde wees nie omdat daar verskillende onderwysstelsels bestaan het voordat politieke transformasie in 1994 begin het. Ongelukkig is daar ‘n neiging onder sowel akademici as nie-akademici om ‘n enkele, onomwonde antwoord te gee wanneer gevra word waarom studente nie goed presteer nie. Een voorbeeld van ‘n algemene antwoord is dat studente nie leer nie. Die antwoord word dikwels verskaf sonder om die ander verwante faktore enigsins te oorweeg. Die vraag is, verstaan instellings die aard van die probleem?

Indien instellings en die vernaamste aandeelhouers in hierdie instellings die aard van probleme wat nietradisionele studente, en veral voorgraadse mediese studente, in die gesig staar sou kon verstaan, sou hulle as ‘n span kon saamwerk en kommunikeer om ‘n geïntegreerde en holistiese aksieprogram ter ondersteuning en ontwikkeling van hierdie studente te voorsien om sodoende hul retensiekoers te verhoog. Die aksieprogram wat in hierdie studie aan die hand gedoen word sou kon begin nog voordat studente die universiteit betree en voortduur tot in hul kliniese jare waar hulle begin spesialiseer en professionele status in die mediese veld verwerf.

CHAPTER 1: ORIENTATION

1.1. INTRODUCTION

One of the key challenges facing higher education institutions internationally and nationally is the widening of access for students. This is particularly the case in South Africa (SA) where access debates are directed at non-traditional students (*vide* 1.7.1). The Education White Paper 3: Republic of South Africa, Department of Education (RSA DoE 1997a: 2:29) reiterates that increased access should lead to, among other aspects, improved success, especially for blacks and female students. Contrary to this expectation the DoE noted with concern that students' retention rate in higher education institutions has decreased and dropout rates have increased between the period 1999 - 2000 (RSA DoE 2001a: 2:1). In her speech on 13 May 2005, the Minister of Education (MoE) in SA stated that 50% of students admitted into higher education in the year 2000 had dropped out by the year 2003 and most of them are from disadvantaged backgrounds (RSA MoE 2005: 2 of 3). In 2006, the Free State Provincial Government (FSPG) in a similar vein commented on the high failure rate of students in the Faculty of Health Sciences (FHS) at the University of the Free State (Galloway 2006: 1).

Literature studies on academic performance indicate that academic, psychosocial, cognitive, affective and demographic factors can affect retention of students in universities (Bernal & Aragon 2004: 210; Dobson 2004: 1221; Hendrich & Schepers 2004: 250). Another likely reason for the high dropout rate, according to Badat (2005: 18) is insufficient funding for students.

Apart from studying the literature on academic performance of students, the researcher, in her capacity as academic support and development practitioner in the medical school at the University of the Free State (UFS) had the opportunity to observe undergraduate medical students as they explained their problems during consultations over the past nine years. During these consultations, it became clear

that factors such as school background, the learning environment, adjustment to higher education, finance and stress affected the academic performance of students. Furthermore, an analysis of personal reflective journals written by first-year medical students at the UFS during the first two weeks of their studies in 2004 confirmed these observations.

In a survey conducted by the researcher as part of her Masters' Degree in Higher Education studies (Jama 2002: 59) it was found that the UFS does have structures and strategies for student support and development. Examples include the campus-wide tutor programme and services rendered by the Centre for Student Counseling and Development. Furthermore, the FHS has structures such as House Medix, a so-called "city residence", which caters for the social and academic needs of off-campus medical students, a mentor-tutor programme and a Division of Student Learning Development. The latter was specifically established to cater for the academic needs of non-traditional students (Beylefeld 2000: 3; UFS Institutional Review 2006: 202).

In spite of all these measures that are already in place, the attrition rate of medical students in the UFS is high. At the beginning of this study, the 2000-2003 FHS statistics showed that the attrition rate of medical students according to race was: Whites 3,6%, Coloureds 17%, Asians 10,2% and Blacks 22,9%. These figures indicate that, in comparison to other race groups, the attrition rate of black students is high.

1.2. RESEARCH PROBLEM

Based on the foregoing discussion and the concerns raised by the different stakeholders in higher education, the principle of access with success as highlighted in the Education White Paper 3 does not seem to materialise in higher education institutions. In the case of medicine, according to Lehmann, Andrews and Sanders (2000: 8), the first pre-clinical years, especially the second year, with its focus on natural and basic medical science subjects, display a higher attrition rate, especially among black students. A country like SA, which is currently having compounded

medical and health problems resulting from the scourge of HIV/AIDS, on the one hand, and a shortage of doctors, on the other, cannot afford to have high attrition rates of medical students (Sidley 2004: 190). An increase of student retention thus represents one of the most pressing challenges in higher education, which in turn necessitate intensified efforts of academic support and development for students, particularly non-traditional undergraduate medical students.

Against this background, the main research question formulated for this study was: What actions can be taken to combat the high attrition rate of non-traditional undergraduate medical students?

In accordance with the research problem and the main research question, the following specific questions were asked:

- What are the factors affecting the academic performance of non-traditional undergraduate medical students at the UFS?
- What contributes to the success of other non-traditional undergraduate medical students who manage to pass at the UFS?
- Are the structures and strategies currently employed to support and develop students at the UFS effective?
- What programme of action can be taken to provide effective academic support and development for non-traditional undergraduate medical students at the UFS?

1.3. GOAL, AIMS AND OBJECTIVES OF THE STUDY

The aim of this study was to identify actions that can be taken to combat the high attrition rate of non-traditional undergraduate medical students.

1.3.1. Aims

The aim of this study was to identify actions that can be taken to combat the high attrition rate of non-traditional undergraduate medical students.

1.3.2. Objectives

The study had the following objectives:

- Determine factors affecting the academic performance of non-traditional undergraduate medical students at the UFS.
- Determine factors contributing to the success of other non-traditional undergraduate medical students who manage to pass at the UFS.
- Evaluate the effectiveness of the structures and strategies currently employed to support and develop students at the UFS.
- Formulate a programme of action to provide effective academic support and development for non-traditional undergraduate medical students at the UFS.

1.4. SIGNIFICANCE OF THE STUDY

It was anticipated that the study would reveal real and not perceived factors affecting the academic performance of undergraduate medical students. The identification of students' real problems might lead to effective strategies for academic support and development and subsequently increase student retention. The study might be useful in faculties or disciplines where learning programmes are perceived to be difficult and in disciplines where non-traditional students battle to achieve success. In addition, the study might help in curbing the shortage of doctors in the country.

1.5. RESEARCH DESIGN AND METHODOLOGY

The study adopted a case study design which, according to McMillan and Schumacher (2001: 391), is used to gain an in-depth understanding of a single unit or phenomenon. In this study, the investigation focused on the academic

performance of non-traditional undergraduate medical students in the Faculty of Health Sciences at the University of the Free State. The phenomenon in this study was factors affecting the academic performance of the medical students and the types and effectiveness of structures and strategies used to support and develop these students.

The research methodology followed to conduct this study started with a literature review followed by theory building. From this literature review and theory building, a retention theory for non-traditional students was designed. This theory, called "Circles of Progression", describes the progression of a student from one stage of an academic environment to the other. Subsequently, an empirical investigation, being guided by the literature review and theory, was conducted in two phases using a mixed methods approach. In the first phase, quantitative and qualitative data were collected by means of a questionnaire, also using extensive engagement to supplement the data from the questionnaire. Thereafter, quantitative data were analysed statistically using a Fischer's test (Kruger, de Vos, Fouché & Venter 2005: 239), whilst qualitative data were analysed by means of reading and reflection, content analysis, identification of themes, establishment of patterns and connections, coding and by using theoretical propositions. The analysed data were interpreted by using a descriptive and interpretive approach. Following the interpretation of the results, a draft programme for the academic support and development of the non-traditional undergraduate medical students was designed. This draft programme of action was sent to peers at the other medical schools in SA. In phase two of the research process the peers were requested to comment on the draft programme. Thereafter, the qualitative comments from the peers were analysed and interpreted. Subsequently a final programme of action for the academic support and development of these students was designed.

1.5.1. Research participants

The study population in this study was divided into three groups of undergraduate medical students at the UFS. The first group comprised all students who had failed

any year of study during the period 2004 to 2006. The second group included all non-traditional students who obtained a distinction in more than 50% of modules in the examination of the second year of study during the same period. The third group consisted of all traditional students who obtained a distinction in all modules in the examination of the second year of study during the same period. According to Lehmann, Andrews and Sanders (2000: 8) the second year of study is a year characterised by higher attrition rates hence the inclusion of the second and third groups in the study population. The total number of the sample was 71, of which 52 fell in the first group, 12 in the second group with seven (7) in the third group. Although the target population in this study was non-traditional students, traditional students were also selected in order to gain an understanding on what they do to succeed especially in the year where most students struggle to succeed.

1.6. DEMARCATION OF THE FIELD OF STUDY

Since a case study requires a researcher to do an in-depth study, the researcher deemed it necessary to draw precise lines in terms of the study context, personal context, the area to be researched and time specifications.

1.6.1. Personal context

The researcher in this study is a student academic support and development practitioner and a coordinator of the mentor-tutor programme in the UFS medical school and has been extensively engaged with the undergraduate medical students from 2000 to date. During this period, the researcher has had the opportunity to interact with the students during consultations, during the coordination of the mentor-tutor programme and in the classroom environment. This interaction has enabled her to gain first-hand experience of some of the problems of the students. Besides that, being from the same social and school background as that of the non-traditional students, the researcher was able to use personal experiential knowledge to understand the environment and problems of the students. Furthermore, the researcher had an opportunity to develop a spiritual bond with some of the students.

This bond enabled the researcher, who also has strong Christian values to realise the importance of spiritual support in the academic life of students.

1.6.2. Area to be researched

Currently SA has 23 tertiary education institutions. Eight of these institutions have medical schools. As a case study follows an approach in which a researcher explores a single entity, the researcher deemed it necessary to single out one of the medical schools that is situated in the Faculty of Health Sciences of the UFS. This medical school was regarded as an ideal case because it is one of the medical schools situated in one of the previously white universities that have undergone transformation. In 2000, the school transformed its medical curriculum with a shift in emphasis from a lecture-centered to directed learner-centered education. The school further transformed the curriculum in 2007 by adopting an integrated approach to teaching and learning. Furthermore, the undergraduate students in this medical school were selected because the FSPG, which is a provincial government where the medical school is situated and which contributes financially towards the education and training of these students raised concern about their failure rate.

1.6.3. Time specifications

The study was conducted in the period between 2004 and 2006. During this period, the UFS medical school was offering training in two separate five-year-long learning programmes. The first programme ran from 2000 to 2004. The second programme started in 2007, but during this period, some of the students who had started out and failed in the “old” curriculum, were now studying in the “new” curriculum.

1.7. DEFINITION OF CONCEPTS

The following concepts needed to be defined to clarify their meaning in the context of this study.

1.7.1. Non-traditional students

Bean and Metzner (1985: 489) define non-traditional students as those older than 24, or do not live in the campus (are commuters) or are part-time students, or are a combination of these factors. Furthermore, Bean and Metzer (1985: 491) admit that, due to the heterogeneity of the characteristics of non-traditional students, it is difficult to develop a typical profile of these students.

In the context of the South African higher education environment, the term non-traditional students refers to black students from poor family and disadvantaged school backgrounds. Most of these students come from families and schools with lack of or poor resources such as finance (*vide* 2.2.4). This term is also applied in the context of the UFS, which was a traditionally white institution.

1.7.2. Student attrition

Student attrition refers to non-completion of a course or subject, a programme or degree. At a programme level, it is assumed to be directly related to attrition at a prescribed course or module level (Müller, Prinsloo & du Plessis 2007: 21). For the purpose of this study, student attrition refers to non-completion of a module during a prescribed level of the medical curriculum in the UFS. According to regulations of the curriculum, any student who fails a module in a particular year of study has to repeat the year and will therefore not be able to complete the studies in 5years.

1.7.3. Student retention

Student retention can be viewed from two dimensions. The first, being the institutional dimension refers to indicators an institution uses to measure retention and assess how well it is performing. The second, being the student dimension is considered as one of the factors that influences success from an institutional perspective (Ashby 2004: 66). For the purpose of this study, students who are

retained are those who registered for a 5-year undergraduate medical learning programme at the UFS and completed their studies at the end of the fifth year.

1.7.4. Student dropout

While a dropout can be regarded as a student who leaves the university before graduation, such a student may eventually return and become a non-dropout at a later stage (Seidman 2005: 92). For the purpose of this study, a student who dropped out is one who registered for the undergraduate medical learning programme, but because of problems left the programme and did not return to complete his/her studies.

1.7.5. Student support

The Higher Education Quality Committee (2005: 103) defines student support as those services that support students in their day-to-day lives on campus as well as those services that support them in their academic work. This includes, among others, services such as financial aid, bursary and loan schemes, residences, student counseling, library services and resources, information technology provision and health services. For the purpose of this study, student support refers to non-teaching and learning structures and strategies used at the UFS and the FHS to support the undergraduate medical students in their studies.

1.7.6. Student academic development

Student academic development refers to curriculum strategies employed at the teaching-learning interface to enhance the quality of learning and the academic performance of students. The term also refers to institutional responses to the needs of underprepared students (Higher Education Quality Committee 2005: 103). For the purpose of this study, student academic development refers to all the teaching and learning structures and strategies used in the UFS and the FHS to enhance the academic performance of undergraduate medical students.

1.7.7. Programme

According to Babbie and Mouton (2001: 335), a programme refers to any intervention or set of activities that are aimed at meeting a recognised social need or solving an identified problem. Based on this definition, the proposed programme for the academic support and development of non-traditional undergraduate medical students in this study will refer to a programme of action.

According to the Educational Policy Institute (2007: 3), retention programmes in institutions consist of four phases. Phase I is the pre-planning stage involving the collection of information about the institution. Phase II, being the planning stage involves the preparation of a plan to implement in the institution. In Phase III, the plan is implemented and in Phase IV the impact of the plan is monitored. In this study, only the first two phases were conducted. In Phase I, information was collected about factors affecting the academic performance of students and also about the types and effectiveness of structures and strategies used to support and develop students. The programme of action with its plans proposed in this study represents Phase II, which is the planning. It therefore means that Phase III and Phase IV did not form part of this study.

1.7.8. Integrated approach

An integrated approach is aimed at creating a network of services that work together. This approach is also seen as a means to improve the effectiveness of services (Haddad 2001: 6).

1.7.9. Holistic approach

A holistic approach includes both curricular and co-curricular components, takes the emotional, social and cognitive development of students into account and employs the services of academic and non-academic staff (Haynes 2006: 19).

1.7.10. Integrated holistic approach

Drawing from the definitions of an integrated and holistic approach stated above, the definition of an integrated holistic approach proposed for this study is a pro-active approach that links and co-ordinates the emotional, social and cognitive development of student support and development. In addition, this approach requires collaboration, communication and teamwork between key stakeholders such as the students' family, institutional student support structures, faculty-based student support structures, peers support and financial institutions.

1.8. LAYOUT OF THE STUDY

In addition to this chapter, which embodies a general orientation to the study, the thesis consists of the following chapters:

Chapter 2 – a literature review focusing on student retention and factors affecting the academic performance of students. The theories of Spady, Tinto and Bean are discussed and used as a basis for designing a retention theory called "Circle of Progression" for the South African higher education context.

Chapter 3 - a literature review, providing perspectives on academic support and development of students based on case studies drawn from four countries, namely the United States of America, the United Kingdom, Australia and South Africa.

Chapter 4 - a discussion of the South African education system before democracy, policies and Acts that have shaped and led to the transformation of SA education in general, and higher education in particular. The discussion focuses on the policies and Acts that have affected and still affect student access to and success in higher education.

Chapter 5 - a description of the research design and methodology used to conduct the study. The research design of this study was a case study and a mixed methods approach was used as a research process.

Chapter 6 - a discussion of the empirical investigation on factors affecting the academic performance of students before entry into the university, on entering the university, during the teaching and learning experience and during their ongoing social and academic integration in the university.

Chapter 7 - a discussion of the empirical investigation into the types and effectiveness of the academic support and development structures and strategies of University of the Free State and the Faculty of Health Sciences.

Chapter 8 - the final chapter presenting the proposed programme of action for the academic support and development of non-traditional undergraduate medical students. This chapter also includes the limitations of the study, recommendations for further study and concluding remarks.

1.9. CONCLUSION

This chapter has provided an introduction and orientation to the study whose ultimate aim is to design an academic support and development programme to combat attrition on non-traditional undergraduate medical students.

The following chapter is a literature review of factors affecting the academic performance of students.

CHAPTER 2: THEORETICAL PERSPECTIVES ON FACTORS AFFECTING THE ACADEMIC PERFORMANCE OF STUDENTS

2.1. INTRODUCTION

This chapter, which is based on student retention theories, discusses factors affecting the academic performance of mostly non-traditional students in higher education. Firstly, the theories of Spady, Tinto and Bean are discussed. Secondly, summative perspectives on these theories are provided. The last section of this chapter proposes a theory for non-traditional students called circles of progression. This theory will however not be discussed in this chapter, but will be discussed in Chapter 8 as it forms a basis for the ultimate aim of this study, which is to design an academic support and development programme for non-traditional students.

According to Berge and Huang (2004: 1) student retention has been and is still one of the critical areas of discussion in higher education all over the world. In a country such as America, higher education institutions have since the 1980s experienced a problem in retaining students, particularly underrepresented minorities (Lau 2003: 126). In England, the three areas of concern within higher education policy are increasing the number of students participating in higher education, widening the diversity of students participating in higher education and improving retention rates (Thomas, Quinn, Slack & Casey 2002: 3). Furthermore, in Australia, the reforms of higher education in the 1980s have seen a shift from elite to mass education, and access with success has been a primary focus in this country (McKenzie & Schweitzer 2001: 21).

In South Africa (SA), the Education White Paper 3: A Programme for the Transformation of Higher Education (RSA DoE 1997a: 2.29) states that increased access should lead to improved success and graduation rates, especially for black and female students. Contrary to expectation, in the year 2002 the Department of

Education (DoE) in SA noted with concern that the retention rate in higher education institutions has decreased and dropout rates have increased (RSA DoE 2001a: 2.1). In her speech on 15 May 2005 the Minister of Education in SA stated that 50% of the cohort of students admitted in the year 2000 had dropped out by the year 2003 (RSA MoE 2005: 2 of 3). In his address in a seminar on higher education transformation held at the University of the Free State (UFS) in September 2005, the Chief Executive Officer of the Council on Higher Education in SA also stated that a key challenge for the higher education system is the improvement of efficiency by reducing the dropout rates and enhancing throughput and graduation rates (*Bult* September 2005: 18). In 2006 the Free State Provincial Government (FSPG) commented on the high failure rate of students in the Faculty of Health Sciences (FHS) at the UFS (Galloway 2006: 1). Subsequently, at a conference of the Higher Education Learning and Teaching Association of Southern Africa held in Pretoria in November 2006, the Minister of Education called for a critical review of the higher education system in the light of the 50% dropout rate of students (*Business Day* November 28 2006: 3 of 4).

According to Lourens (2004: 1), there are currently no national figures or uniform methodologies available to assess the extent of retention rates in SA universities. As a result, the Southern African Association for Institutional Research (SAAIR) has initiated a retention project called Higher Education Retention Data in South Africa (HERD-SA) with the aim of assisting universities to improve their capacity in terms of retention studies. This project covered the period June 2005 to May 2007. The results of the project are yet to be disseminated to higher education stakeholders such as the DoE, Council on Higher Education and universities.

The above-mentioned concerns raised by the different stakeholders in higher education and specifically at the UFS indicate that the principle of access with success, as highlighted in the Education White Paper 3 (RSA DoE 1997a: 2.29), is still a challenge for higher education institutions. One of the pressing challenges of higher education institutions in SA is thus to increase student retention. This challenge necessitates intensified efforts at supporting and developing students,

particularly those coming from disadvantaged backgrounds. These efforts, however should take dynamic factors such as pre-entry attributes affecting the academic performance of students as a point of departure.

2.2. FACTORS AFFECTING THE ACADEMIC PERFORMANCE OF STUDENTS

Studies on factors affecting the academic performance of students conducted, for example, by McDaniel and Graham (2001); Bennett 2003; Woodley (2003); Smith (2004) have summarized their findings based on variables such as gender, personality characteristics, finances, *etc*. Instead of summarising findings of the studies based on isolated variables only, other researchers have conceptualised these factors in the form of theories such as, among others, the sociological dropout process, the adult education participation and dropout theory, the dropout syndrome, and the integration and psychological theory (Berge & Huang 2004: 7).

The three interrelated theories contextualising student retention and factors affecting the academic performance of students that are used for the purpose of this study are those of Spady (1970), Tinto (1975) and Bean (1980). Tinto's (1975) theory on the academic and social integration of university students forms the basis of this study because, firstly, it has laid a foundation for research on retention of students in higher education. In the second instance, Tinto's methodological approach to student retention is broad-based, focusing on individual characteristics prior to entering university, the students' experience upon entering the university and the effect of external factors that interfere with students' academic performance.

2.2.1. Spady's sociological theory

Spady was one of the first researchers to propose a widely recognised theory on student retention in 1970 (Spady 1970: 77). The basic assumption of this theory is that student dropout is best explained by a process involving an interaction between the individual student and the university environment. In this interaction, the

student's attributes such as attitudes, skills and interests are exposed to influences, expectations and demands of the university. According to Spady (1970: 77), the result of this interaction will determine whether the student will be assimilated into the academic and social system of the university and subsequently whether the student will be retained in the university. Linked to this process of interaction between the individual student and the university environment are variables that promote the academic and social integration of students in higher education. These variables are family background, academic potential, normative congruence, grade performance, intellectual development and peer support. All these variables are further linked to two other variables namely satisfaction with the university environment and institutional commitment (Spady 1970: 77).

2.2.2. Tinto's integration theory

According to literature studies done by authors such as, McCubbin (2003: 20) and Swail, Redd and Perna (2003: 43) Tinto's theory of social and academic integration is the most referred to in the area of student retention. In 1975, Tinto drew upon the work of Spady (1970) who was the first to apply Durkheim's theory of suicide to student retention. This theory is based on the assertion that the likelihood that an individual will commit suicide is predicted by the level of their integration into society (Tinto 1975: 91). While in Durkheim's model of suicide individuals commit suicide because they are insufficiently integrated into society, Tinto asserts that dropout occurs because students are insufficiently integrated into different aspects of the university. Tinto further contends that dropout could occur through lack of integration in either the academic or the social systems of the university (Tinto 1975: 92).

Based on further research, Tinto revised the theory in 1987 by including the three stages of moving from one community to the other. The first stage, separation, refers to the student's parting with one group to join another one. During the second stage namely transition, students deal with the stresses of coping in a new, unfamiliar environment. In the last stage of incorporation students become

competent in being members of the new environment (Swail *et al.* 2003: 46). A further revision of this theory in 1993 added four other variables affecting the social and academic integration of students in the university. These variables are adjustment, difficulty, incongruence and isolation (Tinto 1993: 45). The first variable, adjustment, describes the process of transition from one world to another. During this process, a student is compelled to separate from the familiar world of family and friends to a new world of academic demands. The second variable, difficulty, is the student's inability to meet minimal academic standards, which might be due to inadequate preparation from school. The third variable, incongruence, refers to the general mismatch or lack of fit between the needs, interest and preferences of the student and those of the institution. The last variable, isolation, refers to the students' inability to establish themselves into the social network of the institution (Smith 2004:12). Tinto further revised the integration theory in 1997 by focusing on the classroom experience. From this perspective, Tinto asserts that the interaction process that takes place in the classroom determines the social and academic integration of students (Tinto 1997).

Bennett (2003: 127) elaborates on the two aspects of Tinto's model. The first aspect, academic integration, includes factors such as academic performance of students, intellectual development and whether the student believes that lecturers are personally committed to teaching and helping students. Social integration in turn, includes factors such as the student's self-esteem and the quality of his/her relationship with fellow students and lecturers. A further elucidation of Tinto's model by Berge and Huang (2004, 8) and McCubbin (2003: 2) shows that students' pre-entry college attributes such as family background, academic ability, race, sex and prior schooling might affect their academic and social integration into the university environment, and subsequently their academic performance.

2.2.3. Bean's psychological theory

In 1980 Bean (1980: 158) developed the psychological theory of student retention by asserting that the background characteristics of students must be taken into

consideration in order to understand their integration into a new university environment. According to this theory, Bean (1980: 183) further contends that the intentions of students to persist may be influenced by their attitudes and behaviours. These attitudes and behaviours might affect the degree to which the student is satisfied with the institution. The level of satisfaction might increase the level of commitment to the institution. In 1985, Bean and Metzner (1985: 489) developed a definition on non-traditional students. According to the authors, non-traditional students are older than 24, or do not live in the campus (are commuters) or are part-time students, or are a combination of these factors. The attrition of these students is mostly affected by external environmental variables such as family responsibilities, finances and outside encouragements, rather than social integration variables such as university memberships and friends which tend to affect traditional students. In 1995, Eaton and Bean (1995: 617) added coping behaviuor as a variable into this theory, stating that students' ability to adapt to the university environment reflects their ability to cope, which is related to previous coping skills in other environments.

2.2.4. Summative perspectives on the theories

It appears from the above information that factors affecting the academic performance of students are complex and multidimensional. Two common features appearing in the retention theories discussed are the academic and social integration of students in the university. All three theorists, Spady (1970), Tinto (1975) and Bean (1980), concur that pre-college attributes and characteristics, family background and prior schooling play a role in the retention of students. The other common beliefs of these theorists are that peer support, academic performance, the students' level of satisfaction with the institution and commitment of both the students and the institution might play a role in retention. Spady and Tinto are united in their view that social skills, academic and intellectual ability might affect the retention of students. Common features in the work of Tinto and Bean are related to the student's college experience, adjustment and the attitude of the student towards the institution. Tinto's theory thus shares common features with

both Spady's and Bean's, whereas Spady and Bean do not share any common features on their own. Tinto's theory furthermore includes features not shared with any of the other two theories. These features are the stages of transition from school to the university, finance, difficulty of the studies, the specific needs of different groups of students and the student's classroom experience.

Bean and Metzer (1985: 491) admit that it is difficult to develop a typical profile of non-traditional students. This difficulty according to McDaniel and Graham (2001: 1 of 4), as well as the lack of a general all-purpose retention model, compels institutions to develop their own models.

Historically, the system of education in SA restricted access to schooling and tertiary education according to race and ethnicity. Currently, with the demise of apartheid, higher education is now accessible to a large number of students, thus opening access to non-traditional students who are mostly black students from poor family and disadvantaged school backgrounds. The researcher, as an academic support and development practitioner who interacts with these students on a regular basis, has observed that as a result of their disadvantaged backgrounds, the integration of these students into the social and academic environment of a higher education institution is even more complex than in the case of traditional students. Lack of finance, for example, is critical for non-traditional students because they often cannot even provide for basic needs such as food, let alone accommodation, fees and books. Financial constraints can exclude these students from university accommodation, forcing them to commute between the university and their homes, which in some cases are situated far off. Commuting non-traditional students usually rely on public transport, which may not always be reliable. Consequently, the students come late or miss classes. In addition, some non-traditional students come from families who are not educated and thus have no experience of supporting a child enrolled for higher education. Although the scenario presented above is not unique to black students in SA, under circumstances such as these, the social and academic integration of students into the university becomes difficult.

The theories as discussed in this paper do not address the effect of language on the academic performance of non-traditional students. Again based on personal interaction with, and observation of the students, the researcher has identified that language affects non-traditional students, as most of them have to study in English as a second language. Although English has been a medium of instruction in South African schools for many years, non-traditional students have not fully acquired and grasped the skills of listening, speaking, reading and writing, which are important areas of language competence (Ayliff & Wang 2006: 392). In addition, lecturers generally assume that students are familiar with the academic practices of planning, drafting, note taking and reading. When lecturers thus ask questions or give assignments and tasks using terms such as 'critically analyse' or 'argue', non-traditional students often provide incorrect responses (Hutchings 2005: 716).

Apart from the above-mentioned theories and summative perspectives, extensive engagement of the researcher, in her capacity as an academic support and development practitioner in the Division of Student Learning Development at the University of the Free State, made it possible to observe undergraduate medical students as they explained problems regarding their academic performance during consultations over the past eight years. During these engagements, the researcher found that factors such as school background, the learning environment, adjustment to higher education, finance and language affect the academic performance of students. In addition, the researcher had an opportunity to analyse personal reflective journals written by first-year students during the first two weeks of their studies and the results of this analysis also confirmed the above factors.

Based on the above information, this study proposes to contribute to building a retention theory for non-traditional students in a South African context. The following aspects of a student's progression in higher education will be taken into account: students' academic progression prior to entry into the university, initial entry into university, progression into the actual teaching and learning environment of their learning programme, and the ongoing social and academic integration into the university. Two other common variables, finance and language, will also be

incorporated into the retention theory as they affect almost every stage of a student's life at the university. This theory will not be discussed in this chapter, but will be discussed in Chapter 8 as it forms a basis for this study, which is to design an academic support and development programme for non-traditional students.

2.3. CONCLUSION

From the retention theories discussed in this article, it is clear that a whole range of interrelated factors affect the academic performance of students. Based on the literature, generalisations about student retention can be misleading because each student, each institution and each country is unique. Retention issues can further be complicated by a particular student population in a specific country, therefore, generalisations cannot be made. South Africa, for instance, cannot be compared to other countries because of its previous political history, its uneven schooling system and the different social backgrounds of the various population groups. What is more, issues related to retention in the different higher education institutions will not be precisely the same because of different educational systems that existed before political transformation started in 1994. Unfortunately, based on the researcher's interaction with both academics and non-academics, there is a tendency to provide a single bold answer when asked why students do not perform well. One example of a common answer is that "students do not study". This answer is provided without even considering other interrelated factors. The question is "do institutions understand the nature of the problem?" The proposed circles of progression theory for non-traditional students as discussed and depicted in chapter 8 will endeavour to provide a holistic understanding of how academic and social factors integrate and lead to poor academic performance, and eventually, to poor retention of non-traditional students.

The following chapter will discuss perspectives on the academic support and development of students in higher education. These perspectives are based on international case studies in the United States of America, United Kingdom and Australia, and a national case study being South Africa.

CHAPTER 3: PERSPECTIVES ON ACADEMIC SUPPORT AND DEVELOPMENT OF STUDENTS

3.1. INTRODUCTION

This chapter provides perspectives on academic support and development of students derived from studies of four countries, namely the United Sates of America, United Kingdom, Australia and South Africa. Whilst Chapter 2 provided theoretical perspectives on factors affecting the academic performance of students, this chapter describes interventions and principles of academic support and development in different countries.

International studies are drawn from studies conducted in the United States of America, the United Kingdom, and Australia. Although student retention, as indicated in the previous chapter is contextual and these three countries are developed their potential relevance to the SA situation and to this study is that they seem to provide the type of academic and support programmes that might contribute to the development of an integrated and holistic approach envisaged for this study. National perspectives are drawn from a SA study conducted by REAP (Rural Education Access Programme) which investigated factors that facilitate success for disadvantaged higher education students and describes academic support interventions that address issues around student retention (Jones, Coetzee, Bailey & Wickham 2008). Furthermore, a document compiled by the Higher Education Quality Committee (HEQC: 2005) provides more perspectives on the situation in SA. Locally, perspectives on academic support and development are discussed within the context of the University of the Free State (UFS), focusing more specifically on the programmes and strategies used to support and develop undergraduate medical students in the Faculty of Health Sciences (FHS).

For the purpose of this study, case studies at international, national and local levels were analysed to determine the characteristics and effects of their academic support and development programmes. Since the ultimate aim of this study is to develop an academic support and development for medical students, attention will also be given to programmes in medical education.

3.2. ACADEMIC SUPPORT AND DEVELOPMENT FOR STUDENTS: UNITED STATES OF AMERICA PERSPECTIVES

Since the National Defense Education Act of 1958, a primary objective of federal higher education policy has been to increase access to higher education for students from low-income backgrounds. Increasingly attention is now being paid to enhance student retention and graduation (Tinto 2004: 3). Presently the Federal Department of Education in America contributes to increase student retention by providing

financial aid. Furthermore, the Department of Education, the Department of Energy, Health and Human Services, and the National Science Foundation in collaboration with colleges, universities and community agencies, coordinate programmes to promote access among low-income and underrepresented students (van Stolk, Tiessen, Clift & Levitt 2007: 59).

3.2.1. International Centre for Student Retention

The International Centre for Student Retention, which focuses on the study of student retention in postsecondary education, is a division of the Educational Policy Institute (EPI). The centre was launched in 2005 with the aim of supporting the needs of international educators, administrators, researchers, and policy makers who are looking for answers to the complex problems of student retention (studentretention.org 2007: 1 of 2). In support of student retention and success initiatives, EPI makes available publications such as the "Institutional Strategies to Increase Student Success" (EPI 2006: 1). This publication divides institutional

strategies into six areas namely: (i) recruitment and admission, (ii) student services, (iii) academic services, (iv) financial aid, (v) curriculum and instruction, and (vi) leadership and institutional commitment. These strategies, according to Swail, Redd and Perna (2003: 88) are designed to provide an understanding of the different roles expected and required of administrators and academic staff in the universities in an effort to increase retention. The authors believe that these strategies provide a framework to build student retention programmes that incorporate the individual needs of students and the institutions.

According to the framework, the following conditions need to prevail for these strategies to have the desired effect *(ibid;* also cf. EPI 2006: 3):

- Recruitment and admission are the first areas of contact that a student has with a university and it is important that the staff in these services are adequately trained to deal professionally with students' matters.

- Student services must provide appropriate resources to support the social and academic integration of students.

- Academic services such as supplementary instruction, tutoring, mentoring and bridging programmes should be provided for the academic support of students.

- The financial aid office is one of the first contacts for students and can determine the decision to continue or discontinue studies. The staff in this office should be people who are able to deal with the different financial needs of diverse students. For students from low-income backgrounds, finances are a "make or break issue". Therefore, a strong financial aid office is often a sign of a "well-oiled" institution, where attention is given to students who have special financial needs.

- The continued development of curricular and pedagogic practice is one of the important and fundamental areas that institutions must address to improve student retention.

- Leadership and institutional commitment is regarded as important areas of student support and development.

3.2.2. National Dropout Prevention Centre

In addition to the above-mentioned approaches, the Clemson University established the National Dropout Prevention Centre as a student retention strategy in 1986. This centre conducted research on student retention to further the mission of reducing American dropout rates, specifically meeting the needs of youth who are at risk of not succeeding in their studies (Schargel & Smink 2002: 14). The centre identified what they call 15 Effective Strategies that have the most effective impact on student retention. Although the strategies appear to be stand-alones, they frequently overlap and are in synergy. According to the research conducted at the centre, positive outcomes result when institutions develop a plan that encompasses most or all of these strategies. Successful results have been seen in schools, rural, suburban and urban educational centres. The strategies are divided into four areas namely, basic core strategies, early interventions, making the most of instruction and making the most of the wider community (Schargel & Smink 2002: 14).

- The first area, basic core strategies, includes four of the fifteen strategies, which are mentoring/tutoring, service learning, alternative schooling and out-of-school enhancement.

- The second area, early interventions, includes three of the fifteen strategies namely early childhood development, family involvement and reading and writing programmes.

- In the third area, making the most of instruction, student support is provided by means of professional development, openness to diverse learning styles and multiple intelligences, instructional technologies and individual instruction.

- In the last area of support, making the most of the wider community, students are supported through systemic renewal, community collaboration, career education, workforce readiness, and conflict resolution (Schargel & Smink 2002: 14).

3.2.3. Pathway to College Network

Another student retention approach in America is the Pathway to College Network (PCN), which is an alliance of 30 national organisations committed to improving post-secondary education access and success for students from disadvantaged family and school backgrounds. The network has designed a comprehensive framework for preparing disadvantaged students for college (Research Brief 2005: 1). At the core of this framework are six guiding principles, namely:

- Expectation that disadvantaged students are capable of being prepared and admitted to a university.
- Providing a range of high-quality university preparatory tools for disadvantaged students.
- Embracing social, cultural and learning style differences in developing learning environments and activities for disadvantaged students.
- Involving all leaders at all levels in establishing policies, programmes, and practices that facilitate students' transition towards post-secondary attainment.
- Maintaining sufficient financial and human resources to enable disadvantaged students to prepare for enrolment and to succeed at university.
- Assessing policy, programme, practice and institutional effectiveness regularly (Research Brief 2005: 1).

3.2.4. Medical Education Development Programme

An example of a student academic development programme in medical education is the establishment of a Medical Education Development Programme (MEDP) at the University of North Carolina medical and dental school. This is a nine-week-long intensive academic programme aimed at underrepresented minority students who might show potential to succeed in medical and dental studies. The school provides basic science courses to the students and is assisted by selected second-year medical students who have previously participated in the programme. The participants' academic performances are assessed by means of weekly examinations and a final comprehensive examination. Based on the evaluation and the average mark of the student a recommendation is made and the student is admitted to the medical or dental school (Strayhorn 2000: 356).

3.2.5. Summative perspectives

Although not all the interventions and principles of student support and development described above can be applied in a developing country such as SA, their relevance in a country that is struggling with poor retention rates of students is important. The establishment of centres such as the International Centre for Student Retention and the Dropout Prevention Centre, together with comprehensive studies on student retention is an indication that the Federal government, higher education institutions and organisations in America are making efforts to increase student retention. Furthermore, the approach of the Pathway to College Network (PCN) is addressing the pre-entry, the initial entry and the financial challenges of non-traditional students as discussed in the previous chapter *(vide 2.2.4)*.

3.3. ACADEMIC SUPPORT AND DEVELOPMENT FOR STUDENTS: UNITED KINGDOM PERSPECTIVES

Universities in the United Kingdom (UK) are autonomous publicly funded bodies. In addition, the universities are legal entities, with overall responsibility for their sector lying with the Department for Education and Employment, which has established the Higher Education Funding Council for England (HEFCE) (Layer 2002: 4).

3.3.1. HEFCE

One of the strategic objectives of HEFCE is to widen access and improve participation of students in higher education. The major success of this objective has been its adoption of the Student Life Cycle model as explained in the following table:

Table 3.1: HEFCE Life Cycle Model

Stage	Definition
Aspiration raising	Raising levels of aspiration amongst the targeted group and showing what can be achieved through higher education.
Pre-entry support	Supporting the students through the application process and encouraging them to achieve their goals.
First semester	Welcoming and helping students to settle in and introduction to learning and support systems.
Moving through	Providing learning, teaching and curriculum support arrangements throughout the course of study.
Employability	Preparing students for employment activities and equipping them with the skills to work in a modern employment environment.

(Greenbank 2006: 152).

The Life Cycle stages described above relate well with the stages in the circles of progression as mentioned in the previous chapter *(vide paragraph 2.2.4)*. Whilst the stages in the previous chapter only highlight factors that might affect the retention of students, the Life Cycle stages describe the support mechanism for the students.

According to Bourn (2007: 10) activities in institutions are likely to affect the quality of students experience and therefore student success and retention. There are, however, specific activities that institutions can use to enhance student retention (see Table 3.2 below).

Table 3.2: Actions to increase student retention

Action	Description
Management information	Collate and disseminate information on retention rates at course and faculty level. This action includes information on attendance of classes and/or causes for leaving the institution.
Strategic commitment to retention	Students are required to commit themselves to attending lectures and carrying out independent study. This requirement is communicated clearly to students and cases of non-commitment are followed up.
Support through academic provision	Properly resourced and structured tutoring systems are available to help individual students with extra support. Pre-entry courses and learning support services are also offered.
Broaden options for learning	Institutions with high numbers of non-traditional students become flexible in allowing students to choose learning options that fit their personal circumstances, for example comprehensive modular systems.
Provide specialist support	Providing a 'one stop shop' for personal, social and psychological support.

(National Audit Office 2007: 11).

The actions described above relate well with Tinto's theory mentioned in the previous chapter *(vide 2.2.2)*. Of particular importance in Tinto's theory is that both the institution and the student should be committed to retention, and that support should begin at pre-entry level.

According to Thomas, Quinn, Slack and Casey (2002: 2), the results of a study on student support conducted in ten UK universities in 2002 can be used to explore elements of good practice in the provision of student support services for a more diverse student population. Although all the universities included in the study provide different types of student support, Manchester University has a unique model which is different from the other models identified in the study.

3.3.2. Central Academic Advisory Services

The Central Academic Advisory Service (CAAS) is characterised by the dual academic-advisory role of its staff. In addition to the core CAAS staff, other academics are seconded from departments to spend half a day per week for a period of one semester working in the service. The service offers confidential advice and information to students on matters relating to their academic work or matters affecting their academic performance. Furthermore, the service has compiled a handbook on personal tutoring for staff and provides training on student support for academic and administrative staff (Thomas *et al.* 2002: 33).

3.3.3. Medical education support

As far as medical education is concerned, the General Medical Council (GMC) and the Higher Education Quality Assessment Agency (HEQAA) include provision of student support and guidance in their reviews of educational provision. These two bodies recognise the importance of student support to educational progress (Sayer, Chaput De Saintonge, Evans & Wood 2002: 644). Examples of medical education institutions where student support features prominently are the London School of Medicine and the Queen Mary's School of Medicine. In these schools, fourth and fifth year medical students with learning problems are placed in a remedial programme. Each of these students is allocated to a senior faculty member responsible for monitoring his or her academic progress. Furthermore, a group of senior faculty members, elected by the students themselves are available for individual confidential pastoral support. In both

schools, the support takes place in the Educational Research and Innovation Unit and the Clinical Skills Centre where teaching resources such as manikins, simulators, models and videos are available (Sayer *et al.* 2002: 644). The programme is coordinated by medically qualified tutors with experience in clinical and communication skills and who also have a keen interest in medical education. In addition, the programme deliberately adopts a medical approach consisting of diagnosis, negotiated management, referral, record keeping and feedback. In this type of approach, an appropriate diagnosis based on students' academic problems is made by appropriate staff. Different members of staff collaborate and negotiate how students' problems should be handled. Thereafter students are referred to appropriate services, records are kept and feedback is provided to the students and staff (Sayer *et al.* 2002: 644).

3.3.4. Summative perspectives

The idea of allowing students to choose who they prefer to support them is a unique one. In most cases, instead of supporting their own students, departments and lecturers refer students with academic problems to other "one-size-fits-all" services. In the two medical schools mentioned above, this is not the case. The schools themselves take the initiative and further collaborate between themselves to deal with the problems of their students. In general, the fourth and fifth years of medical study are the practical years where students are prepared for clinical work. At this level, students need specialist and professional support, unlike the generic support provided for first-year students. This means that the most appropriate people to support them are faculty members in medical education.

3.4. ACADEMIC SUPPORT AND DEVELOPMENT FOR STUDENTS: AUSTRALIAN PERSPECTIVES

In Australia the responsibilities for higher education are divided between the government, the states and the territories. The government has a primary

responsibility for funding higher education whilst the states and territories are responsible for the administration of legislation, oversight and accreditation of higher education institutions and programmes (van Stolk *et al.* 2007: 3).

3.4.1. Macro-level programmes

At macro-level, the responsibility for student retention is regarded as a wider equity agenda geared at supporting disadvantaged students. Macro policies consist of supporting programmes for specific groups, monitoring of equity targets and financing student retention research. Grants are provided for the following programmes:

- Indigenous support programmes for indigenous Australian students in order to advance the goals of the Aboriginal Education Policy.

- A higher education disability support programme to promote access and success for students with disabilities.

- A higher education equity support programme for students from low socio-economic backgrounds, students from rural backgrounds, students from isolated areas and students from non-English speaking backgrounds (van Stolk *et al.* 2007: 17).

3.4.2. Micro-level programmes

At micro-level, institutions offer scholarships for students from disadvantaged backgrounds (van Stolk *et al.* 2007: 17). For example, at Monash University, disadvantaged students with outstanding school results are provided with funds from the Scholarship for Excellence and Equity. In addition, Support Bursaries are provided for students from disadvantaged backgrounds. Other examples of financial support is the Griffiths University's Chancellors Education Cost Scholarship funds for

students from low socio-economic backgrounds and the Chancellors Accommodation Scholarship which is aimed at assisting with accommodation costs (van Stolk *et al.* 2007: 19).

Besides the above-mentioned financial support programmes, some universities offer a variety of specific programmes to increase retention rates, particularly for disadvantaged students. For instance, the Edith Cowan University's Learning and Development Services Centre addresses student retention issues through a dedicated website for the teaching staff. The website contains information on:

- The causes of retention and attrition within their university.
- Examples of best practices for student retention within their university.
- Further reading on retention issues (van Stolk *et al.* 2007: 21).

Another example is that of the James Cook University (JCU), where almost 50% of the students come from remote and rural areas and about 20% are from low socio-economic backgrounds. The university has a project called "Arrive, Stay and Succeed (ASS) at JCU". Support staff (learning advisors, library staff, counselors etc.) at the university attended the First Year Experience (FYE) conference in 1995. Following the conference, the staff started initiating innovations such as a university mentor, pre-orientation and orientation programmes aimed at helping new students to adjust to university life. At the end of 2005, teaching and learning development staff (learning advisors, academic developers and student equity staff) proposed the First Year Retention Project, which was launched to all staff in the university. This project has led to the joint initiatives of both support and teaching and learning development staff in student retention matters such as identifying and analyzing the causes of attrition in JCU (Hanley 2007: 1; van Stolk *et al.* 2007: 21:).

Another approach worth mentioning in Australia is found at the University of Wollongong. The university has designed a student support model called the IDEALL approach (Integrated Development of English Language and Academic Literacy and Learning) with the aim of adopting a less remedial but a more developmental approach (Skillen *et al*. 1998: 1 of 20). This approach recognises that the most effective way of assisting students is to integrate instruction in both generic and discipline-specific academic skills within the curriculum. Its basic philosophy is based on the recognition that all new students entering university need assistance in developing the necessary and appropriate skills for both the general academic context and the discipline-specific context. Such an approach requires collaboration between subject experts and learning development staff. The subject experts have the opportunity to impart the knowledge of the discipline, while the learning development staff add their expertise in text analysis to further unpack discipline-specific literacy (Skillen *et al.* 1998: 2 of 20).

3.4.3. Summative perspectives

The scholarships provided by these universities are an indication that they recognise the importance of financial support as a measure to improve retention rates of disadvantaged students. This is in line with addressing financial and accommodation challenges as discussed in the previous chapter *(vide 2.2.4)*. The involvement of teaching and support staff in student retention matters in the two universities mentioned above is noteworthy. The idea of sharing the causes of attrition with teaching staff is commendable because as mentioned in the previous chapter, some lecturers are not aware of the challenges faced by students, especially those from disadvantaged backgrounds. The IDEALL approach furthermore recognises the importance of English and academic language skills acquisition within the curriculum. In this approach, the learning support and development becomes contextualised and discipline specific because the language skills are integrated or embedded within the curriculum. The development of language skills is one of the important challenges

mentioned in the previous chapter *(vide paragraphs 2.2.4)* and this university is addressing this challenge.

3.5. ACADEMIC SUPPORT AND DEVELOPMENT FOR STUDENTS: SOUTH AFRICAN PERSPECTIVES

In an effort to provide for student academic support and development, universities have developed different models (HEQC 2005:103). These models, which are in the form of flexible entry requirements, recognition of prior learning, curricula and staff development, have been part of institutional strategies to widen access and cater for non-traditional students. In addition, the initiatives are clustered around pre-entry and entry levels for non-traditional students (HEQC 2005: 104).

3.5.1. Improving Teaching and Learning Resource

One of the initiatives in the SA higher education environment is the development of a document called "Improving Teaching and Learning Resource" (ITLR) by the Higher Education Quality Committee (HEQC). This document is aimed at setting out models for good practice in higher education and consequently in the academic support and development of students. The following models of good practice are suggested:

- *Comprehensive and accessible student support services*. These are a comprehensive range of student development and support services which should meet the needs of students, enhance their educational experience and learning environment, and cater for a diverse student body. The services should be available at different stages of a student's life, that is, on first entering the institution, during a student's stay in the university and during transition from higher education into the world of work.

- *Administrative services.* Universities should ensure that specific measures have been taken to ensure that core administrative services such as enquiries, admissions and financial aid are available to deal with a diverse student population through, for example, employing administrative staff from previously disadvantaged groups.

- *Models of academic development.* The institutions' models of academic development should be appropriate and responsive to the needs of students. Furthermore, the strategies employed in these models should consider the students' profile, prior learning, level of language proficiency, and the general academic and specific disciplinary skills demanded in curricula.

- *Curriculum development.* Appropriate academic development strategies such as academic literacy, foundation and bridging programmes, writing development, and extended courses should be integrated within the mainstream curriculum. Activities that form part of these strategies should endeavour to develop language proficiency, academic skills and academic literacy.

- *Multilingualism and language development.* The institutions' language development policies and strategies should support multilingualism. Opportunities for the development of proficiency in the institutions' language of learning should be available in all faculties and should be integrated within the mainstream curriculum content.

- *Monitoring student performance.* There should be systems for monitoring student performance in order to ensure timely identification of students who are at risk of failing in a particular module.

- *Staff development.* A formal staff development programme should prepare staff to develop teaching strategies and learning material that are responsive to students' diversity (HEQC 2005: 111).

3.5.2. Government's support

In an effort to enhance academic support and development for students the DoE allocated a sum of R85 million for foundation programmes to universities in 2004 (RSA MoE 2004: 4 of 7). A further allocation of R 267 million over a three-year period was made in 2005 for academic development programmes (RSA MoE 2005: 1 of 3). In 2007, the government further allocated a sum of R 2 billion and emphasised a focus on academic support. Another government initiative is the establishment of a three-year pilot project to widen access of students into further and higher education studies. The aim of this project is to encourage poor parents to save money for the education of their children. A matching state grant is provided to parents who can afford to save money each month for their children's higher education studies (RSA MoE 2007: 1 of 2). It is clear that the government of SA is not only concerned about poor student retention, as indicated in the previous chapter, but it is also taking efforts to address the issue by allocating funds.

3.5.3. Institutional support

At institutional level, all the medical schools in SA have academic support and development programmes aimed at assisting non-traditional students to progress in their studies (Lehmann, Andrews & Sanders 2000: 14). Below is an overview of existing programmes:

- *Mentoring programmes:* All medical schools have established mentoring or peer support programmes for first-year students. Senior students volunteer, or receive an honorarium to mentor first-year students in aspects of student life such as finding their way around campus, time management, adjusting to academic demands etc. In some cases, mentoring is combined with tutorials and focus on academic support for first-, second- and third-year students. Participation in these programmes is voluntary or students are identified as being at risk by

means of test results and are further offered tutorials. These tutorials are presented by senior students on a one-to-one basis or in small groups.

- *Extended curriculum*: The Universities of Pretoria, Cape Town and Stellenbosch offer an extended seven-year medical curriculum. The pace of academic work in this programme is slower in the first three years and additional support is offered to students. While students are not forced to register for this programme, those who are identified as being at risk based on their academic results, are advised to register.

- *Outreach*: The University of Stellenbosch provides a winter programme as part of a recruitment drive for students from disadvantaged schools. The programme tests the ability of the students to cope with university pressure and identifies special talents pertaining to the relevant field of study. The best students are selected and offered bursaries, on condition that they register at the university and continue to perform well in their studies.

- *Curriculum reviews*: The Universities of Cape Town, Natal, Pretoria, Stellenbosch and the Free State have reviewed their medical curricula. At the University of Stellenbosch the pre-clinical years have been adapted to reduce the volume of basic sciences and place great emphasis on the clinical relevance of science subjects. The University of Natal has restructured the curriculum to introduce a five-year programme based on problem-based learning with an emphasis on self-directed learning and computer-based training. The University of the Free State has restructured the curriculum to five years of training, followed by two years of professional training and one year of community service. In SA, the one-year community service is however mandatory for all medical study. (Lehmann *et al.* 2000: 14; Ncayiyana 2000: 306).

Locally, the mission of the University of the Free State (UFS) states that effective student support and development services are an essential element of establishing a

quality university. The mission further states that the university is committed to promoting the development of the total student body as part of an academic culture. To meet its responsibility of providing academic support and development for students, the university has established the Division of Student Affairs under the leadership of a Vice-Rector, which not only provides academic support and development, but also provides guidance in handling most students' problems. The division follows a student-centred approach, guided by the mission of the university. In addition, there is an effort to include student academic development as part of the teaching, learning and research activities that take place in academic programmes. These activities are supplemented by other support and development efforts provided in the offices of the Dean of Students and the Vice-Rector of Academic Affairs in order to foster the holistic development of students (UFS Institutional Review 2006: 196). The university has further recognised the need to introduce innovation in student development by recently establishing the Department of Student Development and Success in 2006. The department's approach to student development and success focuses on:

- Improving students' satisfaction with the university culture.
- Enhancing the throughput and success rates of students.
- Aligning student development with international and national best practices.
- Contributing to student development research outputs and the profile of the university.
- Creating a professional community of practitioners among various key stakeholders in the line functions to ensure a holistic approach to student development (UFS Institutional Review 2006: 202).

In the case of the Faculty of Health Sciences at UFS, academic support and development refers to a multi-faceted intervention strategy aimed at helping non-traditional students to adapt to tertiary learning environment and thereafter to learn and study effectively (Beylefeld 2000: 3). To this end, a Division of Student Learning Development was established in the Dean's office in 1996. Services offered and initiatives launched by this division included the following; a peer-mentoring system, a consultation and referral system, study skills workshops, orientation sessions and the integration of generic academic skills into first-year learning programmes running in the Schools of Medicine and Allied Health Professions.

In addition to the above strategies, the faculty has designed a Learning Development Programme (LDP) for students who fail two or more modules during the first semester of their first year of study. According to the regulations of the faculty, a student who fails two or more modules in the first semester, already fails that particular year of study and will therefore have to repeat the following year. In the first year of study, such students are not allowed to continue their studies in the second semester, but are admitted to the LDP. This programme, however, does not make provision for students who had already completed the university's Career Preparation Programme, which is a one-year access programme acting as a bridging year and helps students from disadvantaged backgrounds to gain access to higher education. In addition, senior students who have already obtained a degree or have been engaged in degree studies before admission to medical studies are not admitted in the LDP. The aim of the LDP is to develop the academic skills of the student during the second semester so that when they are re-admitted into the first year of study the following year they have a better chance of succeeding. Modules presented in the programme are Biophysics, Integrated Anatomy and Physiology, Mathematical Literacy, Advanced Computer Skills, Language Skills and Life Skills (UFS FHS Calender 2007: 41).

3.5.4. Summative perspectives

Although SA is still a developing country, it is clear that government and institutions have taken initiatives to support and develop students in higher education. The country has established bodies such as the Council on Higher Education (*vide 4.9)* and Higher Education Quality Committee, the "Improving Teaching and Learning Resource" document (*vide* paragraph 3.5) and funding of foundation programmes (*vide* 4.14). The country can however not be compared to developed countries such as the USA and the UK with bodies such as the International Centre for Student Retention and the Higher Education Funding Council which receive more federal funding.

3.6. CONCLUSION

This chapter highlighted perspectives on academic support and development of students based on case studies drawn from four countries, namely United States of America, the United Kingdom, Australia and South Africa. These perspectives show that the provision for student support starts at government level, especially in areas of funding. Some authorities such as the Higher Education Quality Assessment Agency and the General Medical Council in England and the Higher Education Quality Committee in South Africa are committed to providing support and resources to institutions in an effort to render services and support to students. The institutions themselves have established centres and divisions such as the National Dropout Prevention Center in America, the Central Academic Advisory Services (CAAS) at the University of North Carolina and the Division of Student Learning Development at the University of the Free State. In addition, institutions have established programmes such as the Medical Education Development Programme at the University of Manchester and the Learning Development Programme at the University of the Free State. By means of these programmes, institutions have devised different strategies to render academic support and development for their students, especially non-traditional students. Examples of these strategies include

the integrated and holistic support provided in the one-stop service and the dual academic-advisory role of staff in the CAAS, the integration of instruction in both the generic and discipline-specific academic skills within the curriculum at the University of Wollongong and the integration of academic skills in the curriculum at the University of the Free State.

The overview of academic support and development of students discussed in this chapter will serve as a point of departure and will provide a theoretical grounding for the study as a whole. The approaches and strategies that apply in the different countries and institutions may be used to develop an integrated and holistic approach for supporting and developing non-traditional students. Drawing from the examples discussed in this chapter, it is clear that such an approach demands collaboration between the ministry of education, policy and decision makers of higher education institutions and role-players at different levels in the institutions.

The following chapter will focus on the South African education system before and after democracy, as well as policies and Acts that have shaped and led to the transformation of the SA education in general and the higher education system in particular.

CHAPTER 4: SOUTH AFRICAN HIGHER EDUCATION TRANSFORMATION POLICIES AND INITIATIVES

4.1. INTRODUCTION

In the previous two chapters, the focus was on student retention, factors affecting the academic performance of students, and academic support and development of students in higher education. This chapter will focus on the South African (SA) education system before democracy, policies and Acts that have shaped and led to the transformation of SA education in general, and higher education in particular. The policies discussed in this chapter are those that have affected and still affect student access and success in higher education.

In describing the process of policy-making, the Council on Higher Education (CHE 2004: 36) states that policies are formulated in response to problems. After having been adopted and implemented, policies are also evaluated. At the point of evaluation, policies are either maintained or terminated, with new ones succeeding them. The SA higher education policy processes, especially after apartheid, have resulted in a large-scale transformation process in higher education.

4.2. THE SOUTH AFRICAN EDUCATION CONTEXT BEFORE DEMOCRACY

The present education system in South Africa relates directly to the consequences of apartheid. The apartheid system had, for a number of years, restricted access to schooling and post-secondary education according to race and ethnicity. In so doing, the system offered education marked with extreme inequalities (Griesel 1999: 6). In the 1950s, two sets of legislation shaped the provision of education. The first legislation, being the Bantu Education Act of 1953, restructured formal schooling along racial and ethnic lines. The second legislation, the Extension of the University Education Act of 1959 applied the same principle to higher education. For instance, the University College of the North was established for Sotho-, Venda- and Tshonga-speaking students, the University College of Zululand was established for Zulu-

speaking African students, whilst the University of Western Cape and Durban-Westville were established for Coloured and Indian students respectively. The University of Fort Hare, which played a major role in providing higher education for black students, was reserved for Xhosa-speaking students (Ilora 2006: 443). By 1968, the administration of African education was decentralized into regions and self-governing territories. Subsequently, four "Bantustans", also called TBVC states (Transkei, Bophuthatswana, Venda and Ciskei) were created by 1976, thus creating further segregation according to race and ethnicity. Vista Universities with campuses in the country's big townships, were established for students in these areas, and the Medical University of South Africa was also established in the same year to offer training in Medicine, Dentistry and Veterinary Science to black students. The Minister of Education and Training administered all African education, including higher education institutions designated for Africans (Ilora 2006: 443).

In the late 1970s and early 1980s, technikons were established in the higher education system. The technikons emerged from the former Colleges of Advanced Technical Education (CATE), which were established by an Act of Parliament in 1967. In terms of the Act, the technikons would have a specific function of training technicians and technologists. This would be a function that is parallel to, but separate from that of a university, and distinct from that of colleges, which focused on practical training in non-technology fields. Thus, science and its application became the fields of universities, while technology and its application became the fields of technikons (CHE 2004: 22). This type of system produced separate fragmented institutions made up of 21 universities, 15 technikons and about 140 colleges. Another implication was that, between 1980 and 1990, each institutional type had its own parallel qualification structure as prescribed by different policies. Before 1993, technikons, for example, did not award degrees and did not operate independently, but their curricula, examinations and certificates were subject to central control (CHE 2004: 22; Griesel 1999: 6; NCHE 1996: 29).

According to CHE (2004: 22), between 1910 and 1983, the administrative responsibility for Coloured and Indian education shifted between provincial and

designated central departments. In terms of the 1983 constitution, all Coloured education became the responsibility of the Minister of Education and Culture, Administration: House of Representatives. All Indian education fell under the Minister of Education and Culture, Administration: House of Delegates.

In the case of White education, prior to September 1984, provincial departments provided all education except higher education, which was the responsibility of the Department of National Education. In terms of the 1983 constitution, provincial education departments became sub-departments of the Department of Education and Culture, Administration: House of Assembly (CHE 2004: 23).

As indicated above, the 1983 constitution divided the national parliament into three chambers with separate representation for Whites (House of Assembly), Coloureds (House of Representatives) and Indians (House of Delegates). This means that there was no representation for Africans. Furthermore, the constitution drew a distinction between "general" and "own" affairs, with the latter referring to matters specific to the culture and values of different population groups. Education became an "own" affair for all groups except Africans, in whose case education was a "general" affair vested in a central department, being the Department of Education and Training (CHE 2004: 23).

The scenario presented above had implications for access to higher education. All public higher education institutions were designated for a particular race, and students from other race groups could not be admitted to those institutions without special permits obtained from the government. In addition, the different legal status of races and higher education institutions led to different governance and funding policies. In essence, the legal and policy provision for higher education under the apartheid government created a system that was "fragmented and uncoordinated; fundamentally inequitable and effective only in terms of rigid categorization by the state, and whose duplications rendered it profoundly ineffective" (CHE 2004: 24).

4.3. THE SOUTH AFRICAN HIGHER EDUCATION TRANSFORMATION

In the post-1990 period, three main initiatives began the process of transformation of the higher education system. These were the National Education Policy Investigation, which was an initiative of the People's Education Movement, the Union of Democratic University Staff Unions policy forum and the Centre for Education Policy Development, linked to the African National Congress (ANC) (CHE 2004: 24). The ANC developed a new national education policy framework and appointed a national committee to formulate recommendations for the transformation of higher education. All these initiatives emphasized five principles for higher education: non-racialism, non-sexism, democracy, redress and a unitary system (CHE 2004: 24; Griesel 1999: 7).

With the victory over the apartheid era in 1994, policy makers were given the task of transforming the social, political, economic and education institutions in SA in order to enter the democratic era. Within a year of the country's first democratic elections in April 1994, the National Commission on Higher Education (NCHE) was established by a presidential proclamation. The vision for the transformation of higher education was articulated in the Education White Paper 3: A Programme for the Transformation of Higher Education of 1997. Central to this vision was the establishment of a single, national, coordinated system of higher education (RSA DoE 2001a: 1).

The beginning of the transformation process was faced with two distinct challenges. Firstly, the system had to be transformed to redress inequalities of access, participation and success within higher education; and to reduce inequalities between different institutions. These inequalities in institutions included resources, staff complements and student bodies. Secondly, the system had to effectively and efficiently produce the type of graduates, research and service outputs required for national development within a globalised society and economy. It also meant that while the country strived to be part of the global society and economy, it had to

address the basic needs of its population and enrich the intellectual and cultural life of its people (CHE 2004: 24).

The initiatives that started the process of transformation of higher education culminated into other policies that continued the process. Although there are many such policies, the only policies and Acts that will be discussed in this study are those that deal with student access and success, language and funding, because these are concepts that are central to this study as discussed in Chapter 2 and Chapter 3. In these policies, other terms that are used interchangeably with student access and success are participation rates, widening participation, growth and equity, redress and graduate outputs. The following South African education policies and Acts will be discussed:

- National Education Policy Investigation, 1993.
- Centre for Education Policy Development, 1993.
- National Commission on Higher Education, 1995.
- Education White Paper 3: A Programme for Transformation of Higher Education, 1997.
- Higher Education Act, No. 101 of 1997.
- Council on Higher Education, 1998.
- National Student Financial Aid Scheme Act, 1999.
- National Plan for Higher Education, 2001.
- Academic Policy for Programmes and Qualifications in Higher Education, 2001.

- Language Policy for Higher Education, 2002.

- New Funding Framework for Higher Education, 2004.

4.4. THE NATIONAL EDUCATION POLICY INVESTIGATION (1993)

The National Education Policy Investigation (NEPI) of 1993 was an inquiry into the policy options for the future of education in SA and was commissioned by the National Education Coordinating Committee (NECC). The NECC was a national body formed in 1985, representing teachers, parents and students, mainly from educationally disadvantaged black communities. The purpose of the NECC was to coordinate and lead the struggles against an inferior and racist education system. The banner under which this coordination was taking place was that of 'People's Education' guided by five principles: non-racism, non-sexism, democracy, redress and a unitary system (NEPI 1993: 1). The inquiry by NEPI resulted in the establishment of the Centre for Education Policy Development.

4.5. THE CENTRE FOR EDUCATION POLICY DEVELOPMENT (1993)

The Centre for Education Policy Development (CEPD) was established in 1993 (just before the end of apartheid) in order to develop alternative education and training policies that would serve a new democratic country. These policies were aimed at promoting the principles of equity, democracy, quality education and life-long learning. The efforts of the centre resulted in the African National Congress's Policy Framework for Education and Training, which was published early in 1994, just before the democratic elections. Many of the new SA education and training policies are based on this framework (CEPD 2007: 1 of 2).

Although the centre continues to serve the goals of education, it is presently operating as a non-governmental educational organization, working in partnership, not only with the government but also with other non-governmental organizations and private sector consultancies. In particular, it maintains a close strategic

relationship with the five Education Policy Units at the universities of Kwa-Zulu Natal, Durban-Westville, Western Cape, Witwatersrand and Walter Sisulu (CEPD 2007: 1 of 2).

4.6. THE NATIONAL COMMISSION ON HIGHER EDUCATION (1995)

One of the initiatives in the process of higher education transformation by government was the establishment of the National Commission on Higher Education.

The first democratic government established a National Commission on Higher Education (NCHE) in 1995 with the aim of proposing a new policy framework and identifying fundamental principles, which would guide and direct the process of transformation in higher education (NCHE 1996: 24).

Central to the work of the commission was the concern with equity and redress in student access, particularly in terms of African students participating in higher education studies. According to the NCHE (1996: 5) equity and redress were regarded as the primary driving forces that could lead to the reconstruction and development of the South African society after decades of apartheid rule. One of the key features of the commission was thus increased participation, which not only meant greater numbers of students, but students being recruited from broader social groups and classes. The implication of this growth was a transition from an elite to a mass system called massification in higher education. During its work in 1995, the commission realized that the move towards a mass higher education system without increase in resources, improvement in the quality of candidates from the school system and radical change in traditional modes of teaching, would result in overcrowding of facilities, increased “unpreparedness” among new students, a decline in the morale of staff, poor quality programmes and a fall in research output (NCHE 1996: 92).

Although the goal of the NCHE was to move from an elite to a mass system of higher education, with student enrolments reaching 1,5 million by 2005, this goal

seemed to be out of reach. In calculating student enrolment projections, the Department of Education realized that student enrolments might be only 520 000 in 2002 (Griesel 1999: iii). In addition, according to Waghid (2004: 33) due to lack of "epistemological access", (i.e. access to knowledge) and funding, only 580 000 students enrolled in higher education in 2000 as compared to 608 000 in 1998.

In its report in 1996, the commission proposed the following elements of a multi-faceted strategy to the Ministry of Education:

- Planned growth in the context of a three-year rolling national higher education plan that coordinates student enrolment at the level of the education system and at institutional level.

- Planned growth that would address the inverted pyramid problem of a large number of students being registered for university degrees as compared to a few numbers registered in shorter certificate and diploma programmes.

- A single coordinated system that would recognize and encourage the contribution made by private higher education providers to further widen access and participation of students.

- An expanded and coordinated public further education sector that would offer a wider range of higher education certificates and diploma programmes as a way of increasing participation. These programmes would be coordinated within the national plan of higher education.

- Expansion and strengthening of distance education programmes with a change in emphasis from correspondence methods to well-functioning distance education practices.

- The availability of resource-based learning programmes and materials that would provide for a change in the traditional modes of delivery.

- Provision and funding of programmes that have flexible entry points and offer access courses in the further education sector in order to prevent the poor success rates of underprepared students.

- Organisation and restructuring of colleges of education, nursing and agriculture through regional cooperation in the use of existing facilities and prevention of duplication (NCHE 1996: 93).

The commission believed that the above-mentioned strategy would enable participation rates of students to increase from 800 000 in 1985 to 1 500 000 in 2005. In calculating the anticipated financial expenditure attached to the increase in participation rates, in 1996 the commission proposed a new funding framework for higher education to the Ministry of Education (MoE). This framework would provide for fixed assets, earmarked funding and student financial aid scheme (NCHE 1996: 95). The new funding framework for higher education institutions was published on 9 December 2003 in terms of the Higher Education Act No.101 of 1997 (Steyn & de Villiers 2007: 11). This funding framework will be discussed in paragraph 4.14 of this chapter.

Whilst the commission identified increase in the participation of students in higher education as a key feature, it also realised that one of the factors that had contributed to poor access and success of students in higher education has been the lack of articulation between higher education and black schooling (NCHE 1996: 135). Because of the mismatch between the demands of higher education programmes and the academic preparedness of students, a key goal for the higher education system was improving the quality of output from the school system. However, given the constraints on the schooling system, it was unlikely that the system would produce students who are adequately prepared for entry in higher education (NCHE 1996: 135). As noted by Roberts, Gouws and Van der Merwe (2006: 291), the government had made an investment in improving the quantity and quality of teacher education in 2003, but this investment was unlikely going to improve the

quality of the school system unless shortages in complementary teaching materials and appropriate management and incentive structures are in place.

One of the approaches adopted by higher education in facilitating access and success of students was the *ad hoc* introduction of academic development and support initiatives such as bridging programmes and foundation courses (NCHE 1996: 136). One such approach was the one-year Career Preparation Programme (CPP) at the University of the Free State (UFS). This programme helps students from disadvantaged backgrounds to gain access to higher education in especially three fields of study: Economic and Management Sciences, the Humanities, and Natural and Agricultural Sciences (UFS 2007: 1 of 2). Whilst some of these initiatives were successful in facilitating access and success of educationally disadvantaged students, they had limited capacity to cater for the anticipated increase in student numbers. The reconceptualisation of first degrees and diploma programmes was regarded as an option to accommodate the increase in student numbers (NCHE 1996: 136). This reconceptualisation meant provision of flexible entry points into these programmes, taking into account the different levels of preparedness of students. The implication of this approach was that students would have access to these programmes with an extended curriculum. Such a curriculum would provide a foundation of knowledge, concepts and academic skills as a basis for further study. Some further education colleges were expected to offer the initial parts of such programmes through agreements with universities and technikons. In order to provide for the programmes, the commission recommended that the new funding formula should accommodate such an approach (NCHE 1996: 136).

During its work in 1995, the commission realized that there were different entry requirements for higher education degrees and diplomas, with matriculation exemption being the statutory minimum requirement for degree programmes (NCHE 1996: 137). The commission believed that it was possible to move towards a uniform statutory minimum requirement for all higher education programmes. The minimum requirement would allow greater mobility of students within higher education as well as broadening the diversity of students eligible for higher

education studies. The proposal was that the statutory minimum requirement for entry into all higher education programmes should be a pass in a further education certificate, which corresponded to the senior certificate. The proposal was made with an understanding that institutions would still have the right to stipulate additional requirements for entry into specific programmes. It therefore meant that the statutory entry requirement was not a guarantee for entry into higher education programmes, but only eligibility for selection (NCHE 1996: 137).

Another challenge identified by the commission was that some students are excluded from higher education because they do not have access to reliable information about institutions and programmes (NCHE 1996: 138). Even those that are informed and wish to apply for admission to higher education find the procedure to be confusing and costly because they have to apply to each institution separately. The commission also noted that the closing dates for admission into higher education vary. In order to remedy such a situation the proposal was the establishment of a national service that would provide potential students with information about institutions, programmes, closing dates and process the applications, with students making a single application. The single national service would be linked to regional offices to ensure that information is available nearer to the applicants. In the long term, this service should have close links with the National Students Financial Aid Scheme (NSFAS) in order to provide students with a comprehensive application service (NCHE 1996: 138). Whilst the national service would provide the administrative support, the actual selection would still be the responsibility of institutions. The establishment of a national service would require proper planning and might take time for full implementation. In the period between 1995 until the establishment of the national service, the commission made a proposal to the MoE that essential information about higher education be made available through regional offices. Another proposal was that when planning for the proposed national service, a review of the academic year should be made so that the period between the availability of school leaving results and the start of the new academic year would be expanded (NCHE 1996: 138).

In further providing a new framework for higher education transformation, the commission proposed a new funding policy (NCHE 1996: 216). According to the old funding formula, funding for both universities and technikons was based on head count for enrolled students. In 1998, the formula was refined to be based on 50 percent full-time equivalent enrolment and 50 percent full-time equivalent pass rate as set out by the MoE. It was envisaged that the new funding formula would lead to more equitable student access, improve the quality of teaching and research, and increase graduation rates (Cele & Menon 2006: 405). The new formula, however, had a detrimental effect on historically disadvantaged universities, which had opened its doors to accommodate students from disadvantaged backgrounds. According to the formula, funding would be based on academic activity and graduate output. Therefore, the new funding formula does not favour historically disadvantaged universities because of the poor graduate output of students from disadvantaged backgrounds (Jinabhai 2003: 54; Ilorah 2006: 454).

Another specific mechanism to address inequalities and redress in higher education was the allocation of earmarked funds. These are funds allocated to institutions and students for specific purposes only. An important example of earmarked funding concerns public funding for student financial aid programmes as an important mechanism for redress. Student financial aid would be provided by establishing an NSFAS managed by the Tertiary Education Fund in SA (TEFSA) on behalf of the Department of Education (DoE) from 1996. At that time, the government committed itself to contributing R 300 million towards NFSAS for 1996 and R 350 million rand for 1997 and 1998 respectively. An average of R 5 000 was envisaged for each student (NCHE 1996: 223). Another example of earmarked funding was for academic development programmes in mathematics, science and language to assist educationally underprepared students (NCHE 1996: 240). Following the proposals of the NCHE a policy framework for transformation was developed as discussed in the Education White Paper 3.

4.7. THE EDUCATION WHITE PAPER 3: A PROGRAMME FOR TRANSFORMATION OF HIGHER EDUCATION (1997)

The release of the Education White Paper 3: A Programme for Higher Education Transformation in 1997 was the result of an investigation and consultation initiated with the establishment of the NCHE. The White Paper outlines the framework for change, stipulating that the higher education system must be planned, governed and funded as a single national coordinated system (RSA DoE 1997a: 1.3). The main purpose of this paper was to identify the different intervention strategies necessary for higher education transformation (Mapesela & Hay 2005: 115). In the changed higher education system there should be commitment for the expansion of higher education to meet the imperatives of equity, redress and development as proposed by the NCHE. The MoE, by way of the Education White Paper 3, made a further commitment for the planned expansion of access and success rates of black students in general, and of African, Coloured and women students in particular, especially in programmes and levels where they are underrepresented (RSA DoE 1997a: 2.24). As a necessary means to overcome the deficiencies of the legacy of higher education system, the White Paper affirmed the principles that must underpin change initiatives, and these are equity and redress, democratisation, effectiveness and efficiency, development, quality, academic freedom, institutional autonomy and public accountability. Furthermore, the White Paper proposed a national plan for higher education that would include benchmarks for transformation and a system of three-year rolling plans (CHE 2004: 26).

Although the White Paper supported the proposals of the NCHE, it did not accept the specific proposal of increasing participation through massification. Instead, it proposed a planned expansion of higher education with efficiency achieved through designated policy instruments (CHE 2004: 26). The other proposal not accepted by the White Paper was the establishment of a forum of stakeholders with policy advisory functions and a higher education council with planning and allocative functions. Instead, it opted for a single body, being the Council on Higher Education (CHE) with policy advisory and quality assurance functions (CHE 2004: 26). The

composition and functions of the CHE are stipulated in the Higher Education Act of 1997, thus giving legal form to the values and principles of policy-making.

4.8. THE HIGHER EDUCATION ACT (1997)

Following the recommendations of the White Paper, the MoE released a Bill on Higher Education in 1997, resulting in the adoption of the Higher Education Act No. 101 of 1997. The provisions of the Act were to: regulate higher education; provide for the establishment, composition and functions of a Council on Higher Education; provide for the establishment, governance and funding of public higher education institutions; provide for the registration of private higher education institutions; provide for quality assurance and quality promotion in higher education; provide for the transitional arrangements and the repeal of certain laws; and provide for matters connected therewith (RSA DoE 1997b). In further elaborating on the Act, the CHE (2004: 29) states that the Act gave legal form to the values, principles and core concepts of policy, making provision for, amongst others, funding and the language policy. The Act stipulates that the MoE must determine funding policy for the public higher education system, which, *inter alia*, should include measures to increase access of students in higher education. For language, the Act states that the MoE must determine a language policy for higher education, thus guiding institutional language policies.

4.9. THE COUNCIL ON HIGHER EDUCATION (1998)

The SA Council on Higher Education (CHE) was established as an independent statutory body in 1998 in terms of the Higher Education Act of 101 of 1997. The Act and the White Paper established the responsibilities of the CHE as advising the MoE on all matters related to higher education policy issues and assuming executive responsibility for quality assurance within higher education and training. The vision of the CHE is a transformed, equitable, high-quality, economically and socially responsive, productive and sustainable higher education system in a transformed, equitable, just, humane and democratic South Africa based on the principles and

values of non-racialism, non-sexism, freedom of expression and other basic human and social rights (CHE 1998: 1 of 1).

4.10. THE NATIONAL STUDENT FINANCIAL AID SCHEME (1999)

The National Students Financial Aid Scheme (NSFAS) Act of 1999 was established as an initiative to consolidate and extend financial aid to needy students. The Act was proclaimed to provide for: the management, governance and administration of the NSFAS; the granting of loans and bursaries to eligible students at public higher education institutions; the administration of such loans and bursaries and the recovery of loans (RSA DoE 1999).

Aligned to the proposals of the NCHE, the framework developed by the White Paper, the Higher Education Act and the NSFAS Act that were established as discussed above, the MoE developed a national plan for higher education to fulfill the aims of higher education transformation.

4.11. THE NATIONAL PLAN FOR HIGHER EDUCATION (2001)

The National Plan for Higher Education (NPHE) gives effect to the vision for the transformation of the higher education system outlined in the Education White Paper 3 of 1997. The plan provides an implementation framework and identifies strategic interventions that are necessary for the transformation of the higher education system (RSA DoE 2001a: 1.1). According to Mapesela and Hay (2005: 125), the plan supports all the other higher education policies which came prior to it. The following aspects of the plan that are relevant for this study are those that deal with increasing (i) the participation rate of students, (ii) graduate output and (iii) equity in access and success rates.

- **Increasing the participation rate of students**

The aim of the MoE is to increase the participation rate of the age group 20-24 in public higher education by 20% over the next 10-15 years, which is the period between 1999 and 2014 (RSA DoE 2001a: 2.2). One of the critical observations made by the national plan is that labour market trends indicate the need for higher education institutions to produce more graduates, but that the SA higher education system does not meet this need in terms of enrolment trends. Working on the headcount of students' enrolment for the year 2003, the participation was calculated as being 18% (Cele & Menon 2006: 402). Based on the steady decline in matriculation pass rates since 1994, with a small increase in 2000, and the decline in the number of students entering and graduating from the public school system, there is no way in which sufficient numbers of learners will be able to pass well enough to fulfill the projections of the national plan. Furthermore, the problem is not only in the matriculation (Grade 12) outputs; it is more manifest in the decrease of Grade-1 enrolments, resulting from lower fertility and an increase in mortality rates (Jansen 2001: 5).

Against the backdrop of these figures, the MoE committed itself to ensuring adequate funding for higher education and to improving the throughput rates in the school system (RSA DoE 2001a: 2.2). The funding formula is discussed in paragraph 4.14 of this chapter.

- **Increasing graduate output**

According to the NPHE (2001) the long-term aim of increasing the participation rates of students must be complemented by strategies to increase graduate output. These strategies should be established at both national and institutional level. At national level, the MoE committed itself to funding academic development programmes. At institutional level, the institutions should take the responsibility to ensure that they integrate academic development programmes into their overall academic and financial planning. In addition, institutions should continually evaluate the

effectiveness of these academic development programmes and rectify their shortcomings (RSA DoE 2001a: 2.3). According to The Partnership for Higher Education in Africa (2007: 9 of 18), institutions should build environments in which historically disadvantaged students are given academic support, excellent teaching and mentoring in order to increase their graduation output. Likewise, regional collaboration in the development and provision of academic development programmes in order to share experiences and best practices is also encouraged. Furthermore, according to the MoE, institutions should not recruit students who do not have the potential to pursue their studies and they should not retain students who have no chance of success (RSA DoE 2001a: 2.3).

In order to plan and measure the efficiency of the institutions in terms of graduate outputs, the MoE established national student planning targets as totals of graduates rather than as head-count or full-time equivalent enrolment totals. The ministry will, at the start of each three-year planning cycle, draw up a planning table of expected graduate output (RSA DoE 2001a: 2.3).

- **Increasing equity and success rates**

Although the NPHE realized that there are changes in the profile of students according to race and gender, these profiles have not been accompanied by success in studies. The MoE warned against a "revolving door syndrome" for institutions with high failure and dropout rates (RSA DoE 2001a: 3.2). Due to the failure of higher education institutions to strike a balance between equity of access and equity of outcome, historically marginalized groups have been excluded from participating in the broader economic and social spheres of life (Cele & Menon 2006: 402). Although increasing the access and success rates of students is the responsibility of institutions, the ministry committed itself to addressing underlying factors that hinder success. The support from the ministry will focus on three areas, namely the funding of academic development programmes, improving the quality of schooling and providing student financial aid. The Higher Education Quality Committee (HEQC) will also support institutions by setting out a framework and models for good

practice in academic development programmes (RSA DoE 2001a: 3.2). The framework and models were discussed in Chapter 3 (*vide paragraph 3.5).*

- **Strategies to increase participation rates and graduation outputs**

The national plan proposed the following strategies to increase the participation rates of students and graduate outputs:

- Funding academic development programmes as an integral component of the new funding formula for higher education.

- Including time frames and targets to improve throughput, success and graduation rates in line with the efficiency benchmarks set by the ministry.

- Including time frames for reducing dropout rates, especially for students with good academic results who drop out because of financial reasons.

- Developing selection criteria to determine the suitability of applicants who do not meet the minimum criteria for automatic admission.

- Developing minimum criteria for the re-admission of students and a limit on the number of times that a student will be allowed to repeat a course or a full year of study (RSA DoE 2001a: 2.8).

In order to further the process of transformation, the MoE set out policy guidelines to implement some of the strategies discussed above in the form of an academic policy for programmes and qualifications.

4.12. THE ACADEMIC POLICY FOR PROGRAMMES AND QUALIFICATIONS IN HIGHER EDUCATION (2001)

The DoE requested the CHE to develop a policy for programmes and qualifications in higher education with the aim of giving effect to the policy guidelines as set out in the NPHE of 2001. The academic policy represents a further process in the transformation of higher education and fulfills the goals of the Education White Paper 3 (RSA DoE 2001b: 41).

Amongst the issues addressed by the academic policy is the admission and widening access of students in higher education. The policy recognizes that to register for a degree study in a university a student needs to be in possession of a Senior Certificate with a matriculation endorsement, or a certificate of complete or conditional exemption (RSA DoE 2001b: 137). Universities are also allowed to set additional admission requirements for specific programmes over and above the minimum requirement. The additional requirement is established practice for professional degrees, especially in health professions. In most cases, including the additional requirement has been due to infrastructural limitations and to agreements between the universities and the professional boards. In those cases where mathematics and science are required, it is common practice for universities to specify minimum Grade 12 performance levels in these subjects. Other universities are specifying additional minimum requirements for language as well (RSA DoE 2001b: 137).

During the 1990s, exceptions to this admission policy were allowed and the number of students admitted through exception increased. This practice, known as the Senate Discretionary Conditional Exemption increased as a response to decreasing student numbers and inadequate matriculation throughput rates in the school system (RSA DoE 2001b: 42). Also under this practice, some universities instituted specific entrance tests for students with aggregates that are below the required level. One of the possible approaches is that, in addition to specific entrance tests, different selection procedures can be designed for specific target groups, in other

words, using purpose-designed tests for particular programmes as opposed to generic learning skills or potential testing (Grussendorff, Liebenberg & Houston 2004: 267). These tests are employed mainly because admission based on Senior Certificate excludes students with academic potential. Under the new academic policy, this practice would be streamlined through recognition and subsidy of foundation programmes and certificates that will provide access to a different range of higher education programmes (RSA DoE 2001b: 42).

According to the New Academic Policy (RSA DoE 2001b: 43), higher education institutions have a moral and educational responsibility to ensure that they have effective programmes to meet the learning and teaching needs of students they admit. In the first place, institutions should not recruit students who do not have the potential to pursue further studies. Secondly, institutions should not retain students who have no chance of success. Furthermore, Coughlan (2006: 211) states that access should be granted selectively and thus be denied to students that are, for instance, insufficiently motivated, incapable or whose expectations of higher education are incorrect or unrealistic. The policy further urges institutions to integrate academic development programmes into their academic and financial planning. Clearly, the educational challenge is early identification of students who are at risk, design programmes that will enable students to realise their full potential and providing meaningful exit points for these students. The policy further recommends the provision of foundation programmes and earmarked funding for academic development programmes (RSA DoE 2001b: 43).

In further response to the proposals, framework, Acts and strategies as outlined in the policies discussed above, the MoE developed a language policy for higher education.

4.13. THE LANGUAGE POLICY FOR HIGHER EDUCATION (2001)

South Africa is a country of many languages, which however, in practice, have not been given equal status. English and Afrikaans have been widely recognized as

official languages in universities, whilst African languages have been marginalized and are thus under-developed. The use of language policy as an instrument of control, oppression and exploitation was one of the factors that led to the political struggles in the twentieth century (RSA DoE 2002: 2). Language has thus been an emotive issue in SA. Section 8 and 31 of the Constitution of SA, for instance, equate denying people their language rights with denying them their basic human rights (Kajee 2001: 39).

According to the SA constitution, everyone has the right to receive education in the official language or languages of their choice in public educational institutions. In order to ensure the effective access to, and implementation of this right, the state must consider all reasonable educational alternatives, including a single-medium institution. Furthermore, the role of language and access to language skills are critical to ensure the right of individuals to realise their full potential, to participate in and contribute to the social, cultural, intellectual, economic and political life of the SA society (RSA DoE 2002: 3). In spite of these rights, language has been and continues to be a barrier to access and success in higher education. In essence, African languages have not been developed as academic and scientific languages and so far, the majority of students entering higher education are not fully proficient in English and/or Afrikaans (RSA DoE 2002: 4). The challenge facing higher education is to ensure the simultaneous development of a multilingual environment in which indigenous languages are developed as academic and scientific languages, whilst at the same time ensuring that the existing languages of instruction do not serve as a barrier to access and success (RSA DoE 2002: 4).

According to Section 27(2) of the Higher Education Act of 1997, the Minister of Education must determine the language policy for higher education. Subject to the policy determined by the minister, the councils of public higher education institutions, with concurrence of their senates, must determine the language policy of the institution. Evidence suggests that the majority of higher education institutions in SA use English as a medium of instruction (RSA DoE 2002: 7). The status of English as the higher education language of learning, teaching and

research is undisputed worldwide. Established European universities that have used local languages for centuries increasingly switch to English to remain competitive internationally (Van der Walt 2004: 142). Furthermore, evidence suggests that historically Afrikaans-medium institutions in SA offer parallel or dual instruction in English and Afrikaans. The shift of historically Afrikaans-medium institutions to parallel or dual language instruction may be due to the demographic changes in the student population. Although there has been a change at institutional level, these changes are not necessarily implemented at departmental and individual level (RSA DoE 2002: 7). Even though parallel-medium instruction has opened up access to some universities, such as the University of the Free State (UFS), this practice has led to an unintended consequence in which English-medium students (mostly Black) and Afrikaans medium students (mostly White) are in separate classes. There have been questions on whether this practice fulfills the aims of transformation in the university (UFS 2006: 240).

- The language policy in higher education is premised on the following principles:
- The need to ensure equity of access and fair chances of success for all who seek to realise their potential through higher education.
- The promotion of South African languages for use in instruction in higher education will require, amongst others, the development of dictionaries and other teaching and learning material.
- The success of the language policy will depend on the provision of financial resources over a period of time.
- The commitment of higher education institutions in developing programmes and strategies to promote proficiency in the language of instruction (RSA DoE 2002: 8)..

One of the dilemmas in implementing the language policy is that at the moment English, and to a lesser extent Afrikaans, are the only languages capable of functioning fully as languages of learning and teaching. Yet, many potential higher education students are not sufficiently fluent in English and/or Afrikaans to be able to study effectively through these languages (Foley 2004: 57). Universities have

developed academic literacy programmes, but the success of these programmes has been poor. Many students start from too low a base level of proficiency to quickly achieve cognitive academic language proficiency, as compared to basic interpersonal communication. The reality is that the task of improving students' academic literacy to acceptable levels is a long one. This process requires a great effort on the part of both the learner and the university. The real solution lies in the schooling system that must develop this skill earlier in their teaching. Rather than encouraging universities to offer last-minute intervention strategies, the DoE must direct this task to the school system (Foley 2004: 64). The issue of language as one of the factors affecting the academic performance of students in higher education was discussed in Chapter 2 (*vide* paragraph 2.2.4).

The other dilemma is whether indigenous languages can be developed as academic scientific languages to a point where they can be used as medium of instruction. From a theoretical perspective, it may be possible, but the practical application might be difficult because of issues such as financial and human resources needed to deal with, among others, translation and development of dictionaries (Foley 2004: 58).

4.14. THE NEW FUNDING FRAMEWORK FOR HIGHER EDUCATION (2004)

The MoE has direct control only over government grants to public universities and universities of technology, and takes no account of income raised from student fees and other private sources when distributing grants to individual universities (RSA DoE 2004: 2). The new funding framework makes provision for institutional factor grants to institutions with large numbers of disadvantaged students. These are African and Coloured students who are South African citizens and are enrolled in contact education programmes. The factor grants operate by adding an amount to the teaching input grants, depending on what proportion of students are deemed to be disadvantaged (RSA DoE 2004: 9). In addition, the framework makes provision for the allocation of funds for foundation programmes offered by higher education insitutions. According to the framework, institutions are required to make formal applications for funding for a three-year period. If an application is approved, the

institution receives earmarked allocation in each year of the approved three-year period without having to submit further applications. The triennium 2004/2005 to 2006/2007 was the first in which the new funding framework was implemented, with a sum of R85 million allocated for foundation programmes in 2004/2005 (RSA DoE 2004: 10).

In the three-year allocations, most of the earmarked grants are set aside for the NSFAS for poor students. These bursaries are not adequate as they only cover 60 to 70 percent of the total costs of education, thus causing students who are not able to cover the remaining amounts to drop out of universities (Friske & Ladd 2005: 201).

The policies discussed above have guided the transformation of the higher education system in South Africa in general, and access and success in particular. These policies have had an impact and have already produced certain results, such as the revision of the admission policy which has led to an increase in the number of disadvantaged students. The discussion below focuses on the progress of the transformation process during the first ten years of democracy (1994-2004), with specific reference to some of the current situations and challenges still affecting access and redress.

4.15. REVIEW OF THE TRANSFORMED HIGHER EDUCATION SYSTEM IN SOUTH AFRICA

When South Africa celebrated a decade of democracy in 2004, which was the tenth anniversary of SA democracy, the Council on Higher Education (CHE) conducted a large-scale review of the transformation process in higher education. The CHE, as an independent statutory body which must regularly report on the state of SA higher education and contribute to its general development, published the study titled "South African Higher Education in the First Decade of Democracy". The study accounted for the changes that had occurred in the preceding ten years, reflecting the current situation, the remaining challenges, and how these relate to national policy (CHE 2004: I; CHE 2007: 1 of 2).

Understandably, given the inequalities, inefficiencies and ineffectiveness of the higher education system inherited from apartheid, it was assumed that a comprehensive policy framework for systematic transformation, as specified in the Education White Paper 3, would drive change in the required direction. However, following the White Paper, there was an unanticipated development and change (CHE 2004: 36). One of the noticeable occurrences was the changing relationship between the state and the university, manifested by the expansion of centralized decision-making structures (Park 2003: 5). In addition, some of the challenges included the difficulty in implementing cooperative governance, and financing inequalities that widened the gap between historically advantaged institutions and historically disadvantaged institutions further. According to Jansen (2003: 10) and Ilora (2006: 454), the increasing number of Black students moving from Historically Black Institutions ((HBI) to Historically White Institutions (HWI) resulted in more funding for HWI.

By 2004, a policy of mandatory institutional restructuring was adopted and implemented as one of the key responses to these unforeseen developments. The restructuring was also enforced because of the persistent apartheid legacy and the government's view that some institutions had failed to adopt voluntary approaches to address inequalities, inefficiencies and effectiveness (CHE 2004: 36).

At national level, the government restructured higher education by reducing universities from 36 to 23 through mergers and incorporations of some institutions with the aim of enhancing student success and expanding research opportunities and market responsiveness (Study South Africa 2007: 2 of 14). The restructured system comprised three types of universities: traditional research-focused universities, universities of technology and comprehensive universities that combine academic and vocationally-oriented education. At institutional level, universities were encouraged to improve access to students of all races, to help build a new democracy and become more responsive to the society's needs. Furthermore, institutions were required to develop curricula that are locally relevant and geared

towards increasing competitive, technological and knowledge-driven scholars (Study South Africa 2007: 2 of 14).

According to the results of the study, "South African Higher Education in the First Decade of Democracy", as envisaged by the National Commission on Higher Education in 1996, the foundations for the transformation of higher education had been laid in the form of a single, coordinated system by 2004. In addition, new organizations had been established, such as the Higher Education Branch in the Department of Education, the Council on Higher Education and its Higher Education Quality Committee, the National Qualifications Framework, *etc.* (CHE 2007: 2 of 2). Furthermore, new funding, planning, and quality assurance instruments had been developed. Also, a new institutional landscape has emerged because of mergers and incorporations among public institutions. The ten-year review concluded that ongoing transformation of higher education is a complex process, consisting of unfolding challenges of further policy formulation, adoption and implementation. These processes were coupled with tensions and contestations, as well as political and social dilemmas (CHE 2007: 2 of 2).

By 2005, according to Study South Africa (2007: 7 of 14), the number of African students had increased by 61%, the number of White students decreased by 25% and the number of Coloured and Indian students increased by 14%. The number of graduates produced annually by SA universities had grown from 74 000 in 1994 to 120 000 in 2005. This increase was, however, only 15% of the government's benchmark of 25%. Similarly, there was concern about the prevailing 50% dropout rate, especially among black students. Numbers showed that graduation rates among black students, many of who are from disadvantaged schools and poor families with financial difficulties, were lower than those of other races.

In spite of challenges in terms of student dropout and poor graduation rates, SA has emerged as one of the world's exciting study destinations. This is demonstrated by the increasing number of about three-quarter of a million students attending 23 public universities. More than 7% of these students are international, with most of

them from other African countries, whilst others are from Europe, America and Asian countries (International Education Association of South Africa 2004: 9; Study South Africa 2007: 1 of 14).

The mix of different cultures portrays a fascinating scenario, but creates challenges for other non-traditional students as discussed in Chapter 2 (*vide paragraph 2.2.4).* International countries with stronger currencies regard SA higher education as cheap, but this cannot be said by SA students, especially some non-traditional students who still face financial difficulties as discussed in Chapter 2 (*vide paragraph 2.2.4).* It is important to note that most of the universities are still located in big cities and towns within an environment of good infrastructure. Once out of the cities and towns, the real SA with its open spaces and widespread poverty becomes visible. It is here, at local level that prevailing inequalities between the rich and the poor are apparent. Once again, the concentration of universities in cities and towns means that students from rural areas, most of them being non-traditional students, have difficulty in accessing higher education, as has been and is still the case in accessing schooling because of the distance that they have to travel to go to school. This is one of the challenges faced by non-traditional students as discussed in Chapter 2 (*vide paragraph 2.2.4).*

Currently, according to Study South Africa (2007: 7 of 14), most universities have, with a view to opening access to disadvantaged students, devised alternative admission processes that select educationally disadvantaged students based on their academic potential rather than their performance in national school leaving examinations. Procedures that have been put in place by institutions include points rating systems based on school results, questionnaires and interviews. In addition, according to Study South Africa (2007: 7 of 14), some institutions have also introduced academic development and bridging programmes that help students overcome poor schooling and cope with learning in a second language, which is usually English.

Another development in higher education according to Study South Africa (2007: 8 of 14), is that Higher Education South Africa (HESA), the body representing universities vice-chancellors, is developing national benchmark tests to help universities select students who are most likely to succeed, and to measure how well a new national curriculum prepares students for higher education. These tests will measure academic literacy, numeracy and skills in mathematics. Later on universities will decide whether to use these tests for admission purposes. If they do, prospective students will potentially write only one national test (Study South Africa 2007: 8 of 14).

In the case of funding, in 2005, the MoE issued a statement on higher education funding. Amongst the areas of funding addressed in this statement were foundation grants for the triennium 2006/2007 to 2008/2009, with the totals set at R 105 million for 2006/2007, R 114 million for 2007/2008 and R 123 million for 2008/2009 (RSA DoE 2006: 20). The financial aid scheme currently supports 110 000 students as compared to 86 000 five years ago. In 2007, the scheme's allocation was R1.6 billion for bursaries and loans (Study South Africa 2007: 7 of 14). Presently government has allocated R 6 billion for buildings, equipment, libraries, improvement of retention rates and the education of more students in the fields of science, engineering and technology (Study South Africa 2007: 1 of 14).

One of the realities still facing SA higher education, as identified by Roberts, Gouws and van der Merwe (2006: 219), is that higher education is still dependent on a school system that produces underprepared students. The concern is that socio-economic inequalities still exist and subsequently the school system is not capable of reducing inequalities in educational output. The differences in the inequalities of the educational output of students from the school system are due to past racial patterns. For example, poor schools with predominantly African and some Coloured pupils perform much worse than White schools. Poor school results, in turn, have an effect on the input into the higher education system.

4.16. SUMMATIVE PERSPECTIVES

There are a number of changes that have transformed the general and higher education sector in South Africa. Since the beginning of democracy, some large-scale changes were initiated through government initiatives by means of policies in both education sectors. Whilst the discussions above (paragraphs 4.2 – 4.15) have given a detailed exposition of the policies and initiatives that changed and transformed the education and higher education sectors, the following tables summarise these changes.

Table 4.1 depicts the higher education sector before democracy as discussed in paragraph 4.2.

Table 4.1: Details of the SA higher education sector before democracy

Authority	Universities	Technikons	Total
House of Assembly (Whites)	**11** *English*: University of Cape Town, University of Natal, Rhodes University, University of Witwatersrand. *Afrikaans*: University of the Orange Free State, University of Port Elizabeth, University of Pretoria, Potchestroom University, Rand Afrikaans University, University of Stellenbosch. *Distance*: University of South Africa	**8** Cape Tecknikon, Orange Free State Technikon, Natal Technikon, Port Elizabeth Technikon, Pretoria Technikon, Vall Triangle Technikon, Witwatersrand Technikon	**19**
House of Representatives (Coloureds)	**1** University of Western Cape	**1** Peninsula Technikon	**2**
House of Delegates (Indians)	**1** University of Durban-Westville	**1** ML Sultan Technikon	**2**
Department of Education & Training (Africans)	**4** University of the North, University of Zululand, Medical University of South Africa, Vista University	**2** Mangosuthu Technikon, Northern Transvaal Technikon	**6**

Republic of Transkei	**1** University of Transkei	**1** Transkei Technikon	**2**
Republic of Bophuthatswana	**1** University of Bophuthatswana	**1** Setlogelo Technikon	**2**
Republic of Venda	**1** University of Venda	**0**	**1**
Republic of Ciskei	**1** University of Fort Hare	**1** Border Technikon	**2**
Total	**21**	**15**	**36**

Source: Council on Higher Education 2004: 40.

The system as depicted above shows a segregation of public higher education institutions according to different authorities and along different racial lines. Students from race groups other than Whites could not be admitted in other institutions without permits obtained from the government. White Universities were regarded as historically advantaged and received more funding than the historically disadvantaged institutions for other races. In essence, according to CHE (2004: 24), the legal and policy provision for higher education under the apartheid government created a system that was "... fragmented and uncoordinated; fundamentally inequitable and effective only in terms of rigid categorization by the state and whose duplications rendered it profoundly ineffective".

Table 4.2 depicts the higher education sector after democracy as discussed in paragraph 4.15.

Table 4.2: Details of the SA higher education sector after democracy

Institutional type	Institutions
Universities	**1**. **University of Cape Town** **2. University of Fort Hare** **3**. **University of the Free State –** incorporates the former Bloemfontein Vista University and University of the North (Qwa-Qwa) **4. University of Pretoria** – incorporates the former Mamelodi Vista University **5. Rhodes University** **6. Stellenbosch University** **7**. **University of the Western Cape** – incorporates the former University of

	Stellenbosch Dental School **8**. **University of Witwatersrand** **9. Nelson Mandela Metropolitan University** – incorporates the former University of Port Elizabeth, Port Elizabeth Technikon and Port Elizabeth Vista University **10**. **North West University** **11. University of Johannesburg** – incorporates the former Rand Afrikaans University, Technikon Witwatersrand and Vista University (Johannesburg campuses) **12. University of KwaZulu-Natal** – incorporates the former Durban-Westville and Natal Universities **13. University of Limpopo** – incorporates the former University of the North and Medical University of South Africa **14. University of South Africa** – incorporates the former Technikon South Africa and Vista University Distance Education Centre **15. University of Venda** **16. University of Zululand** **17. Walter Sisulu University -** incorporates the former University of Transkei, Border Technikon and Eastern Cape Technikon
Universities of Technology	**18. Central University of Technology –** incorporates the former Technikon Free State and Welkom Vista University **19. Vaal University of Technology =** Vaal Triangle Technikon + Sebokeng Vista University (infrastructure and facilities) **20. Cape Peninsula University of Technology** – incorporate the former Cape Technikon and Peninsula Technikon **21. Durban University of Technology** – incorporates the former ML Sultan, Natal and Mangosuthu Technikons, and Umlazi campus of the University of Zululand **22. Mangosuthu Technikon** **23. Tshwane University of Technology** – incorporates the former Technikon Pretoria, Technikon Northern Gauteng and Tecnikon North-West

Source: SouthAfrica.info 2009

The restructuring depicted above became mandatory and was adopted and implemented because of the persistent apartheid legacy and the governments' view that some institutions had failed to adopt voluntary approaches to address inequalities, inefficiencies and ineffectiveness (CHE 2004: 36).

Table 4.3 depicts policies that shaped transformation in the general education sector post 1990 and just before 1994 as discussed in paragraphs 4.5 – 4.15.

Table 4.3: Policies/Initiatives that shaped the general education sector post 1990 and just before 1994

Date	Policy/Initiative	Activity/Outcome
1993	The National Education Policy Investigation	An inquiry into policy options for the future of education in South Africa, commissioned by The National Education Coordinating Committee.
1993 (just before the end of apartheid)	The Centre for Education Policy Development	Established to develop alternative education and training policies that would serve a new democratic country. Led to the African National Congress's Policy Framework for Education and Training.
Early 1994 (just before the elections)	African National Congress's Policy Framework for Education and Training	A framework from which the first White paper on Education and Training was developed.

The above policies are regarded as the three main initiatives that started the process of transformation in the higher education system. According to Barnes (2005: 216) equity was the central issue of the National Education Policy Initiative (NEPI). NEPI itself acknowledged that institutional inequalities were likely to be one of the most difficult aspects of the apartheid legacy that had to be addressed in higher education. In its review of higher education in the first decade of democracy, the Council on Higher Education also acknowledged that given the inequalities, inefficiencies and ineffectiveness of the higher education system inherited from apartheid, unanticipated patterns of change and developments emerged (CHE 2004: 36). Despite these unintended developments and changes the Ministry of Education established frameworks and strategies to continue the process of transformation.

Table 4.4 depicts policies that shaped the transformation of the higher education sector after the democratic elections of 1994.

Table 4.4: Policies/Initiatives that shaped the transformation of the higher education sector after the democratic elections of 1994

Date	Policy/Initiative	Activity/Outcome
1995	The National Commission on Higher Education	Established six months after the 1994 elections with the aim of proposing a new policy framework for transformation in higher education. Formulated a set of strategic principles for a new higher education plan. The main concern was equity and redress in student access.
1997	The Education White paper 3: A Programme for transformation of Higher Education	Outlined the framework for change and identified different intervention strategies necessary for the transformation of higher education. Proposed a national plan for higher education.
1997	Higher Education Act 101	Gave legal form to the values, principles and core concepts of higher education policies, making provision for funding and language policy.
1998	The Council on Higher Education	Established to advise the Ministry of Education on all matters related to higher education policy issues, thus assuming responsibility for quality assurance within higher education.
1999	The National Student Financial Aid Scheme	Established to provide loans and bursaries for eligible students in higher education.
2001	The National Plan for Higher Education	Provided mechanisms for implementing and realizing the policy goals of the Education White Paper 3. Provided strategies to increase participation rates and graduation outputs.
2001	The Academic Policy for Programmes and Qualifications	Gave effect to the policy goals of the White Paper 3, together with the mechanisms set out in the National Plan.
2002	The Language Policy for Higher Education	Determined the language policy for higher education.
2004	The Funding Framework for Higher Education	Made provision for additional grants to institutions with large numbers of disadvantaged students. Also made provision for earmarked funding to provide for National Students Financial Aid Scheme.

Concepts mentioned repeatedly in the discussion of policies above are increased access and success rates of students in higher education. Other concepts discussed are underpreparedness of students emerging from the school system, language problems in the school and higher education institutions and ultimately, the funding of students in higher education. These concepts were also highlighted in Chapter 2 of this study. Chapter 6, which is an empirical study focusing on factors affecting the academic performance of students, and Chapter 7, which is an empirical investigation on academic support and development of students in higher education, will reveal the degree to which the above-mentioned policies and initiatives had an impact on the access and success rates of students in higher education.

4.17. CONCLUSION

This chapter has given an exposition of the realities and challenges of the past and present SA education and higher education. This discussion of the policies that have guided the transformation of higher education will also provide direction in this study, the ultimate goal of which is to design an academic support and development programme for non-traditional students. Elements of the policies that will guide this study are those that are related to factors affecting the academic performance of students as discussed in Chapter 2 and the academic support and development of students as discussed in Chapter 3.

The next chapter explains the research design and methodology that was used to gather information about factors affecting the academic performance of students, as well as the academic support and development of students.

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

5.1. INTRODUCTION

The preceding chapters provided perspectives on factors affecting the academic performance of students in higher education; academic support and development of students in higher education; and policies and initiatives that guided the transformation of the South African (SA) education system in general and higher education in particular. As a point of departure for the chapters dealing with the empirical investigation to the study, this chapter provides theoretical perspectives on the research design and methodology used to investigate factors affecting and contributing to the academic performance of undergraduate students admitted at the University of the Free State's (UFS) medical school, as well as the academic support and development provided to these students.

5.2. TERMINOLOGY

Before discussing the process followed to conduct this research, certain research terms that will be used are clarified. According to Fouché (2005: 268) some of the terminology used in research causes confusion. For example, terms such as strategies, methods, traditions of enquiry and approaches are used to describe the concept design. Another example is the terminology used to describe a case study. McMillan and Schumacher (2001: 395) and Grix (2004: 50) refer to a case study as an approach. At the same time, McMillan and Schumacher (2001: 398) also refer to a case study as a research design. The other authors who refer to a case study as a research design are Mouton (2001: 149) and Nieuwenhuis (2007: 71). From these descriptions, it can be seen that different authors use different terms for the same concept. Even the same authors can use different terms for the same concept.

Other terms that cause confusion according to Mouton (2001: 55) are research design and research methodology. These are two different terms since a research

design focuses on the end-product whilst a research methodology focuses on the process followed to conduct the research.

For the purpose of this study, the researcher will clarify three terms, namely, research design, research methodology and approach. In the case of a research design, the researcher concurs with Ebersohn, Eloff and Ferreira (2007: 130) who state that a research design is a strategy of enquiry. The research design adopted in this study is a case study. In the case of the second term, research methodology, the researcher concurs with Mouton (2001: 55) and Creswell and Plano Clark (2007: 4) who refer to this term as a process followed to conduct a study. The term research process in the context of this study will be used to describe how data was collected, analysed and interpreted. The term research approach will be used to describe the quantitative and qualitative nature of the research referred to as a mixed methods approach.

On the whole, the research design used for this study was a case study. The research methodology/process that was followed commenced with a literature review followed by theory building. Subsequently data were collected by means of a questionnaire, peer review and extensive engagement with the participants within a mixed methods approach. Thereafter, data were analysed and interpreted within a mixed methods approach as well.

The following information is a description of the research design, methodology and approach that was used, as well as how these were applied in the study.

5.3. CASE STUDY DESIGN

A case study design is used to gain an in-depth understanding of a single phenomenon, a particular/unique people/group, social setting, event or programme and it involves extensive collection of data (Burns 2000: 460; Berge 2001: 225; McMillan & Schumacher 2001: 391; Mouton 2001: 149). In this study the particular/unique people/group is undergraduate medical students, the social setting

is the medical school of the UFS and the programme is the undergraduate medical learning programme. According to Nieuwenhuis (2007: 75), case studies can be selective by focusing on one or two issues that are fundamental to understanding the system being examined. In this study the two fundamental issues are factors affecting the academic performance of, and the academic support and development provided for the undergraduate medical students.

5.4. LITERATURE REVIEW

The literature review that informed this study was discussed in Chapters 2, 3 and 4. Chapter 2 was based on student retention theories and focused on factors affecting the academic performance of students in higher education. Firstly, the theories of Spady, Tinto and Bean were analysed. Secondly, summative perspectives on these theories were provided. The last section of that chapter proposed a theory for non-traditional students called circles of progression. This theory was however not discussed in that chapter, but was discussed in Chapter 8 as it formed a basis for the ultimate aim of this study, which was to design an integrated and holistic academic support and development programme for non-traditional students. Chapter 3 provided perspectives on academic support and development of students based on case studies drawn from four countries, namely the United States of America, the United Kingdom, Australia and South Africa. Chapter 4 focused on the SA education system before democracy, policies and Acts that had shaped and led to the transformation of SA education in general, and higher education in particular. The policies discussed in this chapter are those that have affected and still affect student access and success in higher education.

5.5. THEORY BUILDING

According to Holton and Lowe (2007: 297), a theory is a system for explaining the key concepts that are operative in a phenomenon and how these concepts relate to each other. In further explaining a theory, Berge (2001: 230) states that in descriptive case studies, a descriptive theory that establishes the overall framework

to be followed in the study is presented. Since researchers do not always have good theories to work on, a "theory of action" may be developed. This theory defines how an intervention, event or process will take a case from one situation to the next.

In this study, the theory that was developed describes the progression of a student from one stage of an academic environment to another and actions that can be taken to smooth the progression. In Chapter 2 of this study, the theories of Spady, Tinto and Bean were first analysed and then a theory of action called "Circles of Progression" was developed. This theory, which is described fully in Chapter 8, focuses on the actions that can be taken in the process of supporting and developing a student from one stage of an academic environment to another.

In addition, according to Lynham (2002: 244) theory building may be seen as a continuous theory-research cycle consisting of two parts, with the first part being theoretical and the second part being the operational side of the cycle. In the first part, the units of the theory are identified, and these are also known as the concepts of the theory. These units or concepts represent variables whose interactions constitute the essence of the theory. After identifying the units of the theory, the next step in theory building is to specify how the units interact and relate to each other. Successful completion of the first part results in a conceptual or theoretical framework, which relies on literature and observed experience of the phenomenon in the real world. In following this approach, the theoretical framework as depicted in the "Circles of Progression" in Chapter 8 was based on literature and the observed experience of the researcher in the real world of the undergraduate medical students in the FHS of the UFS (*vide* 1.7.2 for the personal context of the researcher).

In applying this method to formulate the "Circles of Progression" theory, the units and variables that constitute each circle of the theory were identified. After identifying these variables, their interaction from one circle to the other was further described. The theoretical framework developed in this manner was used to structure and design the empirical investigation. Both the framework and the results of the empirical investigation were used to design an academic support and

development programme of action for non-traditional undergraduate medical students, which was the ultimate aim of this study.

5.6. MIXED METHODS APPROACH

Although quantitative and qualitative research approaches differ in how knowledge is generated, both these approaches can be applied to study the same research problem (Ivankova, Creswell & Plano Clark 2007: 259). The research design used in this study is a case study, which according to Babbie and Mouton (2001: 279), is a type of qualitative research. However, according to Grix (2004: 122) there is no reason why a researcher should not employ methods associated with quantitative research in a case study. In this study, data were collected, analysed and interpreted both quantitatively and qualitatively. Authors such as Johnson and Onwuegbuzie (2004: 14), Creswell, Shope, Plano Clark and Green (2006: 1) and Yin (2006: 41) recommend that where quantitative and qualitative data complement each other, a mixed methods approach applies.

According to Ivankova *et al* (2007: 260) the mixed methods researcher combines quantitative and qualitative strategies within a study by collecting both numeric and text data concurrently or in a sequence. Furthermore, a mixed methods approach encourages the use of multiple paradigms rather than the typical association of certain paradigms with quantitative research and others for qualitative research (de Vos 2005: 357; Creswell & Plano Clark 2007: 10).

5.6.1. Mixed methods diagrams and notations

Creswell and Plano Clark (2007: 40) and Ivankova *et al.* (2007: 263) state that visual diagrams and notation systems can be used to better understand the nature of mixed methods approach. Visual diagrams use geometric shapes (boxes or ovals) to show the steps in the research process and arrows to show the progression through the steps. The notation systems use pluses (+) to indicate methods that occur at the same time and arrows (→) to indicate methods that occur in a sequence. In

addition, parentheses are used to indicate methods that are embedded within other methods. Furthermore, according to Johnson and Onwuegbuzie (2004: 19), Creswell and Plano Clark (2007: 40), and Ivankova *et al.* (2007: 263), a notation system designates the importance of the methods within the study, with the primary method being indicated with uppercase letters i.e. QUAN or QUAL, and the secondary method indicated with a lowercase i.e. quan or qual. For example, when both quantitative and qualitative methods are used at the same time during the research and both have equal emphasis a notation system will be illustrated as QUAN + QUAL. When the qualitative and quantitative methods are used in sequence with the qualitative method being used first and also being emphasised, the notation system will be illustrated as QUAL → quan. In a case where the qualitative method is embedded within the quantitative method, with the quantitative method being emphasised, the notation system will be reflected as QUAN(quan) (Creswell and Plano Clark 2007: 40). The visual diagram and notation system in this study will be explained in paragraph 5.6.3 of this chapter.

5.6.2. Mixed methods types

Creswell and Plano Clark (2007: 67) and Ivankova *et al.* (2007: 263) have identified four basic types of mixed methods, namely the embedded, explanatory, exploratory and the triangulation type. The embedded and the explanatory types, being the types used in this study, will be described.

The embedded type can be used when one data set provides a supportive, secondary role in a study based primarily on another data type. It means that both quantitative and qualitative data are collected but one of the data types plays a supplemental role within the overall type. This type is particularly useful when a qualitative component is embedded within a quantitative component (Creswell & Plano Clark 2007: 67; Ivankova *et al.* 2007: 267). In this study, the qualitative comments from the respondents provided a supportive, secondary role. This was the case in Section 3 of the questionnaire where students were requested to evaluate the effectiveness of the academic support and development structures and

strategies of the university. The first set of data was quantitative and the second set where the students were requested to comment about the services, provided a supportive and secondary role and thus supplemented the quantitative data.

The explanatory type can be used when qualitative data is needed to explain or expand on the quantitative data. In such a type, quantitative results provide a general picture while the qualitative results refine, explain or extend the general picture (Creswell & Plano Clark 2007: 72; Ivankova *et al.* 2007: 264). In this study, this mixed methods type was used when students were requested to relate their experiences with the curriculum. The quantitative results provided a general picture and the qualitative results, comprising students' comments on their experiences with certain areas of the curriculum, extended and explained the general picture.

5.6.3. The mixed methods approach used in this study

As indicated above, the two mixed methods types used in this study are the embedded and the explanatory types and the following diagram with notations explains how these types were applied.

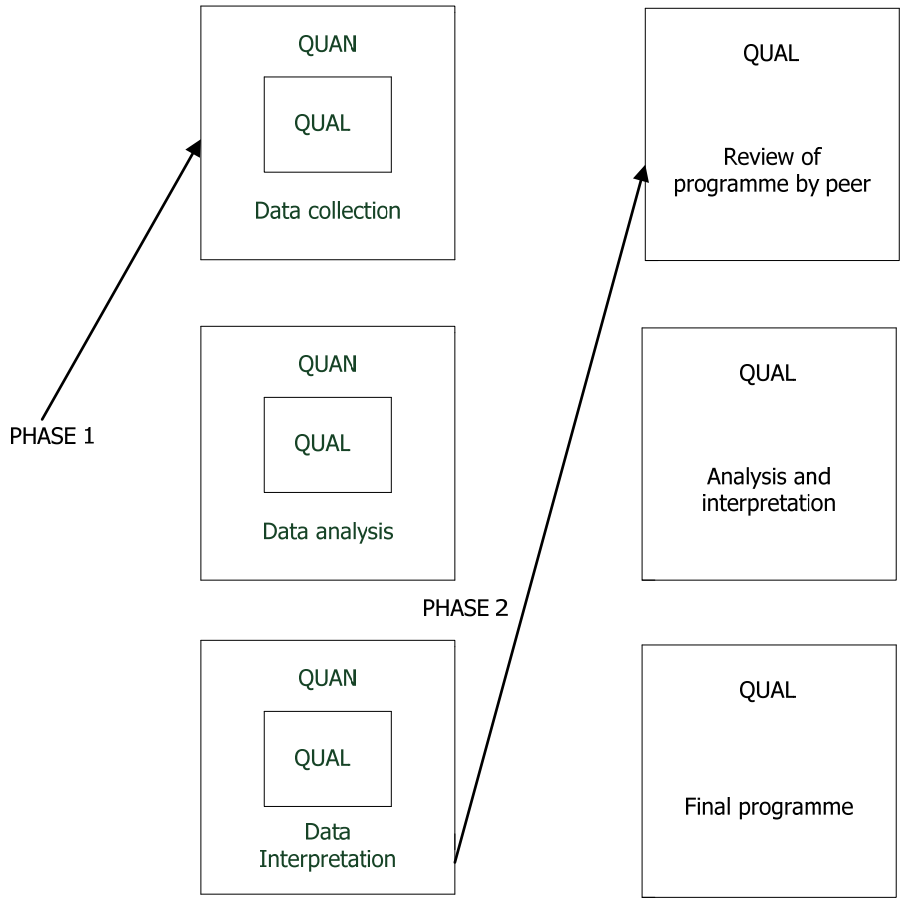


Figure 5.1: Mixed methods approach for this study

The annotated figure above shows that the research was conducted in two phases with each consisting of three stages. Data was collected by means of a questionnaire and extensive engagement with students in the first stage of Phase 1. The questionnaire was used as a primary data collection tool. Both quantitative and qualitative data were collected, with both carrying the same weight within the questionnaire. The qualitative data set was embedded within the quantitative data set. Furthermore, the qualitative data set extended and explained the quantitative data set. In the second stage, quantitative data were analysed by a statistician, while the qualitative data were analysed by means of reading and reflection, identification of themes and patterns, coding and theoretical propositions. These methods of data analysis will be discussed later in the chapter. The last stage of Phase 1, being data interpretation and a discussion, was guided by the literature study discussed in Chapters 2, 3 and 4. Furthermore, quotations from the qualitative data set were used to supplement the quantitative data set. Thereafter a draft

programme of action for the academic support and development of students was designed. The design of the programme was based on the data interpretation and discussion.

Phase 2 consisted of three stages as well. In the first stage, peers from other medical schools were requested to review the draft programme of action. In the second stage, the comments from peers, which were qualitative, were analysed and interpreted. Thereafter, a final programme was designed in the last and final stage.

5.7. SAMPLING

According to Burns (2000: 465), and Maree and Pietersen (2007: 178), the sampling method most often applied in case studies is purposive sampling. It implies that participants are chosen with a specific goal in mind, with the purpose of gaining understanding of the specific phenomenon under investigation. This was the case in this study where undergraduate medical students who had failed any year of study and those that performed academically well in a particular year of study were chosen. Thus, a comparative aspect was also added in the study as the academic performance and the factors that affected the academic performance of these two groups of students were compared. Furthermore, in qualitative studies purposive sampling is used by selecting information-rich cases because they illustrate some feature or process that is of interest for the study (McMillan & Schumacher 2001: 401; Strydom 2005: 202).

Furthermore, Tinto (2007) states that although retention studies normally attempt to randomly select a simple sample of both “leavers” and “stayers”, it is also possible to employ stratified random sampling to highlight the experiences of particular groups of students like the traditional students as well as non-traditional students who persist. In this study, the latter method was employed by selecting both traditional and non-traditional students who performed well in their studies.

The sample in this study was therefore divided into three groups of undergraduate medical students at the UFS. The first group was all students who had failed any year of study during the period 2004 and 2006. The second group was all non-traditional students who obtained a distinction in more than 50% of modules in the examination of the second year of study during the same period. The third group was all traditional students who obtained a distinction in all modules in the examination of the second year of study during the same period. According to Lehmann, Andrews and Sanders (2000: 8) the second year of study is the year with higher attrition rates, hence the choosing of the second and third groups for this study. Although the target population in this study was non-traditional students, traditional students were also selected in order to obtain information on which strategies/methods they use to succeed especially in the year where most students struggle to succeed.

In analysing the second-year examination results of the students, it was evident that most of the attrition occurred during this year of study, which confirmed the findings of Lehmann *et al. (*2008: 8) as stated above. It was also evident that there is a difference between the number of distinctions obtained by non-traditional and traditional students, since none of the non-traditional students had obtained a distinction in all modules, whereas there were traditional students who had managed to do so. Eventually the criteria used were to select all non-traditional students who obtained a distinction in more than 50% of modules in the second year examination and all the traditional students who obtained a distinction in all modules in the second year examination. Based on this analysis, 12 non-traditional and seven (7) traditional students were selected. The total number of the sample was 71, of which 52 fell in the first group, 12 in the second group with seven (7) in the third group.

The table below portrays the composition of the sample.

Table 5.1: Composition of the sample

Sample	Criteria	Number
Group 1	All non-traditional and traditional students who had failed	52

	any year of study.	
Group 2	All non-traditional students who obtained a distinction in more than 50% in the examination of the second year of study.	12
Group 3	All traditional students who obtained a distinction in all modules in the examination of the second year of study.	7
Total sample		**71**

5.8. DATA COLLECTION

Three data collection tools were used in this study, namely, a questionnaire, extensive engagement and inputs from peers. Furthermore, quantitative and qualitative data were collected concurrently and sequentially. According to Johnson and Onwuegbuzie (2004: 19) and Creswell and Plano Clark (2007: 110), when data are collected concurrently, both quantitative and qualitative data are collected at the same time, whereas when data are collected sequentially, one set of data (quantitative or qualitative) is collected and analysed prior to the second set of data. In the case of this study, both quantitative and qualitative data were collected concurrently by means of a questionnaire in Phase 1 and was later collected sequentially by means of qualitative comments from peers in Phase 2 (*vide* 5.6.3).

5.8.1. Questionnaire

A questionnaire was used in Phase 1 of this study for collecting both quantitative and qualitative data, applying the embedded and explanatory types of the mixed methods approach as discussed earlier (*vide* 5.6.2 and 5.6.3). This questionnaire, (*vide* Appendix A), consisting of four sections, was guided by the theories described in Chapter 2. Information collected in Section 1 of the questionnaire was about pre-entry attributes, including biographic information, as well as family and school background of the respondents. Section 2 was about entry attributes seeking information on social and academic integration. Social and academic integration of students is one of the key features of Tinto's theory as discussed in Chapter 2.

Questions dealing with social integration focused on adjustment to the academic environment, whilst questions dealing with academic integration sought information on factors that positively and/or negatively contributed to or affected the academic performance of the respondents. In Section 3, information on the academic support and development of students was collected. The information sought was on the students' experiences of the different structures and strategies used to support and develop them in the university and the Faculty of Health Sciences. Question 4 of this section provided the respondents with the opportunity to give recommendations on other measures that might be used to support and develop students. Under the heading "thoughts to share", the last section (4) of the questionnaire gave the respondents the freedom to narratively share any challenges as well as their positive and negative experiences. According to Labuschagne (2003: 1 of 4) open-ended responses help the researcher to understand the world as seen by the respondent, whilst the narrative comments are meant to provide a forum for explanations, meanings and new ideas.

The questionnaire was piloted with five medical students in order to determine the duration of completion, identify any confusion and establish whether any other questions should be added. Thereafter, the questionnaire was administered to the first group (n=52), second group (n=12) and third group (n=7), the total number of which was 71, with a total response rate of 53 (75.5%). Of this total response (n=53), 37 of the 52 students in the first group responded (71%), all 12 students in the second group responded (100%) and only three (3) of the seven (7) students in the third group responded (42%). Since the response rate of the students in the third group compared poorly with those of the first and second group, they were excluded from the analysis and reporting of findings. According to McColl, Jacoby, Thomas, Soutter *et al.* (2001: 101) a response rate of less that 50% is unacceptable and may cause bias.

5.8.2. Peer review

According to Creswell & Plano Clark (2007: 135), peers can be requested to review and comment on some content area of a research process. In the first stage of Phase 2 of the research process of this study a draft programme of action was sent to seven peers in the medical schools at the Universities of Cape Town, Stellenbosch, Walter Sisulu University of Technology, Kwa-Zulu Natal, Limpopo, Witwatersrand and Pretoria for comments. These peers provide academic support and development to undergraduate medical students. Of the seven peers, only two responded. Although the response rate was poor, the recommendations made by these peers made a contribution to the study.

5.8.3. Extensive engagement with students

The researcher, in her capacity as a student academic support and development practitioner in the medical school at UFS since 2000 to date has been extensively involved and engaged with the respondents while interacting with and observing them during consultations and in the classroom environment. The researcher's interaction with the students occurs mostly during formal consultations in the office or in the classroom setting. Interaction also occurs informally through occasional drop-ins by students in the office, conversations in the foyer of the faculty, the cafeteria *etc*. Besides the engagement with the participants, the researcher was extensively engaged with documents such as, test and examination results, and records of students' consultations containing information about the problems they experienced during their studies. During the period 2000 and 2005, 205 consultations were conducted. The information obtained during this engagement with the students and documents was further used to supplement the data collected from the questionnaire.

Extensive engagement with participants, data and the research setting are essential features of all qualitative research, irrespective of the data gathering method used. "Its importance rests with the idea that subjective meanings are situated in context

and cannot be understood separate from this context" (Fossey, Harvey, McDermott & Davidson 2002: 728). Hence, engagement with participants in their social world is essential to the understanding of subjective meanings (Fossey *et al.* 2002: 728).

The use of extensive engagement as part of data collection process may be regarded as subjective. However, rather than denying human subjectivity, disciplined subjectivity can be used, which McMillan and Schumacher (2001: 411) describe as the researcher's self-questioning and use of personal experiential empathy in data collection. In addition, disciplined subjectivity reminds readers that the researcher is part of the setting, context and social phenomenon that he or she seeks to understand. In this study, the researcher's ability to use personal experiential empathy was enhanced by her background of being from the same family and school environment as the non-traditional respondents. Besides that, disciplined subjectivity was enhanced by the role of the researcher who as an academic support and development practitioner in the medical school at UFS, has not only been part of the setting, context and social phenomenon, but has had first-hand experience of some of the phenomena. It is important to note that although the researcher used the information in the records of consultations, the personal experiences and conversations not captured in the records of consultations were also used to complement data from questionnaires and extensive engagement.

5.9. DATA ANALYSIS

Aligned with the two-tiered data collection process, data analysis was done in two phases. In Phase 1, a concurrent approach was used to analyse data captured by means of a questionnaire and extensive engagement. According to Creswell and Plano Clark (2007: 136), a concurrent approach means conducting a separate initial data analysis for each of the quantitative and qualitative databases. Phase 1 of the analysis guided the Phase 2 analysis, which comprised of a scrutiny of qualitative comments from peers. This approach is called sequential analysis (Creswell & Plano Clark 2007: 136).

5.9.1. Quantitative analysis and representation

A statistician from the Biostatics Department of the FHS in the UFS used a descriptive statistical method to analyse data. According to Pietersen and Maree (2007: 183) descriptive statistics is a collective name for a number of statistical methods used to organise and summarise data in a meaningful way. Furthermore, this method can be divided into two ways of representing or describing data. These are namely numerically and graphically. Both numerical and graphical ways were used to analyse all the questions included in the questionnaire, except the open-ended responses of question 5 of Section 1, question 5 and 6 of Section 2; and questions 1 and 2 of Section 3 of the questionnaire.

In addition, differences in quantitative responses between Group 1 and 2 were analysed statistically using contingency tables and Fisher's exact test (Kruger, de Vos, Fouché & Venter 2005: 239). Contingency tables, also known as cross-tabulations are used to classify subjects in relation to two separate qualitative variables simultaneously in order to determine their degree of association. A Fisher's exact test is used to examine the significance of the association between two nominal variables in a special situation where both variables have only two categories and the sample size is relatively small (Pietersen & Maree 2007: 247). These tests were used to analyse questions 3 and 6 of Section 1; questions 2, 3, 4, 6 and 7 of Section 2 and questions 1 and 2 of Section 3 of the questionnaire. The Fischer's test was used to analyse the responses of all three groups of students, but ultimately only the responses of Group 1 and 2 students were reported because of the poor response rate (42%) of the students in Group 3.

5.9.2. Qualitative analysis

Qualitative data was analysed by using the following process: reading and reflection, identification of themes, establishment of patterns and connections**;** coding and by using a theoretical proposition.

Initial analysis of qualitative data usually takes the form of thorough reading of respondents' statements in their entirety several times and immersing oneself in the details, thus getting a sense of the data before breaking it into parts (de Vos 2005: 337). In this way, data is organised to discover patterns, themes, forms and qualities. Likewise, the meanings, patterns, or connections among data are explored. Furthermore, the researcher's own thoughts, reflections and intuition are used to discover meanings, patterns and themes. A list of preset themes is identified in advance and then searched for when analysing data, whilst emergent themes are only identified whilst reading through the text and these are themes that recur (Fossey *et al*. 2002: 729; de Vos 2005: 333). In this study, emergent (recurrent) themes were identified while reading through the texts. Furthermore, according to Fossey *et al. (*2002: 728) and de Vos (2005: 338) recurrent themes can be identified, reviewed, and coded. In this study, recurrent themes in the responses of Question 4 of Section 3 as well as those of Section 4 were identified, reviewed and coded. In addition, the researcher not only read through the statements, but also thought about and reflected on the data collected during extensive engagement with the students so as to discover meanings, patterns and connections.

According to de Vos (2005: 338) and Nieuwenhuis (2007: 105), a coding process involves breaking down data, conceptualising and putting it back together in new ways. Three major types of coding can be used, namely, open coding, axial coding and selective coding. During open coding, data are broken down into parts, closely examined, compared for similarities and differences, and questions are asked about phenomena reflected in the data. Axial coding is done by putting data back together in new ways after open coding, by making connections between categories. Selective coding is a process of selecting core categories, and systematically linking them to other categories.

All three types of coding were used to analyse data pertaining to question 4 of Section 3 where respondents made recommendations and in Section 4 which was a narrative report of the students' challenges, positive and negative experiences at the university and the FHS. In the narrative report of Section 4, respondents included

recommendations and these were therefore included in the analysis of question 4 of Section 3.

Two other types of coding described by Nieuwenhuis (2007: 105) are inductive and priori coding. In inductive coding the researcher lets codes emerge from the data, whilst in priori coding, codes are developed before examining the data. Inductive coding was used in this study as it relates well with the emerging categories described earlier.

Another way of analysing qualitative data as described by Burns (2000: 472) is to use the theoretical propositions that led to the study, since these propositions influenced the design, the review of literature and the questions asked. The theoretical propositions that influenced this study and the analysis thereof, as described in Chapter 2, were also used to analyse some of the open-ended responses especially in Section 3 of the questionnaire.

5.10. DATA INTERPRETATION

When data are interpreted, meaning and significance is attached to data that were analysed (Taylor-Powell & Renner 2003: 5). Effective data interpretation may be guided by comparisons between data and literature (Sandiford & Seymour 2006: 20 of 27). In Phase 1 of this research, the interpretation was guided by the findings of the quantitative and qualitative data collected from the questionnaire and the literature review in Chapters 2, 3 and 4. Furthermore, the qualitative comments from peers were also interpreted in Phase 2 of the research process.

In an interpretation, the report moves from the description of the interactions that occurred, through quotations or examples, to discussion of their meaning and importance thereof so as to provide a coherent account (Fossey *et al.* 2002: 730). Quotations are used to include the voice of the respondents in the report and are helpful in illustrating a point and in bringing data to life (Taylor-Powell & Renner 2003: 5). In this study, direct quotations, which according to Labuschagne (2003: 3

of 4) are a basic source of raw data, were used to illustrate a point. These are quotations extracted from the responses to open questions included in the questionnaire.

5.11. VALIDITY AND RELIABILITY

In the review of literature about validity and reliability of data and results in the mixed methods approach, which was the approach used in this study, different views were discovered. For example, according to Creswell and Plano Clark (2007: 133), in quantitative research, reliability means that the scores received from participants are consistent and stable over time. Hammersley (2005: 25) admits that quality criteria for assessing mixed methods research is a difficult issue. The author further states that quality criteria such as generalisabilty, validity, reliability and replicability developed for quantitative research cannot be applied to qualitative research, but suggests the use of the terms, trustworthiness, internal validity, fittingness, external validity and audibility. Another suggestion is that the term inference quality be used as a substitute for validity and trustworthiness to convey the quality of conclusions made in a study.

The discussion above indicates that there are different views and uncertainties about assessing the quality of mixed methods research. In the case of this study, the researcher followed the example of a mixed methods study included in Maree (2007: 297) where the researcher selected terms that fitted the particular study. Therefore, the terms that fit this particular study are trustworthiness, credibility, also called internal validity, openness, authenticity and generalisation. The latter term should be understood to refer to the generalisation of theoretical understandings as they apply to similar phenomenon that were investigated empirically (*vide* 5.11.5).

5.11.1. Trustworthiness

According to Golafshani (2003: 597), trustworthiness of a research report lies at the heart of issues that are discussed. Trustworthiness in a mixed methods approach is

described as including for analysis and interpretation all the topics that were covered by both the quantitative and qualitative aspects of the study. In Chapters 6 and 7 of the sudy an outline is given of how quantitative and qualitative data were analysed and interpreted. Another way of establishing trustworthiness of results is by linking findings and conclusions to both data and theory (Westphal 2000: 1). This way of establishing trustworthiness of results was used by linking the findings and conclusions made in the empirical investigation in Chapters 6 and 7 with the theory in Chapters 2, 3 and 4.

5.11.2. Credibility / Internal validity

Internal validity refers to an accurate presentation of a particular context or event as described by the researcher (Maree 2007: 297). Also, De Vos (2005: 346) describes credibility as the alternative to internal validity and states that the goal in credibility is to demonstrate that the research was conducted in such a manner as to ensure that the subject was accurately identified and described. In this study, the subject was accurately identified and described in the literature review as discussed in Chapters 2,3, 4 and 8. In addition, in the design of the questionnaire, relevant questions that covered the topic were included. The research design that was used, which is a case study, allowed an in-depth exploration of the subject as well. According to Burns (2000: 476), different strategies such as triangulation, re-checking with participants, peer-judgment and long-term observation can be used to assess internal validity of findings. Furthermore, peer-evaluation was used by having peers evaluate and comment on the design of the draft programme (*vide* 5.8.2).

5.11.3. Openness

According to Fossey *et al. (*2002: 730), evidence that different views were sought also suggests openness by a researcher. Seeking the views and comments of peers from the other medical schools was evidence that the researcher was open and thus enhanced the quality of the study.

5.11.4. Authenticity

Authenticity in research can be established by presenting the views of participants in their own words, that is verbatim quotes are presented, when presenting findings and when interpreting the data (McMillan & Schumacher 2001: 407; Fossey *et al.* 2002: 725). In the presentation of findings and interpretation of results in Chapter 6 and 7 of this study, most of the quotations made by the respondents were presented in their own words. Those quotes that were modified still represented the meanings of the respondents, thus establishing authenticity of the study.

5.11.5. Generalisation

According to (Burns 2000: 474; Fossey *et al.* 2002: 730; de Vos 2005: 352) when generalisations are made, they can be based on theoretical propositions and understandings. In this study, where generalisations were made, they were based on the theoretical understandings and perspectives discussed in Chapters 2, 3 and 4.

5.12. ETHICS

According to Denzin and Lincoln (2000: 447), case studies often deal with matters of public interest and thus the researcher shares the personal views, expressions and circumstances of respondents. These personal views and expressions carry an element of risk and exposure that may lead to embarrassment or loss of standing.

Although in this study the researcher shares personal views and expressions of respondents, the elements of risk and exposure are minimal because the other principles of ethics in research were followed. These principles, as stated by Mouton (2001: 241) and Ramcharan and Cutcliffe (2001: 358) are informed consent, confidentiality and anonymity. All these principles were adhered to in the design of the questionnaire (See Appendix A). In following the principle of obtaining approval for the research, (Mouton 2001: 244, Strydom 2005: 68), this study was submitted

to, and approved by the Ethics Committee of the Faculty of Health Sciences at the UFS.

5.13. CONCLUSION

This chapter provided a theoretical discussion of the research design, method and approaches used to investigate factors affecting the academic performance of undergraduate medical students in the UFS, as well as the type and effectiveness of structures and strategies used to support and develop these students.

A mixed methods approach comprising three main data collection tools was employed in this investigation. The main findings of the questionnaire were used to draft a programme of action that could be used to support the undergraduate medical students in the School of Medicine at the UFS. Subsequently this draft programme was sent to peers in other medical schools. Thereafter, the inputs of the peers were added to the results and these contributed to the design of the final programme of action.

Since data were collected about two concepts, namely factors affecting the academic performance of students and academic support and development structures and strategies available to these students at the UFS, the empirical investigation of these concepts will be discussed separately in the following two chapters.

CHAPTER 6: RESULTS, FINDINGS AND DISCUSSION OF FACTORS AFFECTING THE ACADEMIC PERFORMANCE OF STUDENTS

6.1. INTRODUCTION

The previous chapter provided a theoretical background on the research design, methodology and approach used to firstly, investigate factors affecting the academic performance of undergraduate students admitted at the University of the Free State's (UFS) medical school and secondly, to determine the type of structures and strategies used to support and develop these students. In this chapter, the results and findings from the questionnaire administered to investigate the above-mentioned factors will be discussed. The results and findings about the structures and strategies will be discussed in the following chapter. Both quantitative and qualitative results and findings will be discussed by comparing two groups of students, namely: Group 1 comprised 37 students all of whom had failed a year of study and Group 2 consisted of 12 non-traditional students who had obtained a distinction in more than 50% of their modules in the second-year examination. In order to simplify the results and findings for the purpose of graphic presentation, Group 1 is referred to as students who failed whilst Group 2 is referred to as students who passed.

6.2. RESULTS, FINDINGS AND DISCUSSION OF RESPONSES TO THE QUESTIONNAIRE

Only the results and findings of Section 1, Section 2 and Section 4 of the questionnaire are discussed, with Section 3 being discussed in the next chapter (Chapter 7). Section 1 included pre-entry attributes, Section 2 was the entry attributes of the students as well as factors that affected of their academic performance during their teaching and learning experience. Section 4 which was named "thoughts to share", provided the students with the opportunity to share any

positive and negative thoughts about challenges that they faced and to also provide suggestions that might help in providing academic support and development for students in the faculty.

6.2.1. Pre-entry attributes

Pre-entry attributes are characteristics that students have before they enter the university and which might affect their social and academic integration and these were discussed in Chapter 2 (*vide* 2.2.1; 2.2.2; 2.2.3). Information about the race, gender and financial support was sought to determine the biographic profile of the students, while information about prior-schooling, prior-tertiary education, skills and attainments was sought to determine their prior academic profile. It is important to note that the comparisons made in the findings below are only based on the respondents and not on the total makeup of the population from which they were drawn.

6.2.1.1. Race

The most noteworthy findings in the table below are that amongst the respondents, most of the students who failed are Black, thus emphasising the problem of high attrition rates of Black students as discussed in Chapter 2 (*vide* 2.1).

Table 6.1: Race of respondents

Race	**Group 1**	**Group 2)**	**Total**
Blacks	28 (76%)	11 (92%)	39
Whites	5 (13%)	0 (0%)	5
Coloured	4 (11%)	1 (8%)	5
Total	37 (100%)	12 (100%)	49

6.2.1.2. *Gender*

The percentages below show that amongst the respondents, more males had failed (67%) in the first group. Interestingly in the case of non-traditional students who passed, males performed better than females. The results do not show whether the males that failed in the first group were traditional or non-traditional, but it is clear that in the second group non-traditional males performed better than females. Perhaps a further study can be done on the difference between the performance of traditional and non-traditional male students.

Table 6.2: Gender of respondents

Gender	**Group 1**	**Group 2**	**Total**
Male	24 (67%)	7 (58%)	31
Female	12 (33%)	5 (42%)	17
Total	36 (100%)	12 (100%)	48

6.2.1.3. *Financial support*

The table below shows that students used more than one source of financial support. Important to note is that the same number (46%) of students used a bursary and/or was supported by the family. A large number of students who passed (92%) received a bursary for their studies. These findings might suggest that students who receive bursaries for their studies might have a better chance of performing better in their studies. In Chapter 2 of this study (vide 2.2.3; 2.2.4) finance was mentioned as one of the major factors influencing the academic performance students.

Table 6.3: Financial support received for studies

Financial support	**Group**	**Group 2**	**Total**
Bursary	17 (46%)	11 (92%)	28
Loan	15 (40%)	0 (0%)	15
Family	17 (46%)	1 (8%)	18
Other	0 (0%)	1 (8%)	1

6.2.1.4. Prior schooling

Important to note in the table below is that among the respondents, the largest group of the students who failed attended a public school in a township whilst the largest group of those that passed attended a public school in town. This finding supports literature stating that one of the factors affecting the academic performance of non-traditional students from public schools in the townships, also regarded as disadvantaged schools are under-prepared (*vide* 2.2.4). The results however show that there are students from private schools who failed. It means that there could be other factors other than under-preparedness that might have affected their academic performance.

Table 6.4: Type of high school attended

Prior-schooling	**Group 1**	**Group 2**	**Total**
Private	6 (16%)	2 (17%)	8
Public (township)	17 (46%)	5 (42%)	22
Public (town)	13 (35%)	6 (50%)	19
Total	36	13	49

6.2.1.5. Prior-tertiary education

A total number of 17 out of the 49 students from Groups 1 and 2 indicated that they had prior tertiary education ranging from Pre-Medical Programme (a special programme provided in Botswana University), basic Bachelor of Science (B.Sc.), B.Sc. in Microbiology, B.Sc. in Medical Science, B.Sc. Honours, Nursing Diploma and Masters in Business Administration (MBA). Out of the 17 students who passed (those that had prior-tertiary education), three (3) had studied in the Pre-Medical programme, one (1) had studied in a basic B.Sc. Programme and one (1) had studied in a B.Sc. Microbiology Programme. The scientific and pre-medical background of these students might have contributed to their performance.

6.2.1.6. *Skills before entry into the university environment*

In this part of the questionnaire, the students were requested to provide information regarding skills that they had prior to registering for university studies. In the discussion that follows, a distinction is made between academic, social and personal skills.

6.2.1.6.1. *Academic skills*

According to the figure below (67% and 75%) of students who passed were of the opinion that they had good study and writing skills as compared to those that failed (22% and 49% respectively). It is interesting to note that a higher percentage of students who failed were of the opinion that they had good basic computer and oral presentation skills (43% and 49% respectively) than those who passed (5% and 17% respectively). A small percentage of both the students who failed (22%) and students who passed (17%) thought they had sufficient research skills. Interestingly, more students from the group that failed were of the opinion that their research skills were on standard. The results suggest that the academic performance of students who perceived themselves to have effective study methods and good writing skills before entry into the university might be better than those who used ineffective study methods and do not have good writing skills. Possession of some of the academic skills might have been influenced by the type of school the students attended (*vide* 6.2.1.4). Possession of some of the academic skills might have been influenced by the type of school the students attended (*vide* 6.2.1.4).

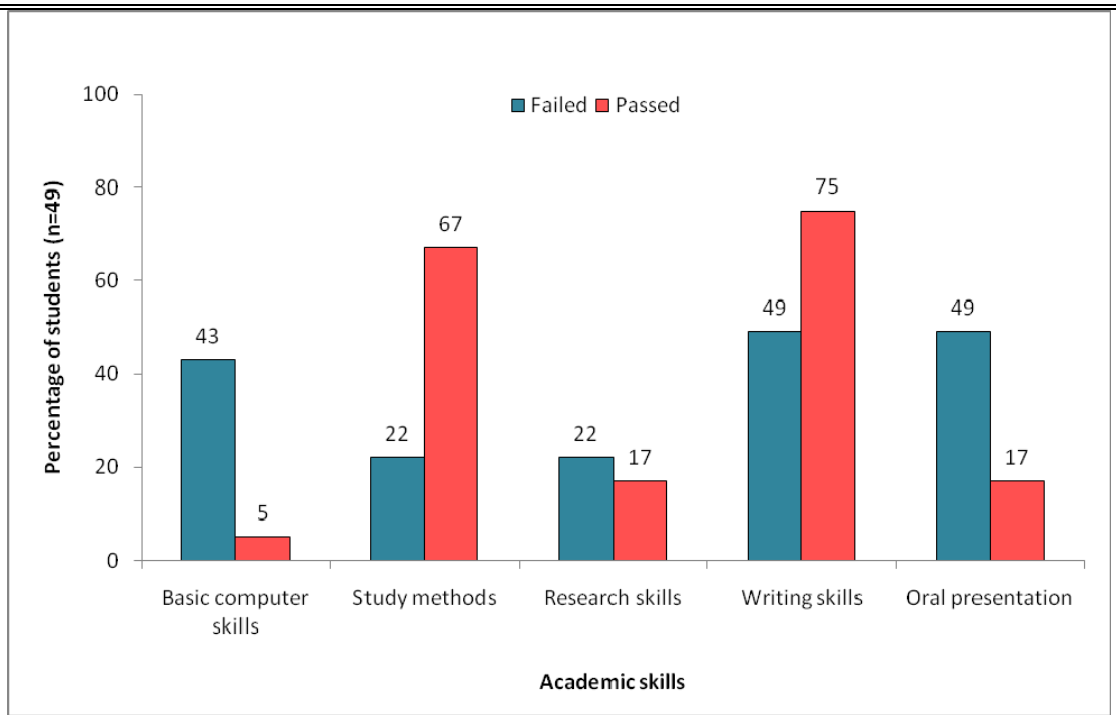


Figure 6.1: Perception on academic skills before entry

6.2.1.6.2. Social skills

Figure 6.2 below shows no considerable difference between the two groups regarding their perception of interpersonal relationship skills (54% and 58%). On the one hand, the figure shows that more students who failed thought they were skilled in conflict management (40%) and had better leadership skills (43%) as opposed to those that passed (25% and 33% respectively). On the other hand, more of the students that passed seemed to be culture sensitive (42%) than those that failed (32%). Similarly, 42% of students who passed were of the opinion that they possessed budgeting skills as opposed to only 32% of those who failed. The results suggest that the academic performance of students who have better budgeting skills and are culturally sensitive might be better than those who do not possess such skills.

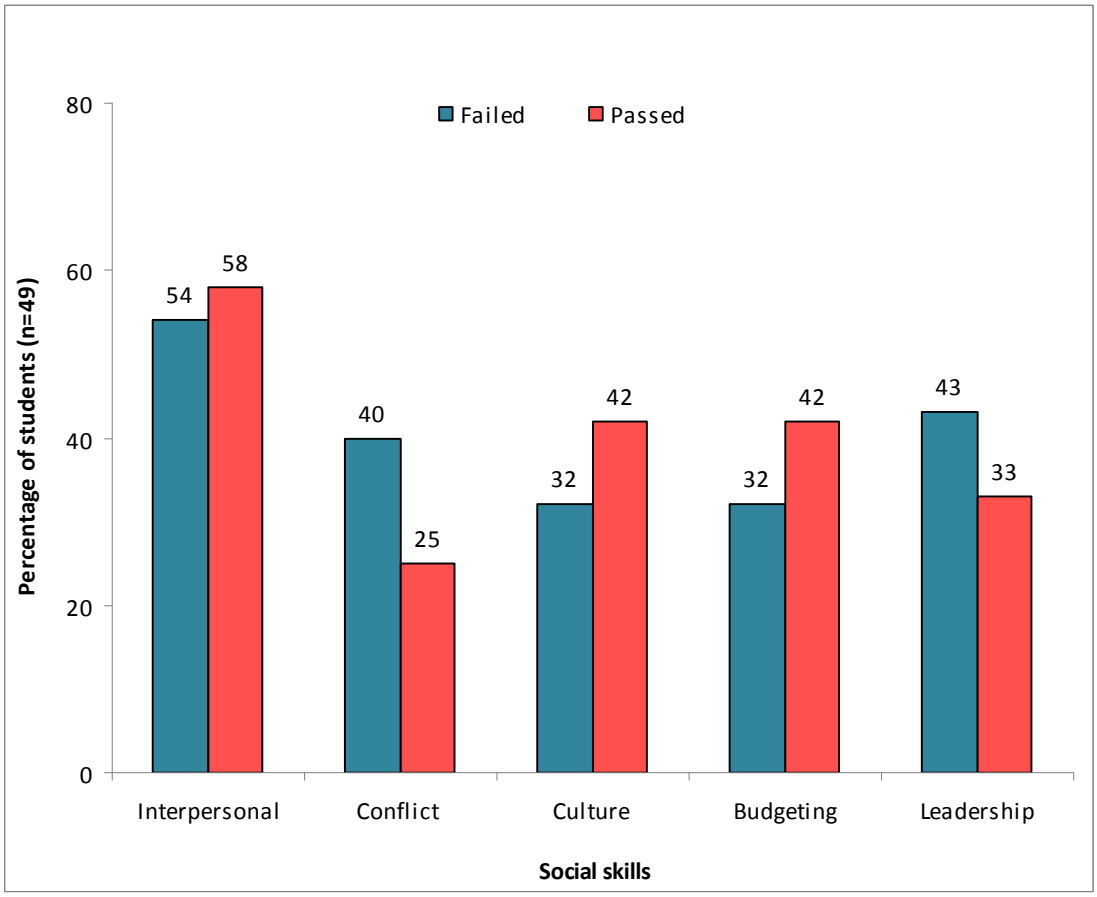


Figure 6.2: Perception on social skills before entry

6.2.1.6.3. *Personal skills*

In general, as indicated in the figure below, more students who failed were of the opinion that they had sufficient personal skills than those who passed. These results suggest that students who are of the perception that they possess better interpersonal skills do not necessarily perform better academically.

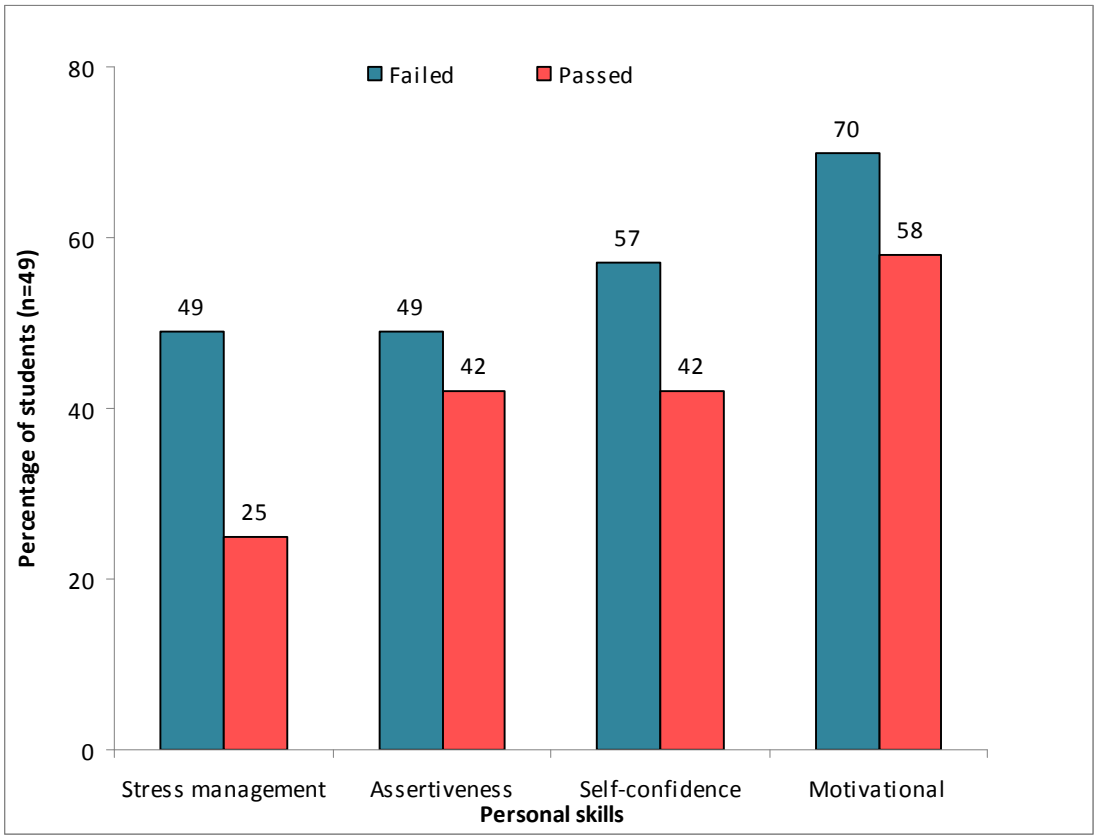


Figure 6.3: Perception on personal skills before entry

6.2.1.7. Attainments

Table 6.5: Award or merit obtained in school

Attainments	**Group 1**	**Group 2**	**Total**
Yes	25 (68%)	10 (83%)	35
No	12 (32%)	2 (17%)	14
Total	37 (100%)	12 (100%)	49

Sixty-eight percent (68%) of the students who failed indicated that they had received some sort of an award or merit in school whilst a larger percentage (83%) of those that passed also stated that they had received an award or merit. In both groups, those that indicated that they had received an award or merit stated an academic merit, such as Top 100 matriculant, academic honours colours, matriculant of the year, DUX scholar (top student at school)). Those that received cultural awards stated that these awards were in the form of sports colours and those that received a leadership award were given an honours blazer. The results suggest

attaining merits at school might be an indication of better academic performance in university.

6.2.2. Entry attributes

In this section of the questionnaire, the researcher wanted to establish characteristics and factors that might have affected the academic performance of students.

The results and findings of this section of the questionnaire are divided into:

- characteristics that might have affected the academic and social integration of students during their initial entry into the university and (ii) factors that might have affected their academic performance during the teaching and learning experience. These characteristics and factors were discussed in Chapter 2 (*vide* 2.2.1 and 2.2.2).

The most important findings related to the characteristics centred on students' goals/intentions and adjustment. These characteristics are discussed below while the factors that might have affected the academic performance of the students during the teaching and learning experience are discussed later.

6.2.2.1. Goals/Intentions

As indicated in Table 6.6 below, a relatively large percentage of students in both groups (86% and 91%) indicated that they had set themselves specific goals when they started their studies at university. Some of the goals mentioned in the qualitative feedback are: "get distinctions", "not have a re-assessment", "complete in record time", "pass the degree cum laude", "receive a merit bursary". Reasons stated for not achieving some of these goals were: "had to compromise", "personal situations", "work was just too much with small amounts of time". The other

qualitative feedback received included the following: “still fighting”, “still working on them”.

The results show that both groups had intentions when they started their studies at university but students in the first group did not reach some of the goals because they failed. Those that passed seem to have reached some of the goals, like not repeating a year of study, but it is not clear whether they passed cum laude or got distinctions. The results show that although students might set goals for their studies, some might be achieved and some might not be achieved.

Table 6.6: Goals/Intentions the students had when they started their studies

Goals	Group 1	Group 2	Total
Yes	32 (86%)	10 (91%)	42
No	5 (14%)	1 (9%)	6
Total	37 (100%)	11 (100%)	48

6.2.2.2. Adjustment

Students in both groups stated that they adjusted well to the university environment (77% and 83%) with those that passed seemingly adjusting exceptionally well to the faculty environment (92%). The same was true for their relationship with fellow students (86% and 83% respectively). Those students who did not adjust well to the university environment provided the following reasons: “finances”, “increased focus on studying medicine unlike other faculties”, “strict rules and regulations”, “different backgrounds”, “language barriers”. These results show that adjustment to the university, faculty and fellow students might play a positive role in the academic performance of students, but there are still factors that might hinder the adjustment of students.

Table 6.7: Adjustment within the first six months

	Yes		No		
Area	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Total**
University	27 (77%)	10 (83%)	8 (23%)	2 (17%)	47

Faculty of Health Sciences	22 (61%)	11 (92%)	14 (39%)	1 (8%)	48
Fellow students	30 (86%)	10 (83%)	5 (14%)	2 (17%)	47

The following is a discussion of factors that might have affected the academic performance of the students during the teaching and learning experience. The discussion centers around, levels of study repeated, modules failed, positive factors and negative factors. These factors are discussed below.

6.2.2.3. *Levels of study repeated*

It is important to note that the level of study repeated only applies to Group 1 because they are the students who failed. Table 6.8 below shows that most students repeated the second year of study (68%), with the fourth year repeated least (8%). According to Lehmann, Andrews and Sanders (2000: 8), the first pre-clinical years in medicine, especially the second year, with their focus on natural and basic medical science subjects, display a higher attrition rate, especially among black students.

Table 6.8: Level of study repeated

Year repeated	**Total**
1st year	12 (32%)
2nd year	25 (68%)
3rd year	8 (22%)
4th year	3 (8%)

6.2.2.4. *Modules failed*

The results in Figure 6.8 and 6.9 suggest that the second year of study presents as the most difficult one or one that presents with more challenges. The most number of modules are failed during that year of study, with some students failing up to five modules (*vide* 6.2.3.3). These results confirm the findings of other researchers (*vide* 1.2).

Table 6.9: Number of modules failed in a particular year of study

Year of study	1 module	2 modules	3 modules	4 modules	5 modules
1st year	14%	19%			
2nd year	14%	30%	14%	5%	3%
3rd year	11%	8%	5%		
4th year	5%	3%			

6.2.2.5. Factors that affected academic performance positively

In Figure 6.4 below, the most important factor that affected their academic performance most positively is understanding content. All of the students who passed testified to that. Two other factors that are almost as important are test/examination preparation and motivation, with 83% of students who passed believing that. More students who failed thought that support from family and peers affected their academic performance positively (77% and 69%). Furthermore, most of the students who passed (67%) thought that their study methods affected them positively as compared to the students who failed (58%). There was, however, no noteworthy difference between the two groups in terms of time management (64% and 66%), financial matters (56% and 58%) and the language of instruction (54% and 58%). Another finding worth noting is that only 39% of the students who failed thought that the attitude of lecturers affected their academic performance positively.

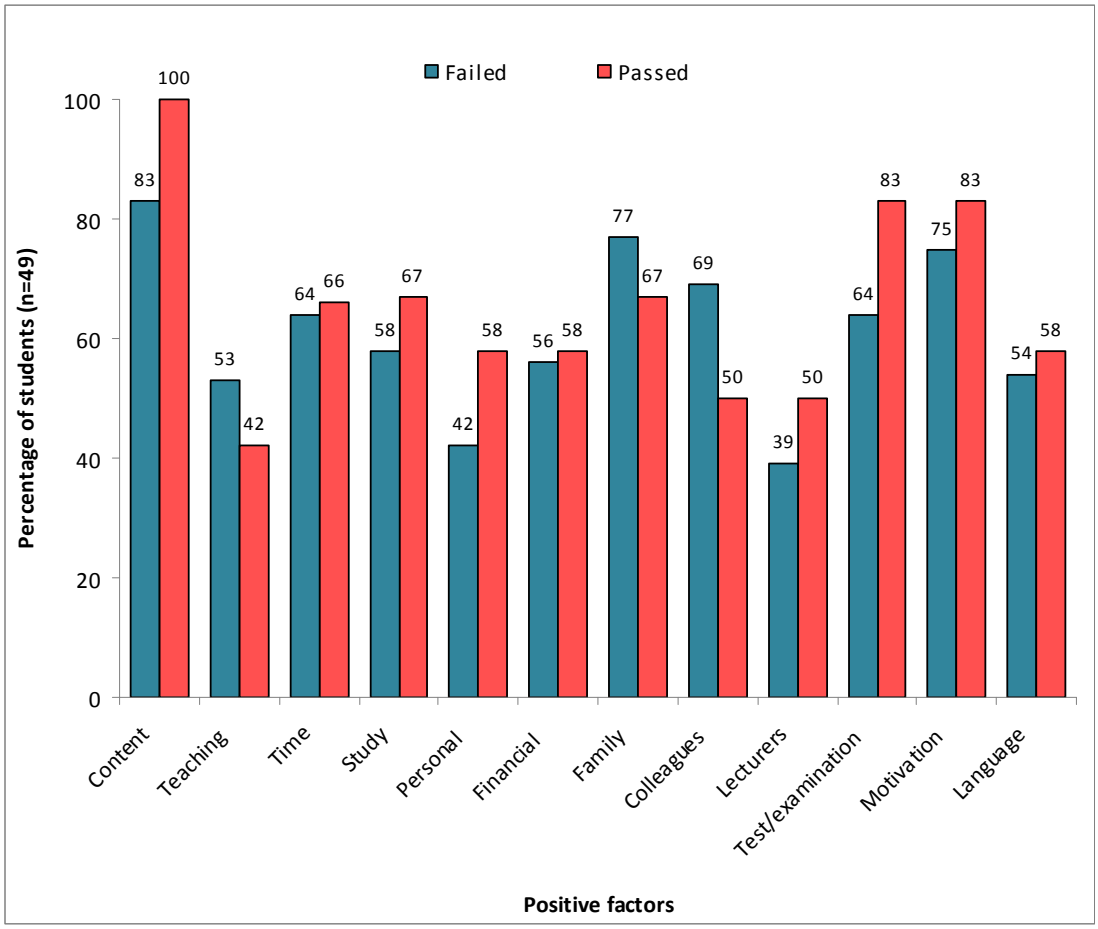
In summary, although the students in Group 1 failed, factors such as the type of teaching methods used and receiving support from family and peers might have assisted them to pass some of the modules. Factors that might have assisted the students who passed to perform better are: understanding of content, type of study method used, personal circumstances, test/examination preparation and motivation.

The most noteworthy factors that might have assisted both groups to perform better are:

- Understanding content

- Motivation to learn.
- Family support.
- Colleagues support.
- Good study methods.
- Test and examination preparation.
- Time management.

Other positive factors identified in the qualitative responses included: spiritual factors such as “relationship with the Lord”, “sisters in the Lord”; social and academic factors such as “participation in other activities”, “group discussions”, “dream to be a doctor”, “asking for help”.



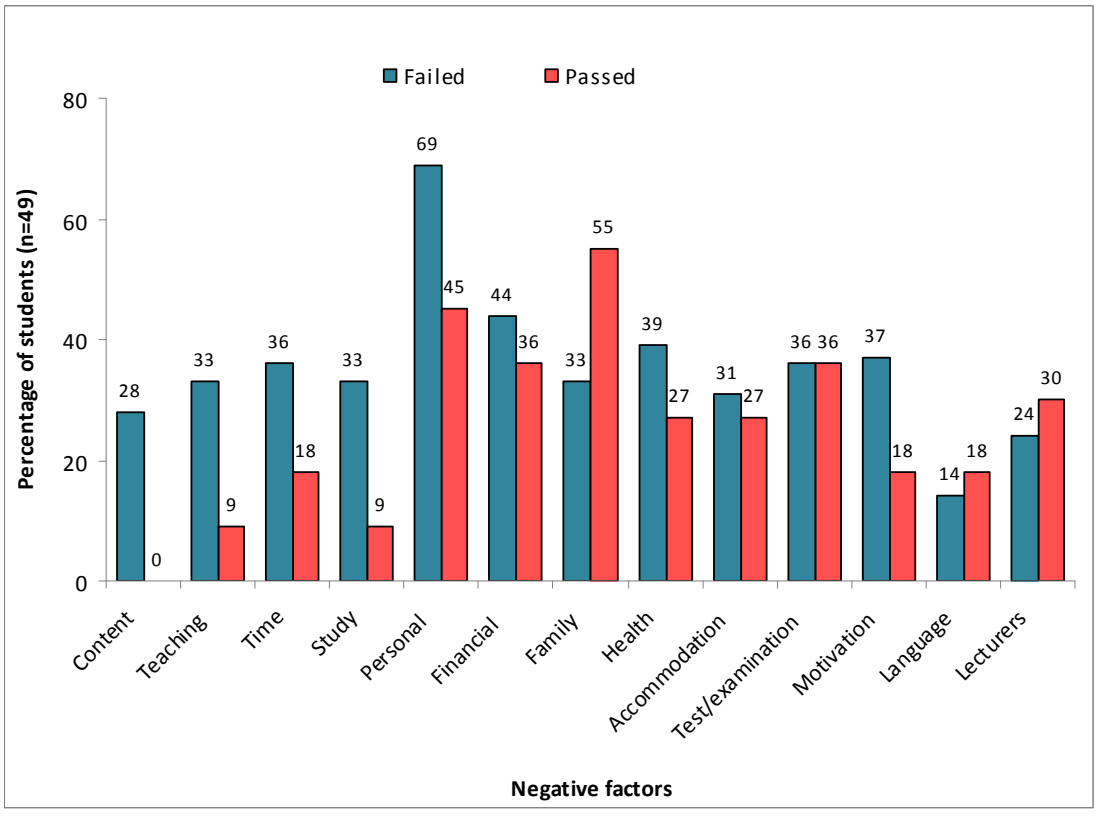
*** See Appendix E for more explanation of the factors**

Figure 6.4: Factors that affected academic performance positively

6.2.2.6. *Factors that affected academic performance negatively*

Figure 6.5 below shows that personal problems might have had a negative effect on the academic performance of the students who failed, whilst more students who passed experienced more family problems. It appears as if none of the students who passed were of the opinion that they had had problems with understanding content, with few of them (9%) being negatively affected by teaching methods and study methods. More students who failed seemed to have had financial problems than those that passed (*vide* 6.2.1.3). An equal number of students (36%) in both groups were negatively affected by test/examination preparation.

Some other problems cited by the students in the qualitative data included personal relationships, depression, stress, physical tiredness and lecturers' favouritism.



*** See Appendix F for more explanation of the factors**

Figure 6.5: Factors that affected academic performance negatively

In making a further analysis and comparison between Figure 6.4 and Figure 6.5 it can be concluded that the most important factors that might have assisted both groups to perform well are understanding content, family support, preparation for tests/examinations and motivation (Figure 6.4). The most important factor that seemed to have negatively affected the academic performance of a large number of the students who failed was personal problems, whilst the one that seemed to have negatively affected the academic performance of a large number of students who passed was family problems (Figure 6.5).

6.2.3. "Thoughts shared"

In Section 4 of the questionnaire, the students were requested to share any thoughts about challenges that they faced and also give suggestions that might help in providing academic support and development for students in the faculty. The results and findings of this section are presented as positive and negative thoughts and are regarded as additional factors that might have affected their academic performance. In discussing the negative thoughts, a distinction is made between comments that are faculty related, lecturer related and those that are related to racism.

6.2.3.1. *Positive thoughts*

According to Swail, Redd and Perna (2003: 57), students exhibit positive thoughts in a climate that fosters self-pride and confidence. Three positive thoughts identified during data analysis were appreciation, faith and optimism.

6.2.3.1.1. *Appreciation*

The following quotations that showed appreciation were extracted from the data:

- "I am proud to be at UFS"

- "Thanks for Mrs. Jama and Dr. Beylefeld for being there for me".

- "Thank you for continuing to better our course".

- "DSLD keep up the good work".

From the above quotations, it is clear that students show appreciation for the university, the support offered through the services of the Division of Student Learning and Development (DSLD) and two staff members working in the division. These findings are in accordance with Table 6.7 (adjustment within the first six months), with a high number of students who indicated that they adjusted well to the faculty environment.

6.2.3.1.2. *Faith*

Two quotations relating to faith were:

- "My faith and trust in God has grown".

- "Pray".

Although only two faith-related responses were given, this thought was also expressed in the other qualitative findings (*vide* 6.2.2.5) and were also stated by some students during extensive engagement regarding their studies with the researcher.

6.2.3.1.3. *Optimism*

The following quotations are an indication that students can still be positive in a negative environment.

- "I was negative until I failed 3rd year and then became positive".

- "People should look at the positive side of things, not only the negative because life is not absolute and does not move in a linear, pray and look forward even in the negative".

- "I am not proud to have failed, but I am stronger - I made new friends, have more opportunities and experiences".

The optimistic quotations that were expressed by the students who had failed during their studies are an indication that they have accepted that failure is part of life and realise that in spite of their failures they can still persist. Swail, Redd and Perna (2003: 59), who state that students who are satisfied with and optimistic about their campus climate often persist, support this notion of optimism and persistence. Furthermore, drawing from other findings (*vide* Figure 6.4) it can be concluded that the level of motivation helped these students to persist in spite of their failure. In interacting with students during consultations, some students had shown and expressed this optimism.

6.2.3.2. *Negative thoughts*

According Swail *et al.* (2003: 58), in a climate where students experience racism and discrimination, negative thoughts are exhibited. Furthermore, according to the authors, another characteristic that influences the social and academic integration of students is their personal academic relationship with faculty. Negative thoughts identified during data analysis are racial prejudice, curriculum constraints and the attitude of lecturers.

6.2.3.2.1. *Racial prejudice*

Negative thoughts associated with racial prejudice and discrimination that emerged from the data are as follows:

- "We are at the mercy of White Afrikaans lecturers".

- "We need to get through racial tension. I would like to be judged by my knowledge, not by my skin".

- "White students should stop behaving like they know what is good for us".

- "Address racial issues".

The quotations above indicate that students might have experienced racism from both lecturers and their fellow-students. Racial remarks and discrimination are demeaning to students and some of them, according to Swail *et al.* (2003: 59) go unnoticed because they are not reported. This notion is supported by what the students have said to the researcher during extensive engagement during consultations about their studies. In brief, this research has given the students an opportunity to report incidents of racism. In addition, during interaction with the researcher, some Black students had also stated that they had experienced and/or perceived some form of racism in the university and the faculty.

6.2.3.2.2. *Curriculum constraints*

The following are quotations regarding dissatisfaction with some aspects of the curriculum:

- "As a medical student I have been alienated from the rest of the campus, friends and family due to the unfair and unreasonable demands".

- "Medicine is too overrated in this university".

- "We don't know what to study".

- "Students are expected to work like robots".

- "Be careful that MOST students are on antidepressants because of the pressure in the faculty".

- "The new curriculum is not working, recheck it, it's breaking the students".

- "It's stupid how this faculty expects us to function - we do not study to understand".

- "Do something about this present curriculum".

- "Change the new curriculum - the IMA (Integrated Medical Curriculum) does not work, even lecturers do not understand it".

- "A student doctor is a human being who has a social life, family and personal space like everyone else, the medical school at this university really dissolves all these other spheres and the faculty has lost good doctors because of this".

It is clear from the many quotations above that students are not satisfied with the new curriculum and the pressure it has on them is so much that, according to one student, "MOST" are on antidepressants. These quotations support the findings of a study by Alison, Scribante and Krüger (2008: 277) who found that medical students are exposed to emotional and psychological stress. In addition, according to the records of consultations held and during interaction with the students, some students had also raised similar concerns about the curriculum.

6.2.3.2.3. *Attitudes of lecturers*

The following quotations express the negative thoughts among some of students about their lecturers. These thoughts may in several cases be minority opinions that do not reflect the general feelings obtained from the quantitative data:

- "Lecturers do not understand the problems of disadvantaged students".
- "Lecturers to be part of the solution not problem".
- "Some students get 'special treatment"'.
- "Lectures to encourage us not discourage us".
- "Lecturers not to mock students by saying things like "lets ask the wisdom in the class", "glad you could join us again and grace us with your presence".
- "We have lost the art of caring and humanity in this faculty".
- "Our classes are not that large to inhibit lecturers from knowing students who need attention".

According to Chepchieng, Mbugua and Kariuki (2006: 80) a lecturer-student relationship is viewed as a helping hand in which the student perceives that the lecturer has his or her best interest at heart. This type of relationship prevents students from having negative thoughts about the campus and helps them to persist in their studies. In addition, according to the authors, when there is an appropriate lecturer-student relationship that facilitates both formal and informal interactions, the lecturer would transmit more than just knowledge and skills. The negative thoughts, as reflected in the quotes by students, indicate that such a relationship does not exist between some students and some lecturers and can hamper their learning. These thoughts complement the findings portrayed in Figure 6.4, with only 39% of the students that failed and 50% of the students that passed being of the opinion that the negative attitude of lecturers affected their academic performance.

Two other isolated negative thoughts shared by the students were "I hate this university, can't wait to finish" and "I can go to town and still not finish

commenting". These thoughts seem to be from students who might have experienced very negative circumstances in the university and/or faculty.

6.3. SUMMARY

In summarising this chapter, it is important to remember that one of the objectives of this study was to determine factors affecting the academic performance of undergraduate medical students at the UFS, thereby determining the specific needs of students studying medicine as a field of study comprising subjects which are perceived to be difficult, particularly by non-traditional students. An integrated and holistic approach for the academic support and development of these students will then be developed.

From the biographic data collected, it is clear that the attrition rate of non-traditional students (Blacks) is much higher than that of the traditional students. The results also correspond with the theoretical perspectives discussed in Chapter 2 of this study, because they show that students from public schools in the townships, usually referred to as disadvantaged schools, are under-prepared for tertiary education, hence their high attrition rate.. In addition, the results show that prior academic skills such as good study methods and writing skills might have a positive effect on academic performance. In addition, the merits and/or awards received by the students who passed might be an indication that they were academically prepared for university studies.

Another factor worth mentioning, as highlighted in Chapter 2, is the financial problems of non-traditional students. From the results, a large number of students who passed had received bursaries as compared to those who failed. The results also show the importance of understanding content, time management, test/examination preparation and motivation as positive factors affecting the academic performance of students. It is also important to note the value of fellow-

students and family support as factors that have affected the academic performance of both groups positively.

Of note again is the negative response on the lecturers' attitude by the students who failed. Another factor that negatively affected the academic performance of the students who failed is personal problems. Although no specific data were obtained as to what these problems are, this factor can be regarded as one of the factors that affect the academic performance of non-traditional students and should be further explored.

Since the ultimate aim of this study is to design an academic support and development programme for non-traditional undergraduate medical students, the results and findings highlighted above will be taken into consideration when designing such a programme.

6.4. CONCLUSION

In this chapter, the results and findings of the questionnaire that investigated factors affecting the academic performance of undergraduate medical students in the University of the Free State were discussed. The most important findings obtained from the investigation will be incorporated in the following chapter and will be used in the design of an academic support and development programme for these students.

The following chapter will be a discussion of the results and findings of the questionnaire used to investigate structures and strategies used to support and develop the undergraduate students.

CHAPTER 7: RESULTS, FINDINGS AND DISCUSSION OF STRUCTURES AND STRATEGIES USED TO SUPPORT AND DEVELOP STUDENTS

7.1. INTRODUCTION

Chapter 5 of this study provided a theoretical background on the research design, methodology and approach used to firstly, investigate factors affecting the academic performance of undergraduate students admitted at the University of the Free State's (UFS) medical school and secondly, to determine the type of structures and strategies used to support and develop them. In the previous chapter, the results and findings from the questionnaire administered to investigate the above-mentioned factors were discussed. In this chapter, the results and findings from the investigation of structures and strategies used to support and develop the students and comments from peers are discussed. As in the previous chapter, both quantitative and qualitative results and findings will be discussed by comparing Group 1 and Group 2 students. Group 1 comprised 37 students all of whom had failed a year of study. Group 2 consisted of 12 non-traditional students who had obtained a distinction in more than 50% of their modules in the second-year examination. In order to simplify the results and findings for the purpose of graphic presentation, Group 1 is referred to as students who failed whilst Group 2 is referred to as students who passed.

7.2. RESULTS, FINDINGS AND DISCUSSION FROM QUESTIONNAIRE

The results and findings of Section 3 and Section 4 of the questionnaire are discussed. Questions from Section 3 comprised the academic support and development of students and Section 4, which was titled "thoughts to share" provided the students with the opportunity to share any positive and negative thoughts about challenges that they faced and also provide suggestions that might

help in providing academic support and development for students in the faculty. These thoughts and suggestions were incorporated in the findings of Section 3 and are therefore not discussed separately.

The results, findings and discussion are divided into four areas. The first area is the effectiveness of the structures and strategies provided by the university to support and develop students. The second area is the experiences of the students with the academic support and development structures and strategies provided by the Faculty of Health Sciences (FHS). In the third area, the students were requested to provide information on any other structure or strategy that they were using to support and develop them. In the last area the students were requested to recommend any other structure or strategy that can be used to support and develop them.

7.2.1. Effectiveness of academic support and development structures and strategies of the university

In this part of the questionnaire, the students were requested to: firstly, rate the effectiveness of the academic support and development structures and strategies of the university using a five-point Likert scale ranging from “very effective”, “effective”, “ineffective”, “very ineffective” to “do not know”; secondly, indicate whether they were made aware of the structures and strategies when they arrived at the university; thirdly, indicate which of the structures and strategies they were not made aware of; and lastly, give comments about any of the structures and strategies.

The results and findings on how the students perceived the effectiveness of the structures and strategies used by the university to support and develop them are reported in Figure 7.1 below. In this figure, the “very effective” and “effective” responses are grouped together, the “ineffective” and “very ineffective” responses

are grouped together and the "do not know" responses are labelled as "uncertain". The full table of results is included as Appendix G.

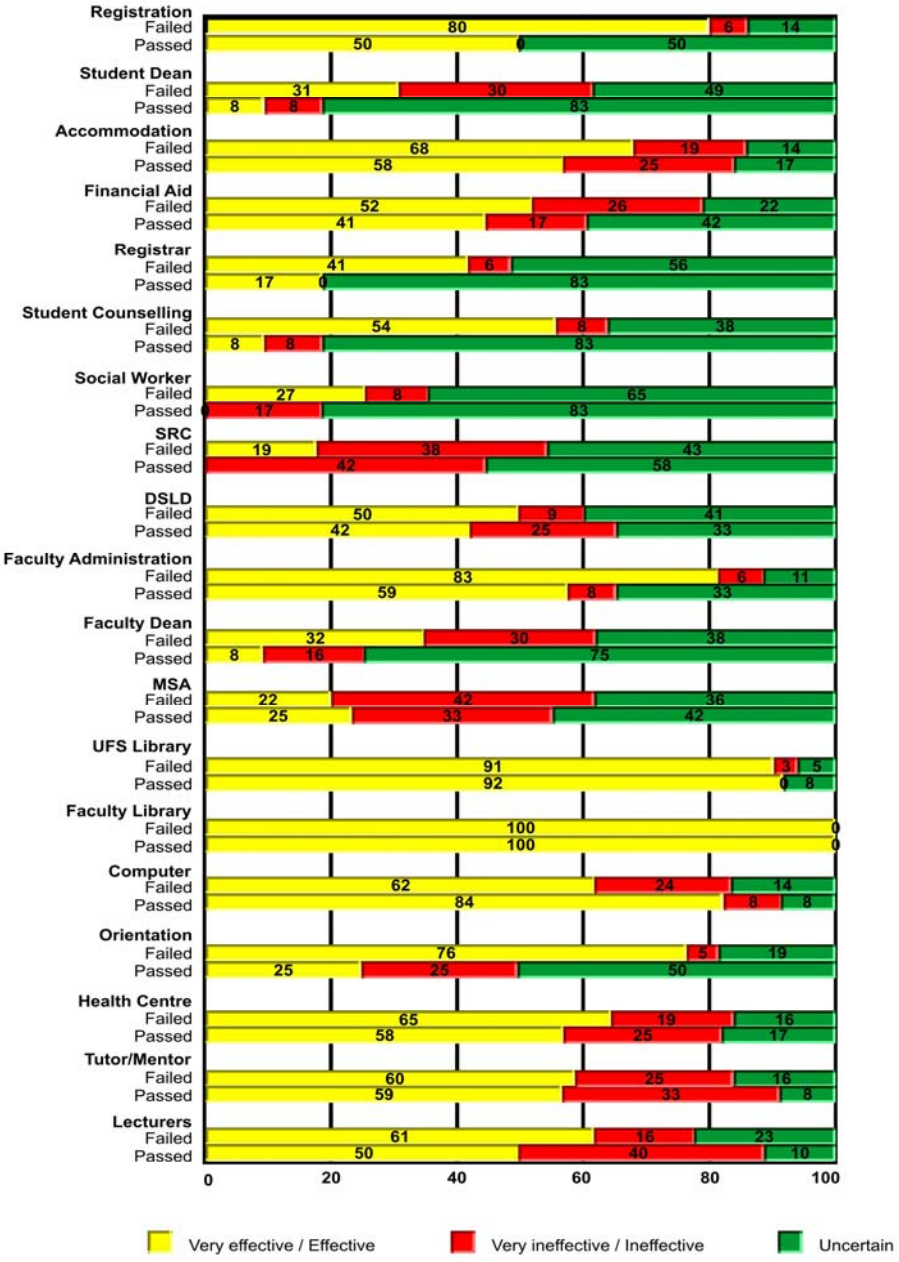


Figure 7.1: Effectiveness of the academic support and development structures and strategies of the university

What is reflected figure 7.1 above is that most responses fall on the positive side of the scale (very effective/effective). Most of these structures and strategies were perceived to be very effective/effective by the students who failed. One of the students described the faculty library as "very effective and convenient". Another student gave the following comment about the faculty administration: "It's fantastic, we do not have to go to the main administration".

It is pleasing to note that most of the students in both groups did not have a negative perception about the effectiveness of most of the structures and strategies, except in the case of support by lecturers. According to the results, 40% of the students who passed had a perception that the support of the lecturers was ineffective/very ineffective. It is interesting to note that in the results of the previous chapter (*vide* Figure 6.4), only 39% of the students who failed and 50% of those that passed were of the opinion that the attitude of the lecturers affected their academic performance positively. Negative comments about the attitude of the lectures were also reported in the previous chapter (*vide* 6.2.3.2.3). These results show that most of the students who passed had a negative perception about the effectiveness of the support of lecturers. Other negative comments related to the faculty dean were "Faculty Dean needs to start being for students and not against students, needs to be more transparent" and "students returning from this office return unsatisfied, their problems not solved, not student friendly at all".

It is important to note that most of the students who passed were uncertain about their perception of the effectiveness of structures and strategies such as the student dean's office, the registrar's office, student counseling services, the social worker and the faculty dean's office. It might be that these students did not need these services and therefore did not make use of them and hence could not evaluate their effectiveness.

In response to the question whether the students were made aware of the structures and strategies when they arrived at the university, 54% of the students

who failed indicated that they were made aware of the services as compared to 25% of those that passed. It means that 48% of the students who failed and 75% of those that passed were not made aware of the structures and strategies. These results indicate that although most students were of the opinion that the support and development structures and strategies of the university were effective, there were still a large number of students, especially among those that passed (75%), who were not made aware of these services when they arrived at the university. This might be identified as one of the shortcomings of the orientation programme since students are usually made aware of the structures and strategies during orientation. In addition, students might have forgotten about the existence of such services because of the overwhelming orientation programme.

The results of the question asking students to indicate which structures and strategies they were not made aware of are not deliberated further because not one of these 15 services listed in the questionnaire was mentioned by more than one student.

In general, the results show that the perception of most students was that the support and development structures and strategies of the university are effective. It means that the university is fulfilling its role of providing structures and strategies to support and develop students as stipulated in the National Plan for Higher Education (*vide* 4.11). According to the national plan, institutions should also evaluate the effectiveness of the structures and strategies and rectify their shortcomings. This study seems to have fulfilled this requirement and might help the university to rectify some of the shortcomings such as making the students aware of the services. It is foreseen that the newly established Department of Student Development and Success (*vide* 3.5.3), might help to rectify some of the shortcomings. Contrary to the students' perception that the structures and strategies are effective, there seems to however, be a high attrition rate of Black undergraduate medical students (*vide* 6.2.1.1).

7.2.2. Experiences with academic support and development structures and strategies of the faculty of health sciences

In this part of the questionnaire students were requested to indicate how they experienced the academic support and development structures and strategies of the FHS by:

- rating certain components of the curriculum;
- pointing out whether the General Skills Module (MEA 112) helped them with their academic work;
- stating whether they consulted the Division of Student Learning Development;
- indicating how they experienced mentoring/tutoring;
- stating whether they consulted a lecturer for assistance or not;
- indicating whether they attended tutorials offered by lecturers or not;
- mentioning any other support they received; and
- giving recommendations on how other students who had experienced the same problems can be assisted.

7.2.2.1. Experiences with the curriculum

Students were asked to rate some components of the curriculum using a Likert scale ranging from “Always”, “Sometimes”, “Never” to “Not applicable”. These components were divided into three areas, namely organisation of the curriculum, teaching and

learning within the curriculum, and lecturers' contributions in the curriculum. These components are discussed below.

7.2.2.1.1. Organisation of the curriculum

Table 7.1 below summarises responses related to the organisation of the curriculum.

Table 7.1: Organisation of the curriculum

	Always		Sometimes		Never		Not applicable	
Aspects that were rated	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**
Modular outcomes are clear	41	42	59	58	0	0	0	0
The work-load is manageable	0	0	70	92	30	8	0	0
The content is easy to understand	19	17	76	83	5	0	0	0
I know what is required in each module	30	42	70	58	0	0	0	0
The class time-tables are structured properly	32	42	43	50	24	8	0	0
The learning material is helpful	46	58	51	42	3	0	0	0
There is alignment between outcomes, content, teaching and assessment	28	17	64	75	8	8	0	0

In the table above, most of the students in both groups were of the opinion that the curriculum was sometimes well organised. There were, however, those that fell more on either the positive (always) or the negative (never) side of the scale. Most of the students in both groups were of the opinion that the learning outcomes were clear and that the learning materials were helpful. It is important to note that none of the students were of the opinion that the workload was manageable at all times. In addition, almost a third of the students who failed (30%) were of the opinion that

the workload was never manageable. This finding about the unmanageable workload is also supported by some comments in the previous chapter (*vide* 6.2.3.2.2.).

7.2.2.1.2. Teaching and learning

In order to determine their experiences with the teaching and learning that takes place in the curriculum, the students were requested to rate the aspects listed in the table below.

Table 7.2: Teaching and learning

	Always		**Sometimes**		**Never**		**Not applicable**	
Aspects that were rated	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**
Teaching methods suit content	16	25	73	75	8	0	3	0
The assessment methods are fair	19	25	65	67	14	8	3	0
Teaching methods suit learning style	14	8	68	92	16	0	3	0
I am motivated to learn in this curriculum	30	58	59	25	11	17	0	0
Group work facilitates learning	19	17	56	58	25	25	0	0
I am able to function as an independent learner	50	75	50	25	0	0	0	0

Most students in both groups were of the opinion that the teaching and learning that takes place in the curriculum was sometimes effective. The two aspects that seemed to be perceived positively by both groups were motivation to learn and that the curriculum enabled them to function as independent learners. Of note is that in the previous chapter (*vide* 6.2.2.5) the level of motivation was considered to be one of the important factors that affected the academic performance of the students positively. It means that motivation can be regarded as one of the most important

factors in facilitating teaching and learning and also in influencing the academic performance of students.

7.2.2.1.3. Lecturers' contribution

In this part of the questionnaire, students were requested to indicate how they experienced the lecturers' contribution in the curriculum by rating the listed aspects in the table below.

Table 7.3: Lecturers' contribution

	Always		Sometimes		Never		Not applicable	
Areas that were rated	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**	**GR1 %**	**GR2 %**
Lecturers have the capabilities to make us understand content	27	33	68	67	0	0	5	0
Lecturers are concerned about students' development	14	17	59	58	24	25	3	0
Lecturers are willing to give extra support to students	16	25	68	67	14	8	3	0
Lecturers are sensitive to diverse students' needs	3	8	53	58	33	33	11	0
Lecturers are enthusiastic about the curriculum	6	17	61	67	14	0	19	17

Table 7.3 above shows that the responses of most students in both groups were mostly in the middle of the scale (sometimes). There were, however, areas of this component of the curriculum that seemed to be more on either side of the scale (always and never). Most of the students in both groups were of the opinion that lecturers were capable in helping them to understand content. In addition, most of the students who passed were of the opinion that the lecturers were willing to help them with extra support. However, most of the students in both groups thought that lecturers were not concerned about them and were not sensitive towards their needs. It is important to mention that as discussed in 2.2.2, a student's belief that

lecturers are committed to teaching and learning is regarded as one of the factors that determine the academic integration into the university environment.

In general, the results in Tables 7.1, 7.2 and 7.3 showed that most of the students in both groups were of the opinion that the organisation of the curriculum, the teaching and learning that takes place in the curriculum and the contribution of the lecturers only "sometimes" facilitated their learning. This finding might be regarded as a shortcoming in the curriculum and could be supported by the comments reported in the previous chapter (*vide* 6.2.3.2.2). According to the International Centre for Student Retention (*vide* 3.2.2), continued development of curricula and pedagogic practice is one of the important and fundamental areas that institutions must address to improve student retention. In addition, according to the Student Life Cycle model of the Higher Education Funding Council for England (*vide* 3.3.1), one of the strategies that can be used to widen access and participation of students in higher education is to provide learning, teaching and curriculum support arrangements throughout the course of study.

7.2.2.2. General Skills Module

In this part of the questionnaire, the students were requested to indicate whether the General Skills Module helped them with academic work or not. This is a module offered in the first year of the undergraduate medical programme and one of its aims is to help students to acquire academic skills. In response to this question, most of the students who failed (72%), were of the opinion that the module did help them with their academic work, whilst a third of those that passed (33%), were of the opinion that the module did not help them with their academic work. Some of those that were of the opinion that the module did help them with their academic work stated that they acquired computer, study and presentation skills. Furthermore, these students said that the module had helped them to be independent thinkers, to master medical terminology, to work in groups and to use a proper reference technique. Some of those that indicated that the module did not help them with

academic work were of the opinion that the module was irrelevant and that was a waste of time as they already possessed those skills.

The responses and comments above correspond with the results and findings reported in Chapter 6 (*vide* 6.2.1.6), which showed that students, especially those that passed did possess some of the academic skills before entry into the university environment. It might be that those students that were of the opinion that the module helped them with academic work are those that come from disadvantaged schools where these skills are not taught and therefore they felt that the module was valuable.

7.2.2.3. Division of Student Learning Development

The Division of Student Learning Development (DSLD) supports students with academic, social and personal problems by either calling them in for a consultation or the students attend voluntarily (*vide* 3.5.3). For this part of the questionnaire, the students were requested to indicate whether they were called in for a consultation or not, whether they attended the consultation or not and whether the consultation had helped or not. The table below shows the response of the students to the above-mentioned questions.

Table 7.4: Support in DSLD

	Yes		**No**	
Question	**Group 1**	**Group 2**	**Group 1**	**Group 2**
Were you called in for a consultation or not?	58%	42%	42%	58%
Did you attend the consultation or not?	95%	100%	5%	0%
Did the consultation help or not?	70%	60%	30%	40%

The table above shows that more of the students who failed (58%) were called in for a consultation. Most of them, in both groups, did attend the consultation, while

all of those that passed had attended. In addition, most of the students were of the opinion that the consultation did help.

In an effort to obtain more data, the students were requested to comment about the services of the DSLD. Most of the comments were positive, with some students stating that the division helped them with an approach to multiple choice questions, study methods and even organising a mentor for them. Another comment was from a student who stated that he/she went voluntarily to the DSLD for stress-related problems.

From the results and comments stated above, it can be concluded that the students did make sufficient use of the DSLD and had a positive perception about the services offered in this division. These results are also supported by comments reported in the previous chapter (*vide* 6.2.3.1.1).

7.2.2.4. Mentoring/tutoring

In responding to the question whether they were mentored/tutored or not, 81% of the students that failed, as compared to 100% of those that passed, indicated that they were mentored/tutored. Furthermore, 67% of the students that failed thought that the mentoring/tutoring was effective as compared to 58% of those that passed. It is worth noting that all the students who passed were mentored/tutored, but only slightly more than half (58%) thought that the mentoring/tutoring was effective.

Those students that stated that the mentoring/tutoring had helped were requested to explain how it had helped them. Some of those that were mentored/tutored stated that mentoring/tutoring helped them by: “keeping up to date”, “getting tests and extra notes from the mentors/tutors”, “explaining what to expect in each module”, “providing assistance in understanding difficult parts”, “giving tips on how to handle specific modules and which study methods to use for a particular module”. In addition some of the students stated that mentors/tutors helped them to ask for help and to be acquainted with the senior students.

Students who stated that the mentoring/tutoring did not help, gave the following reasons: “differences in cultural and racial backgrounds”, “lack of contact because the mentor/tutor was also busy with his/her studies”, “lack of knowledge from the mentor/tutor” and “not coming to our level”.

The comments stated above are typical in mentor/tutor programmes where students usually need help with tips, previous question papers, notes and how to handle modules which are perceived to be difficult, with differences in races and lack of time being some of the challenges in mentoring/tutoring programmes. These are issues identified by the researcher (as the coordinator of the mentor-tutor programme) during evaluations of the mentor-tutor programme.

7.2.2.5. Consultation with lecturers

Sixty nine percent (69%) of the students who failed stated that they did consult lecturers when they had academic problems, as compared to only 25% of those that passed. The results further showed that only 48% of the students who failed were of the opinion that these consultations were effective, as compared to 67% of those that passed.

Reasons provided for not consulting lecturers were that students did not need help, preferred to use books and study material provided, preferred reading on their own and/or asked questions in class. Other reasons were that they were afraid of the lecturers, with some feeling that the lecturer caused more confusion.

Although it is pleasing to note that most of the students who failed did consult lecturers, it is of concern that only a few of them were of the opinion that the consultations were effective. There were even students who feared going to consult lecturers. Some of the comments stated in the previous chapter (*vide* 6.2.3.2.3) and in this chapter (*vide* 7.2.1 and 7.2.2.1.3) could be the reasons why students fear going to the lecturers.

7.2.2.6. Tutorials by lecturers

In this part of the questionnaire, students were asked whether they attended the tutorials offered by lecturers or not. In addition, the students were requested to indicate whether the tutorials were effective or not. A three-point Likert scale ranging from "Always", "Sometimes" to "Never" was used.

Table 7.5: Attendance of lecturers' tutorials

	Always		**Sometimes**		**Never**	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
Attendance	51%	67%	49%	17%	0%	16%

As indicated in the table above, more students that passed (67%) always attended tutorials as compared to those that failed (51%). It is possible that the reasons for not attending the tutorials are the same as not consulting lecturers as stated above (*vide* 7.2.2.5).

Of the students that attended the tutorials, 94% of those that failed were of the opinion that the tutorials were effective as compared to 100% of those that passed.

In response to the question on how the tutorials had helped them, some of the students stated that they gained better understanding of the content; they received individual attention; got tips on how to understand the module; had a chance to ask questions; and that the content was simplified during these consultations.

In general, most students made use of the support and development structures and strategies provided in the faculty. However, most students perceived the components of the curriculum to be "sometimes" effective. The strategies that were perceived to be ineffective were, for the students who passed, the module on General Skills, whereas the students who failed singled support by lecturers as least

effective. It therefore means that the faculty might have to review these components of the curriculum.

7.2.3. Extra support

In this part of the questionnaire, the students were asked to mention any other support they received. In their response, some of them mentioned that they relied on spiritual support as well as support from senior friends and colleagues. In Chapter 6 (*vide* 6.2.2.5*),* the importance of colleagues' and family support was regarded as one of the important factors that affected the academic performance of students positively.

7.2.4. Recommendations

In the last part of the questionnaire, the students were requested to give recommendations on how other students who experienced problems similar to theirs could be assisted. The recommendations that they gave were divided into three categories, namely those that were directed to fellow-students, those that were directed to the lecturers and those that were directed to the FHS.

7.2.4.1. Recommendations directed to fellow-students

Students recommended that their peers should first admit that they have problems and they should seek help as soon as possible from friends or family, and make use of available resources. In addition, the students recommended that their peers should take responsibility by working hard, studying in advance for tests and examinations, be disciplined, manage their time correctly and make sure that they understand what they read.

From the recommendations above, it is clear that students realise that they are primarily responsible for their own learning if they want to succeed in their studies. Aligned to the findings of the empirical investigation (*vide* 6.2.2.5), two

recommendations, namely understanding content and support by family and friends, were recommended as of utmost importance for achieving academic success.

7.2.4.2. Recommendations directed to lecturers

In making recommendations for lecturers, some of the students made a request that lecturers should realise that there are weak students who need special attention and instead of condemning and demoralising them, they should motivate, support and even give them extra tutorials. Such comments and recommendations were also mentioned in Chapter 6 (*vide* 6.2.3.2.3).

7.2.4.3. Recommendations directed to the Faculty of Health Sciences

Most of the recommendations were directed to the faculty and were related to the curriculum, health and the type of support to be given to students.

Firstly, curriculum-related recommendations included excluding parts that are irrelevant from the curriculum, scheduling tests and examinations fairly and reducing the workload of the students. It is important to note that a comment about the unmanageable workload is also aligned to the previous findings of the empirical investigation (*vide* 6.2.3.2.2 and 7.2.1.2.1).

Secondly, recommendations related to health issues included: watching out for signs of depression and anxiety among students, conducting yearly psychiatric examinations on students and having a social worker and psychologist in the faculty. These recommendations are also related to one of the comments about health made by students in Chapter 6 (*vide* 6.2.3.2.2), which was that the staff should be careful since most students are on antidepressants because of the pressure in the faculty. This comment and the findings mentioned about the workload above might be an indication that the medical curriculum is overloaded and might lead to anxiety and depression, hence the need for a social worker and psychologist in the faculty.

Lastly, the students gave many recommendations about the support that should be provided. According to the students, this support should first start by identifying weak students, providing early mentoring, providing help to solve personal, academic and financial problems and making sure that students have food, fees and accommodation. Furthermore, the students recommended that the faculty should help in establishing a medical residence and should have a holiday school for those who write second examinations. There were also recommendations for support such as providing transport and mentoring in the clinical years.

7.3. COMMENTS FROM PEERS

The following comments and recommendations about the draft programme of action were received from the two peers:

- A more contextual definition of non-traditional students, given the history of the country.
- Specialised academic support during the clinical years since students experience new and distinct challenges during these years.
- Provision of targeted orientation during specific phases of the academic and social integration.
- Provision of mentoring by role-models who are also non-traditional students.
- Encouraging students to continue engaging with their studies during the holidays.

7.4. SUMMATIVE PERSPECTIVES

In summarising this chapter, it is important to remember the research question of this study, namely: "What actions can be taken to combat the high attrition rate of non-traditional undergraduate medical students?" Based on this question, the aim of this chapter was to evaluate the effectiveness of the structures and strategies in the university, obtain information about the experiences of students with specific

structures and strategies in the FHS and request the students to make recommendations for further support and development.

According to literature (*vide* 3.1) different institutions around the world have developed different structures and strategies to provide academic support and development to increase retention, but not all these efforts have the desired effect. In South Africa, universities have developed a range of support and development structures and strategies since the early 1980s when historically white institutions started admitting black students (*vide* 3.1). The University of the Free State, being one of the historically white institutions has also developed support and development structures and strategies following access of historically disadvantaged students to the institution. From the results and findings discussed, it seems as if most of the students in the faculty were of the opinion that most of the services of the university and faculty are effective. Of note is that this opinion was held by most of the students who failed, who according to the results in Chapter 6 (*vide* 6.2.1.1) are mostly Blacks. Although the results show that some of the students, especially those that passed, were uncertain about the effectiveness of some of the services, it could be that these students did not have problems that warranted their use and therefore could not evaluate their effectiveness.

Although the students were of the opinion that the support and development structures and strategies of the university and the faculty were effective, of concern is the response about the curriculum, with most students thinking, without exception, that almost all the different components of the curriculum were at best "sometimes" effective in facilitating their learning. What is also of concern is that none of the students thought that the workload was manageable. The repeated perception about the unmanageable workload is worth noting.

Two other important negative perceptions to be noted are about the lack of concern and sensitivity of lecturers. Coupled with these perceptions are the negative comments about the attitude of lecturers mentioned in the previous chapter (*vide*

6.2.3.2.3). Such negative perceptions could be due to lack of knowledge about the specific problems of students, especially non-traditional students. It seems as if lack of knowledge about students' problems and retention is not a UFS problem only. According to literature (*vide* 3.4.1 b), some universities have identified the importance of providing information about student retention issues. For example, the Edith Cowan University of Australia has designed a website that contains information on the cause of poor student retention and attrition within the university for their teaching staff. Another example is that of the James Cook University of Australia. In this university, the teaching staff and the learning development staff work together in identifying and analysing the causes of student attrition (*vide* 3.4.2). Such initiatives might help the staff at UFS to understand the problems of the students better and become concerned and sensitive to their needs.

Of note again are the many recommendations that the students directed to the FHS. This might be an indication that students expect the faculty to provide more support and development than what has been offered so far. Other important findings worth noting are: the unmanageable workload, repeated mention of stress, anxiety and depression and even recommendations for yearly psychiatric evaluations and the need for the services of a psychologist and social worker in the faculty. Although there are psychologists and a social worker for all students in the university, it could be that medical students need their own services in the faculty, with the hope that these professionals (psychologist and social worker) will deal with their specific needs. It is important to note that in Chapter 6 (*vide* 6.2.2.6) most of the students who failed (69%) indicated that personal problems affected their academic performance negatively. The idea of a specialist support in the faculty is supported by the action on access team (*vide* 3.3.1), which recommends that one of the actions that can be taken to increase students' retention is by providing a "one stop shop" service for personal, social and psychological support (*vide Table* 3.2*).* In the University of the Free State, the Division of Student Learning Development in the Faculty of Health Sciences might serve as a "one stop shop" service for the medical students.

In giving recommendations, students also highlighted the importance of early identification and support for weak students. Although the DSLD in the FHS does identify and give support to weak students, it could be these efforts are not implemented early enough. Other important recommendations worth mentioning are a request for a medical residence, mentoring and provision of transport in the clinical years. These requests have also been made when the researcher was having consultations with some students. Perhaps in the case of mentoring in the clinical years, the example of the London School of Medicine and the Queen Mary's School of Medicine in the UK can be considered. In these medical schools, medically qualified tutors with experience in clinical and communication skills and who have interest in medical education are allocated to fourth and fifth year students to monitor their academic progress (*vide* 3.3.3). The researcher is aware of the financial implications of providing a medical residence and transport for students in the clinical years. Perhaps the FHS can liaise with government to provide funding for the two initiatives since it provides funds for academic support (*vide* 3.5.2).

7.5. CONCLUSION

In this chapter, the results and findings of the questionnaire that was used to investigate the effectiveness of support and development structures and strategies of the university were discussed. In addition, the results and findings of the students' experiences with the different support and development structures and strategies of the Faculty of Health Sciences were discussed. Some of the results of Chapter 6 were also incorporated in this chapter.

The following chapter is the final product of this study, whose aim is to propose a programme for the academic support and development of non-traditional undergraduate medical students.

CHAPTER 8: PROPOSED PROGRAMME FOR THE ACADEMIC SUPPORT AND DEVELOPMENT OF NON-TRADITIONAL UNDERGRADUATE MEDICAL STUDENTS

8.1. INTRODUCTION

The previous chapters have provided a base for this chapter which is the final outcome of this study. Chapter 2 especially, which provided theoretical perspectives on factors affecting the academic performance of students, was the main foundation of the final outcome of this study. This chapter, as indicated above, being the final outcome of this study will present an integrated and holistic programme to combat the attrition of non-traditional undergraduate medical students. Firstly, a retention theory for non-traditional students, called "Circles of Progression", which is based on the theoretical perspectives discussed in Chapter 2, will be discussed. Secondly, the main findings of Chapters 6 and 7, which were the empirical investigations will be referred to, to justify the action plans that will be proposed in this chapter. Thereafter, the key concepts of the retention theory and the findings reported in Chapters 6 and 7 will be used to design the proposed programme.

8.2. RETENTION THEORY FOR NON-TRADITIONAL STUDENTS: CIRCLES OF PROGRESSION

A retention theory called "Circles of Progression" is proposed in this study. This theory is guided by the literature study on the theories of Spady, Tinto and Bean (*vide* 2.2.1, 2.2.2, 2.2.3) and is also based on the principles of theory-research cycle (*vide* 5.5). In addition, this is a "theory of action" that describes how an intervention, event or process will take a case from one situation to the other (*vide* 5.5). For the purpose of this study, the theory describes the progression of a non-traditional student from one stage of the social and academic environment to the other and actions that can be taken to smooth the progression, thus combating their

high attrition rate. These actions are based on data findings presented in Chapter 6 and 7.

The "Circles of Progression" theory proposes to contribute to building a retention theory for non-traditional students in a South African context. The following aspects of a student's progression in higher education will be taken into account: students' academic progression prior to entry into the university, initial entry into university, progression into the actual teaching and learning experience, and the ongoing social and academic integration into the university. Two other common variables, namely, finance and language will also be incorporated into the retention theory as they affect almost every stage of a student's life in the university.

The following diagram portrays the proposed theory for non-traditional students in the context of a South African higher education environment. The circles depicted in the diagram show progression of a non-traditional student from one stage of academic life to the other.

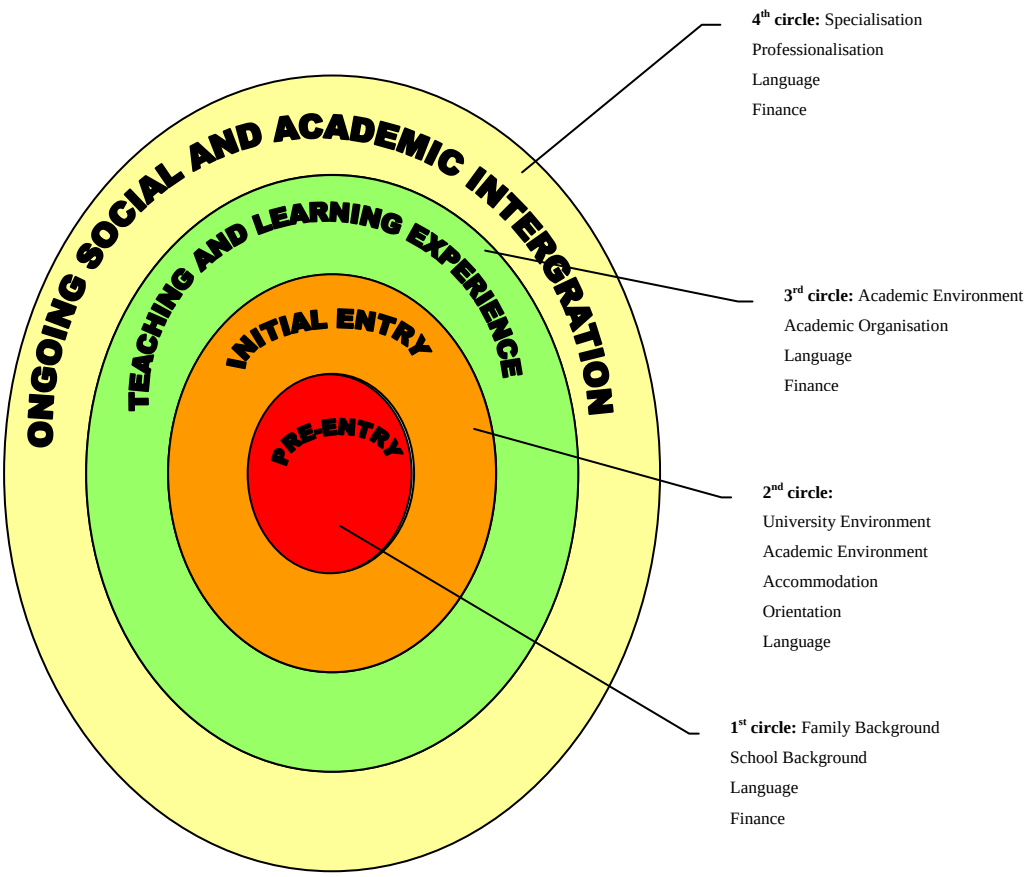


Figure 8.1: Retention theory for non-traditional students: Circles of progression

8.2.1. First circle: Pre-entry

According to this retention theory, a non-traditional student begins the path of academic life in the pre-entry circle. In this small circle, some non-traditional students find themselves within a family background without or with limited resources and support to help them with the integration in the second circle. Neither has the school background equipped the student with the necessary skills to help with the academic integration into university life (Berge & Huang 2004: 10). Presently the main concern in the school system is to produce good matriculation results without proper development of the skills needed for academic success, such

as language proficiency. In most cases, non-traditional students study English as a subject and study most of the other subjects in English, even though they have limited basic competence in reading, writing, listening and speaking (Ayliff & Wang 2006: 392).

The compounded financial difficulties of non-traditional students often begin in this first circle because they and their family lack knowledge about financial schemes and how to access these schemes. In some cases, the student and the family do not even realise that this phase will have financial implications for them (Johnstone 2004: 12). In certain instances, some of these students have been exempted from paying school fees and assume that the same will apply in the university. Generally, towards the end of this phase, students are highly motivated, especially so when they receive their matriculation results and realise that they have access to the next circle of their academic life (Johnstone 2004: 12).

8.2.2. Second circle: Initial entry

Movement into the second circle is a critical phase referred to as initial entry into the social and academic life of the university. Social integration entails a new environment in a big city and campus with new people from different backgrounds and cultures. Some students, who are from small schools in rural areas, have never been exposed to a culture different from their own (Toni 2002: 8).

Although universities have orientation programmes for the social and academic integration for all new students, the activities in these programmes are often very hurried and students are bombarded with a lot of information which they are expected to assimilate. Students are often overwhelmed by this type of exposure (Swail 2006: 3). In most cases, students who can afford to make use of university accommodation attend these programmes. Commuting students, on the other hand, often miss these programmes. According to the findings of a study conducted at the UFS to evaluate the first-year orientation programme indicate that the programme

has limited impact on the preparation of students for higher education. Another important finding of the study is that only 18% of students attend activities of the programme (Strydom 2007: 3).

It is in this circle that the financial problems of the students begin to take their toll when students realise that they need to obtain financial aid. Even if the students have secured financial aid in the form of loans or bursaries, problems arise because some loans are usually not enough to cover the total costs of the university and some bursaries are paid out late (Bukula 2004: 2). Some students do not receive any aid at all because of late applications or because they do not qualify for the aid. At times, the compounded financial difficulties are so severe that these students do not have accommodation, food and decent clothes.

Another complicating factor for non-traditional students is that some of them have never been separated from their families and thus have never been independent. This separation can lead to feelings of anxiety and frustration. It is also at this stage that students need to make new friends. If they fail to do so, feelings of alienation set in (Strahan 2001: 3). Besides the realities of social integration that characterise the initial entry, students now begin to be integrated into the academic environment. Here they are introduced to the academic organisation, structures and language of the university (Clift 2003: 10). Once again, this orientation is done in a very hurried manner and students are expected to grasp lots of information, which they will be expected to apply in the next bigger circle of teaching and learning, where the real business of university begins (Swail 2006: 3).

8.2.3. Third circle: Teaching and learning experience

When students enter the third circle, they begin to experience the realities of academic life. The realities of this new environment mean that students are introduced to their specific learning programmes. It is in this circle that students begin to learn about, inter alia, new methods of teaching, rules and regulations and

assessment methods (Toni 2002: 19). Furthermore, students have to get acquainted with big and different classroom arrangements, lecturers and classmates from different cultures and study materials which are arranged in different formats for every subject. Besides having to grasp subject-specific concepts, students have to learn the new language of teaching and learning such as a "semester", a "module", "module mark", "semester mark", "formative assessment" and "summative assessment".

If the financial problems of a student were not resolved during the previous circle, the teaching and learning environment continues to generate problems such as lack of study material. Likewise, because of financial problems, commuting students might miss classes and/or might not be able to attend early or late classes (Bennet 2003: 126). Some commuting students stay so far from the campus that when they arrive at home they are too tired to study. Besides missing classes and living far, commuting non-traditional students stay in homes where the family circumstances do not allow the student time, space and the support to study because the family itself does not understand the academic world (Clift 2003: 5). The effects of problems encountered in this circle include demotivation, loss of self-esteem, lack of confidence and subsequently poor academic performance (Strahan 2001: 3). Poor academic performance, in turn, is a vital factor determining movement into the greater and last circle of academic integration.

8.2.4. Fourth circle: Ongoing social and academic integration

In most cases the last circle, where students begin to specialise within a specific learning programme, is usually the last stage of academic integration. It is in this stage that students are prepared for their roles as professionals or specialists in a particular field. They are expected to apply the theoretical skills they learned in the previous circle in order to acquire professional or special skills. As in the previous circle, students are further introduced to a new academic language, a new academic

environment and they are expected to apply higher-order critical thinking skills (Lau 2003: 5 of 9).

Although students are about to complete their studies at this stage, they still need financial support. The finances needed at this stage might be specifically for equipment and traveling to different areas for putting professional or special skills into practice. Lack of equipment and transport might thus adversely affect the academic performance of students, even at this late stage of their academic life.

Although academic integration is more important at this stage, social integration is still needed as students still depend on the support of their peers to adjust in this academic environment. Besides peer support, students also need good role models in their particular academic disciplines. If students do not have the support from peers and role models, they might feel isolated (Martinez 2003: 17). Similar to the situation in previous circles, all the problems faced by the students in this circle might lead to poor academic performance, and thus failure or dropout.

The retention theory as depicted in the four circles of progression in the above diagram, and the discussion thereof, provide a holistic understanding of the realities and challenges faced by non-traditional students in a South African higher education environment. It is therefore important that every organisation, institution and everybody involved in the education of non-traditional students should be aware of these realities in order to understand and deal with one of the critical areas in higher education, which is student retention. The questionnaire that was used in the empirical investigation was structured according to the key concepts of this theory. The main findings that will be used to design the proposed programme for this study are listed below.

8.3. FINDINGS FROM LITERATURE AND THE EMPIRICAL INVESTIGATION

The findings from literature as presented in Chapter 2, 3, 4 and 8 as well as data presented in Chapter 6 and 7 are integrated in accordance with circles of the theory as described in the previous paragraphs. Subsequently these findings guide the proposed programme of action.

8.3.1. Pre-entry

Literature *(vide* 8.2.1) has shown that non-traditional students find themselves within a family and school background without or with limited resources and support. Furthermore, the financial and language problems of these students often begin during this period (vide 8.2.1).

According to data from the empirical investigation and extensive engagement with students, a large number of Black students failed (*vide* 6.2.2.1). Furthermore, from the data obtained, most of the students who failed had attended a public school in the township (*vide* 6.2.1.4) and prior scientific and pre-medical background might have enhanced the academic performance of students who passed (*vide* 6.2.1.5). Based on the findings presented in Chapter 6 *(vide* figure 6.1 and figure 6.3) prior academic skills, motivation and ability to manage stress might have enhanced the academic performance of students. The findings also suggest that students who received a bursary for financial support might be performing better academically (*vide* 6.2.1.3) and that attaining an award in school might be an indication of better academic performance in university (*vide* 6.2.1.7). In addition, according to the recommendations made by the students, early support should is essential (*vide* 7.2.4.3).

8.3.2. Initial entry

According to literature (*vide* 8.2.2) the initial entry into the social and academic environment of the university, accommodation, the initial orientation in the university and faculty, language and finance can affect the academic performance of students.

Furthermore, data suggest that adjustment to the university and faculty is important for social and academic integration in the university environment (*vide* table 6.7). Although according to data presented in Figure 7.1 students were uncertain about the effectiveness of some of the services, their perception was that some of the services such as registration and faculty administration were effective. Figure 7.1 also shows that the accommodation service and orientation programme were effective in helping the students during the initial entry into the university. According to the recommendations made by the students (*vide* 7.2.4.3) early support should be provided for social, personal and financial problems as well as a medical residence. During extensive engagement and according to the records of consultations with students there is a need for early identification of problems, provision of financial assistance and a medical residence.

8.3.3. Teaching and learning experience

In the literature study discussed (*vide* 8.2.3) when students are introduced to their specific learning programmes, they begin to experience the realities of the academic environment. The students begin to learn about, inter alia, new methods of teaching, rules and regulations, assessment methods, they get acquainted to new classroom arrangements and class mates, as well as a new language of teaching and learning. Furthermore, financial problems may continue during this period.

According to the findings, factors in the academic environment that might have contributed to the academic performance of the students are: support in the faculty

(*vide* 6.2.3.1, 7.2.2.3, 7.2.2.4), effective support service from the faculty administration, university and faculty library (*vide* figure 7.1) as well as optimism of the students (*vide* 6.2.3.1). However, factors that might have had a negative impact on the academic performance of the students are: racism (*vide* 6.2.3.2.1) and negative attitudes of some of the lecturers towards the students (*vide* 6.2.3.2.2). Furthermore, in the recommendations, students mentioned the importance of peer and friends support (*vide* 7.2.4.1), the need for a social worker and psychologist in the faculty (*vide* 7.2.4.3), transport and financial support (7.2.4.3).

Factors in the academic organisation that might have contributed to the academic performance of the students are: understanding content, motivation, family support, study methods, peer support and time management (*vide* figure 6.4). However factors that might have had a negative impact on the students are: personal and family problems *(vide* figure 6.4). According to the results in tables 7.1, 7.2 and 7.3 most of the students were of the opinion that the organisation of the curriculum, the teaching that takes place and the contribution of the lecturers at best “sometimes” facilitated their learning. In addition, data also showed that most of the students failed in the second year of study (*vide* figure 6.8, 6.9). In the qualitative data students also mentioned the challenge with the overloaded curriculum (*vide* 6.2.3.2.2, 7.2.2.1.1).

8.3.4. Ongoing social and academic integration

Based on the literature study discussed (*vide* 8.2.4) the last stage in the academic integration of students is when they begin to specialise and are professionalised in a particular field. At this stage they are also introduced to the academic language of their field of study and may also experience financial problems with equipment for study purposes.

According to data obtained from the empirical investigation and extensive engagement with students, there is a need for support and provision of transport during the clinical years (*vide 7.2.4.3).*

The proposed programme of action envisaged for this study is based on the findings from literature and empirical investigation as presented above.

8.4. PROPOSED PROGRAMME OF ACTION

According to Babbie and Mouton (2001: 335) a programme refers to any intervention or set of activities that are aimed at meeting a recognised social need or solving an identified problem. Based on this definition, the proposed programme for the academic support and development of non-traditional undergraduate medical students in this study will refer to a programme of action.

According to the Educational Policy Institute (2007: 3), retention programmes in institutions consist of four phases. Phase I is the pre-planning stage involving the collection of information about the institution. Phase II, being the planning stage involves the preparation of a plan to implement in the institution. In Phase III, the plan is implemented and in Phase IV the impact of the plan is monitored. In this study, only the first two phases were conducted. In Phase I, information was collected about factors affecting the academic performance of students and also about the types and effectiveness of structures and strategies used to support and develop students. The programme of action with its plans proposed in this study represents Phase II, which is the planning. It therefore means that Phase III and Phase IV did not form part of this study.

Furthermore, this study proposes that the programme of action be integrated and holistic. According to Haddad (2001: 6) an integrated approach is aimed at creating a network of services that work together. This approach is also seen as a means to improve the effectiveness of services. A holistic approach according to Haynes

(2006: 19) includes both curricular and co-curricular components, takes the emotional, social and cognitive development of students into account and employs the services of academic and non-academic staff. This proposed programme of action will thus follow a pro-active approach that links and co-ordinates the emotional, social and cognitive development of student support and development. In addition, this is an approach that requires collaboration, communication and team-work between key stakeholders such as the students' family, institutional student support structures, faculty-based student support structures, peers' support and financial institutions.

The proposed integrated and holistic programme of action is built on the theoretical framework in the circles of progression (*vide* 8.2) and is structured and discussed in three parts. The first part refers to the key concepts identified in each circle. These key concepts were identified in the literature study discussed in Chapter 2 and according to the theory-building research approach described in Chapter 5 (*vide* 5.5). The second part refers to important stakeholders who can work together as a team in the programme of action and the last part refers to the actual actions that can be taken by the identified stakeholders in order to combat attrition among non-traditional undergraduate medical students. The inclusion of stakeholders is based on Haynes (2006: 19) idea that collaboration, communication and team work between different stakeholders is important in providing academic support and development for students, whilst the action plans are based on the findings of the empirical investigation (*vide* 8.3)..

Drawing from the explanation above, the structure of the proposed programme of action is depicted in Figure 8.2 below.

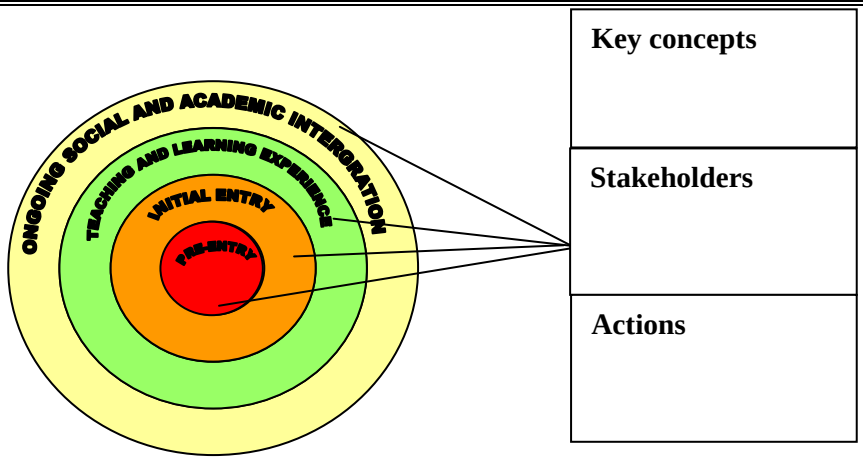


Figure 8.2: Structure of the proposed integrated and holistic programme of action for the academic support and development of non-traditional undergraduate medical students.

In the following discussion, a full description of the programme of action is provided.

8.4.1. Plan of action before entering the university

The plan of action before the students enter the university is based on the literature study discussed in the first circle of the retention theory (*vide* 8.2.1). According to the literature study, the four main factors that might affect the academic performance of non-traditional students before they enter the university are disadvantaged family background, disadvantaged school background, poor language development, especially English, and lack of or limited finance. Therefore, the four key concepts identified in this circle are family background, school background, language and finance. The main findings of the empirical investigation confirmed that disadvantaged family background, disadvantaged school background, provision of finance, and possession of writing, study and interpersonal skills might have affected and contributed to the academic performance of students (*vide* 8.3.1). Based on the literature study and findings of the empirical investigation, this study proposes a plan of action that involves the following stakeholders: the family, the schools, marketing division of the university, an institutional student support structure such as the Division of Student Development and Success at the UFS (*vide*

3.5.3), a faculty-based student support structure such as the Division of Student Learning Development in the Faculty of Health Sciences of the UFS (*vide* 3.5.3), mentors, English language department of the university, administration division of the FHS and financial institutions such as companies in the health sector and the Department of Health. Furthermore, the study proposes that these stakeholders work together as a team to prepare the students for the university environment. Concepts that emerge in the proposed action plan for stakeholders are explained below.

8.4.1.1. *Family profile*

Family profile within the context of this study means the financial status and living conditions of the prospective students. The aim of this profile is to determine the type and extent of support needed by these students.

8.4.1.2. *Orientating the family to the university environment*

It is important that the family be orientated to the university environment so that they can understand the type of environment that the students will be integrated into. This knowledge will enable the family to support the students.

8.4.1.3. *Students who show potential to study medicine*

According to Lehmann, Andrews and Sanders (2000: 10), SA medical schools use a mix of academic and non-academic criteria to select students. The overall academic criteria are usually a pass in Physical Science, Mathematics and Biology. In assessing non-academic criteria, the schools usually consider leadership skills and proven extra-curricula activities. Students who show potential to study medicine are those that will fit these criteria.

8.4.1.4. *Potential schools*

These schools are identified as having learners who show potential.

8.4.1.5. *Subject choice in Grade 9*

According to the SA school system, learners are supposed to make a decision about the subjects that they will take from Grade 10 to Grade 12, while they are in Grade 9. These subjects are chosen according to the learning programme they will follow in the university.

8.4.1.6. *Winter school*

In the SA school system, learners go on a winter holiday of about three weeks in June. Classes could be organised during this holiday to equip Grade 11 learners with academic skills.

8.4.1.7. *Summer school*

In the SA school system learners go on a five-week summer holiday between December and January. Furthermore, Grade 12 learners complete their examinations as early as the last week of November or the first week of December. Universities usually open during the second week of January. It means that learners have a long summer holiday, which could be used effectively. This holiday could be used to organise classes to prepare prospective students for university studies.

8.4.1.8. *Language skills*

Language skills in the context of this study refer specifically to English as discussed in this chapter (*vide* 8.2.1).

The table below provides a list of the key concepts, stakeholders and, most importantly, it explains the proposed actions that can be taken before students enter the university environment.

Table 8.1: Actions before entry into the university

Key concepts	Stakeholders	Actions
Family background	• Schools	• Identify family profile such as financial status and living conditions of the prospective students.
	• Marketing division	• Orientate the family to university environment.
School background	• Schools	• Identify students who show potential to study medicine.
	• Marketing division	Both stakeholders to assist with subject choice in Grade 9.
	• Institutional student support structure	• Identification of potential schools.
		• Provide information about the university and requirements for studying medicine.
		• Assist Grade 12 prospective students with applications.
		• Orientate the prospective students to the university environment.
	• Faculty-based student support structure	• Orientate the prospective students to the faculty environment.
		• Equip the learners in Grade 10 - 12 with academic, social and interpersonal skills.
		• Facilitate winter school for Grade 11 learners. • Facilitate summer school for Grade 12 learners.
		• Coordinate mentoring between students who are already studying medicine and Grade 12 learners.
Language	• Language department of the university	• Both stakeholders to work together to develop English language skills of prospective students.
	• Schools	
	• Institutional student support structure	• Both stakeholders to work together to incorporate language development during winter and summer schools.
	• Faculty-based student support structure	
Finance	• Administration office of the faculty	• Assist Grade 12 learners to apply for bursaries.

	• Financial institutions	• Provide financial support in the form of full bursaries.

8.4.2. Plan of action on entering the university

The plan of action on entering the university is based on the literature study discussed in the second circle of the retention theory (*vide* 8.2.2). According to the literature study, on entering the university, non-traditional students are integrated into the social and academic environment of the university. The six main factors that might affect the academic performance of the students during this stage are unfamiliar university environment, unfamiliar academic environment, unfamiliar accommodation arrangements in the hostel, overwhelming and overloaded orientation process, unfamiliar academic language and lack of or limited finance for accommodation, meals *etc*. Although the findings of the empirical investigation revealed that the only factors that seemed to have contributed to or affected the academic performance of the students are family, peers and spiritual support, and provision of a medical residence, this study proposes that a plan of action be devised to ease the transition of the students into the next circle. In the proposed plan of action, the most important stakeholders that should work together are the family, mentors, spiritual organisations such as the Medical Christian Society, an institutional student support structure, a faculty-based student support structure, lecturers, social worker, psychologist, accommodation service, language department, administration staff of the FHS and financial institutions such as companies in the health sector and the Department of Health. Concepts that are mentioned in the proposed actions to be taken by stakeholders are explained below.

8.4.2.1. Communication with the family

This means communication between the family and the students by means of, for example, letters and phone calls. The faculty-based student support structure can help in facilitating this process. According to Swail, Redd and Perna (2003: 98), extensive communication with families should become standard practice for any

university. The aim of this communication is to encourage the family to support the students.

8.4.2.2. *Academic culture in the residence*

According to the Educational Policy Institute (2007: 26) students' places of accommodation should provide opportunities for academic growth. Usually first-year students are expected to perform residence activities such as phone duties, where a student sits next to the public phone in the residence and calls the receiver from his/her room during certain periods. During the researcher's extensive engagement with students, they often complained that these duties wasted their time. An academic culture in the residence can be established by abolishing or minimising some of the hostel duties and scheduling study times for the students.

8.4.2.3. *Mainstream orientation*

Mainstream orientation means the orientation coordinated by the institutional student support structure. In this type of orientation, students are provided with information about the entire university's academic and social culture.

8.4.2.4. *Faculty orientation*

In the context of this study, faculty orientation means the orientation coordinated by the faculty-based student support structure. In this orientation, the students are provided with information about the academic and social culture of the faculty and the medical school.

8.4.2.5. *Targeted orientation*

According to Swail, Redd and Perna (2003: 118), in targeted orientation, specific needs of particular students are identified. The idea of targeted orientation was also recommended by one of the peers who scrutinized the draft programme of action.

In addition, during this orientation, students are provided with specific orientation about aspects such as the organisation of each area of the curriculum during appropriate periods, for example during clinical years. It is important to continuously reinforce some of the information that was provided during the faculty orientation during these periods.

8.4.2.6. Language skills

Language skills in the context of this study during the stage of university entry refer specifically to academic language as discussed in paragraph 8.2.2 of this chapter. In addition, English language skills should be integrated with subject-specific and clinical language skills during specific periods as the students progress in their studies.

8.4.2.7. Financial management

The usual practice in the provision of bursaries is that the administration of the university or faculty receives the full amount from the financial institutions. Thereafter, the administration deducts the registration, tuition, accommodation and meal fees with the rest of the money being deposited in the students' own account for books and allowance for other basic needs. Because of the inexperience with budgeting, students can easily mismanage money. The aim of assisting students with financial management is to help them to use this money for the intended purpose.

In Table 8.2 below, the key concepts and stakeholders are listed. The last column consists of proposed actions.

Table 8.2: Actions on entering the university

Key concepts	Stakeholders	Actions
University environment	- Family	- Accompany students to the university. - Communicate with students regularly.

	- Institutional student support structure	- Orientate the family and students to the university environment.
	- Mentors	- Guide and orientate the students in the university.
	- Spiritual organisations	- Provide spiritual support and motivation.
Academic environment	- Mentors	- Continue to guide and support the students.
	- Institutional student support structure - Faculty-based student support structure	- Both stakeholders to assist students to apply the skills that were taught before entry into the university. - Both stakeholders to work together in the early identification of students' problems.
	- Faculty-based student support structure	- Review the academic profile of the students once matriculation results are available.
	- Faculty-based student support structure - Social worker - Psychologist - Lecturers	- The four stakeholders to work together by sharing information about the students' progress, identify their problems early and provide the necessary support.
Accommodation	- Accommodation service - Management of the university - Management of the FHS	- The three stakeholders to work together in establishing a medical residence.
	- Institutional student support structure - Accommodation services	- Both stakeholders to work together in establishing an academic culture in the residence.
	- Mentors	- Provide peer support in the residence.
Orientation	- Institutional student support structure	- Provide mainstream orientation.
	- Faculty-based student support structure	- Provide faculty orientation.
	- Mentors	- Provide targeted orientation about the

		faculty and medical school.
Language	- Language department - Faculty-based student support structure	- Both stakeholders to work together in assisting students to apply language skills acquired before university entry.
Finance	- Administration office of the FHS - Financial institutions	- Facilitate early payment for registration, tuition fees, accommodation, meals *etc.* - Assist students with financial management.

8.4.3. Plan of action for initial experience of the teaching and learning environment

The plan of action for students' first encounter of the teaching and learning environment is based on the literature study discussed in the third circle (*vide* 8.2.3). According to the literature, students begin to experience the realities of academic life during this stage. The four main factors that might affect the academic performance of the students at this point are the unfamiliar academic environment, unfamiliar academic organisation such as classroom arrangements, new language of teaching and learning and lack of or limited finance for books. The four key concepts during this stage are academic environment, academic organisation, language and finance. The main findings of the empirical investigation (*vide* 8.3.1, 8.3.2 and 8.3.3) have also shown that factors such as family and peer support, curriculum constraints, personal problems, time manage, understanding content, attitude of lecturers *etc.,* might have contributed to and affected the academic performance of students during this stage. Based on the literature study and findings of the empirical investigation, the study proposes a plan of action that involves stakeholders such as family, a faculty-based student support structure, mentors, tutors, psychologist, social worker, spiritual organisations such as the Medical Christian Society, language department, curriculum developers, financial institutions such as companies in the health sector and the Department of Health, lecturers and administration staff of the FHS. Concepts that are used in the proposed actions for stakeholders during the teaching and learning experience are explained below.

8.4.3.1. *Academic work during holiday*

In SA universities, holidays are usually planned in accordance with the school holidays, especially during the first and second year of study. When students finish writing their university examinations, they are allowed to go home and start their holidays. With this type of arrangement, it is possible for students to have long holidays of up to nine (9) weeks at times, as it happens in the UFS. These long holidays could be used effectively for getting academic work done in the form of assignments. The idea of encouraging students to engage with their studies even during the holidays was also recommended by one of the peers who scrutinized the programme of action. Hopefully, this academic work can help in improving the academic performance of the students.

8.4.3.2. *Monitoring the curriculum*

This means that the staff responsible for curriculum development should monitor components of the curriculum such as organisation (*vide* 7.2.2.1.1), teaching and learning (*vide* 7.2.2.1.2) and lecturers' contribution to the curriculum (*vide* 7.2.2.1.3). The aim of such monitoring would be to identify aspects that might affect the academic performance of students negatively *(vide* 8.3.3).

The table below provides a list of the key concepts, stakeholders and the proposed actions that can be taken during the teaching and learning experience.

Table 8.3: Actions in the teaching and learning environment

Key concepts	Stakeholders	Actions
Academic environment	• Family	• Regular communication with the student.
	• Faculty-based student support structure	• Coordinate mentoring and tutoring.
	• Curriculum developers	• Track academic performance of students.
	• Faculty-based student support structure	• Provide targeted orientation about the medical programme.
	• Social worker	The three stakeholders to work together in

	• Psychologist • Mentors and tutors • Spiritual organisations	identifying and resolving the problems of the students early. • • Provide peer support. • Provide spiritual support and motivation.
Academic organisation	• Faculty-based student support structure • Lecturers • Curriculum developers	• Provide academic support such as time management and study methods skills. • Provide subject-specific support. • Provide academic work during holidays. • Monitor the curriculum.
Language	• Language division of the university • Lecturers	• Both stakeholders to work together in providing language development within the curriculum.
Finance	• Financial institutions • Administration office of the FHS	• Early provision of finance study material such as books. • Assist students with financial management.

8.4.4. Plan of action during ongoing social and academic integration

The plan of action during the ongoing social and academic integration of students is based on the literature study discussed in the fourth circle of the retention theory (*vide* 8.2.4). According to the literature, this is the stage where students begin to specialise in a particular field, which in the case of this study is the medical field, and are prepared for their roles as professionals. In addition, students are introduced to another unfamiliar academic language, which in this case is the clinical language. Factors that might affect the academic performance of students during this stage are unfamiliarity with the field of specialisation, unfamiliarity with the professional field, unfamiliar clinical language and lack of or limited finance for transport and equipment such as diagnostic sets. According to one of the peers from one of the medical schools, students experience new and distinct challenges during the clinical years. Therefore, concepts that are prominent in this circle are specialisation, professionalisation, language and finance. The results of the empirical investigation have also shown that factors such as family, peers and spiritual support, support by lecturers, mentoring in the clinical years and provision of transport might have contributed to and affected the academic performance of students (*vide* 8.3.2). In

addition, one of the peers from the medical schools recommended that mentoring should be done by mentors who were also non-traditional students. Based on the literature and the findings of the empirical investigation, this study proposes that stakeholders such as the family, the faculty-based student support structure, mentors, spiritual organisations such as the Medical Christian Society, role models, language department, top managers of the FHS, the administration office of the FHS and financial institutions, such as companies in the health sector and the Department of Health should continue to provide support as in the previous stages. In addition, students need the support of special clinical tutors and role models during this stage. The proposed roles and actions that could be taken by the identified stakeholders are explained below.

8.4.4.1. *Special clinical tutors*

These are medically trained tutors with experience in clinical teaching and have an interest in medical education (*vide* 3.4.2).

8.4.4.2. *Language skills*

Language skills in the context of this study during this period refer specifically to academic language as discussed in this chapter (*vide* 8.2.2). In addition, the English skills should be integrated with subject-specific and clinical language skills during specific periods as the students progress in their studies.

8.4.4.3. *Transport during clinical years*

For their practical work, senior students are often allocated in clinical areas that are far off. As a result, students are forced to use public transport. Some of these areas are so far that students have to use more than one type of transport, such as a bus and a taxi for one trip. At times, the class time-table is arranged in such a way that students start in the clinical areas in the morning and have to attend classes at the university in the afternoon. It therefore means that they depend on the public

transport to be in class on time. During extensive engagement with some students, they related cases where, because of transport problems, they either had to use public transport to travel during the night or sleep in the hospital when they have finished their clinical rotations. According to the students, they sometimes arrive very late at home or residence and are expected to be in class or even write a test the following morning. These transport problems during the clinical years are almost the same as those of commuting students as discussed in paragraph *8.2.3.* The aim of requesting the administration of the faculty and financial institutions to provide transport for the students is to alleviate such problems.

The table below provides a list of the key concepts, stakeholders and the proposed actions that could be taken during the ongoing social and academic integration of the students.

Table 8.4: Actions during ongoing social and academic integration

Key concepts	Stakeholders	Actions
Specialisation	• Family • Mentors • Lecturers • Curriculum developers • Faculty-based student support structure • Social worker • Psychologist • Lecturers • Spiritual organisations • Special clinical tutors	• Regular communication with students. • Provide peer support. • Both stakeholders to work together to provide targeted orientation during the clinical years. • The three stakeholders to work together in the early identification and resolving of the students' problems. • Discuss students' problems with support staff of the FHS, social worker and psychologist. • Provide spiritual support and motivation. • Provide extra support to equip students with clinical skills, especially in areas that are perceived to be difficult.
Professionalisation	• Qualified medical doctors who were also non-traditional students	• Act as role models. • Provide support and motivation.
Language	• Language department • Lecturers	• The three stakeholders to work together to provide language development within the curriculum.

	• Special clinical tutors	
Finance	• Administration of the FHS • Management of the FHS • Financial institutions	• The two stakeholders to work together in providing transport for clinical years. • Provide finance for transport and necessary equipment such as diagnostic instruments.

The figure below portrays the programme of action

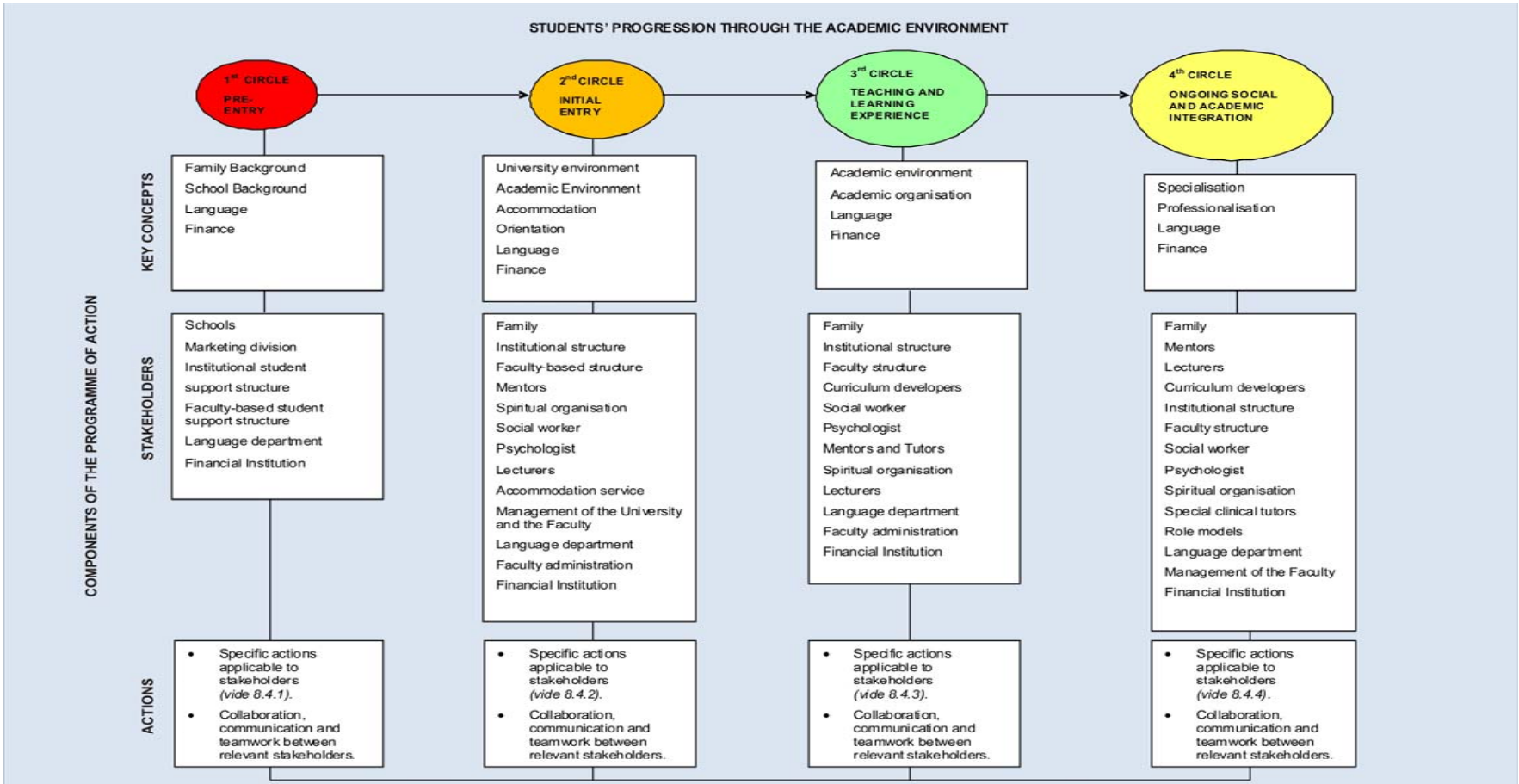


Figure 8.3: An integrated and holistic programme of action for the academic support and development of non-traditional undergraduate medical students as they progress through the different circles of the academic environment.

8.5. SUMMATIVE PERSPECTIVES

At the beginning of this chapter, a proposed retention theory for non-traditional students was presented and discussed (*vide* 8.2). This theory has tried to provide a holistic understanding of how academic and social factors integrate and lead to poor academic performance, and eventually, to poor retention. In addition, this chapter has presented an integrated and holistic programme of action for the academic support and development of non-traditional undergraduate medical students. The programme of action was designed according to the key concepts discussed in the four circles of the proposed retention theory. Furthermore, key stakeholders related to each key concept were identified and the roles of each of the stakeholders were discussed in the action plans.

8.6. LIMITATIONS OF THE STUDY

Initially the study was designed to include a sample of all undergraduate medical students who had failed a year of study during the period 2000 and 2005. This sample would have included students who were in the old curriculum. This curriculum started in 2000 with the cohort of students completing their studies at the end of 2004. The first limitation of the study was that by the time the empirical investigation was conducted, which was in 2008, some of the students had either already completed or dropped out of the studies, thus resulting in a limited sample. Furthermore, when the empirical investigation was conducted, some of the students in the sample were in the new curriculum that started in 2007.

The second limitation warranting attention concerns the criteria used to select non-traditional and traditional students who performed well. These criteria limited the sample size because the number of non-traditional students was 12 and the number of traditional students was only seven (7). In addition, the poor response rate (42%) of the traditional students who managed to perform well also compared poorly with

that of the students who failed (75%) and the non-traditional students who perform well (100%) and led to their exclusion in the quantitative data analysis. According to McColl, Jacoby, Thomas, Soutter *et al.* (2001: 101) a response rate of less that 50% is unacceptable an may cause bias. This limited sample and poor response rate limited information that could have been obtained from these students.

Initially the intention was to collect information about the different student support and development structures in the other medical schools. This information was supposed to be collected by means of interviews with heads/managers/directors of the structures in the medical schools. However, these interviews did not take place due to logistical and practical reasons. These interviews might have provided a fuller picture of the present structures used to support and develop students in other medical schools in South Africa with a similar context.

In the literature study and in the proposed retention theory, language and finance were identified as key concepts and therefore factors that might affect the academic performance of students during all the stages of progression of their studies. These factors were, however, not explored in detail in the empirical investigation as they were not included in the questionnaire. As a result, valid conclusions could not be drawn regarding these two concepts.

Another limitation is that all data obtained is from students who are still in the system. Therefore, data was not obtained from students who had failed between 2004 and 2006 and had dropped out of the system.

8.7. RECOMMENDATIONS FOR FURTHER STUDY

The results of the study showed that, within the group that failed, that is Group 1, more males than females had failed, but in the group that passed, that is Group 2, which consisted of non-traditional students only, more males than females passed (*vide* 6.2.1.2). It is therefore recommended that a further study be conducted to

determine the difference between the academic performance of traditional and non-traditional males.

According to literature and the empirical investigation, there is more attrition during the second year of study (*vide* 6.2.2.3 and 6.2.2.4). It is therefore recommended that a further study be conducted on the performance of students in the second year of study.

It was also evident in the results that more students who failed indicated that personal problems affected their academic performance (*vide* 6.2.2.6), but they did not mention the specific problems. A further study can be conducted to determine the specific personal problems that affected these students.

According to the results students had experienced some form of racism from their peers and lecturers (*vide* 6.2.3.1). However, no question on racism was included in the questionnaire, which leaves room for further study.

One of the aims of this study was to gain perspectives on what contributed to the success of non-traditional and traditional students who managed to perform well, but the criteria that were used to select these students produced only a small sample. A further study that includes more of these students can be conducted to gain more perspectives on what contributed to their success.

8.8. CONCLUDING REMARKS

The overall aim of this study was to propose an integrated and holistic programme for the academic support and development of non-traditional undergraduate medical students especially at the University of the Free State (UFS). The study was motivated by the need to increase the retention rate of these students. The conceptual framework used in this study is based on the theories of Spady, Bean and Tinto. These theories were used to design a retention theory of action for non-

traditional students in the South African context. The literature study and results of the empirical investigation guided the ultimate outcome of this study, which was to design an academic support and development programme to combat attrition among non-traditional medical undergraduates.

The study adopted a case study design to gain an in-depth understanding of the non-traditional undergraduate medical students in the medical school at the UFS. Furthermore, the study was meant to gain an in-depth understanding of the type of and effectiveness of the structures and strategies used to support and develop these students. A mixed methods approach was used to conduct the study. The data collection tools that were used are: a questionnaire, extensive engagement and peer review. These methods allowed triangulation and improved the reliability and validity of data and findings.

According to the results of the study student retention is not due to an isolated factor, but it is a result of a whole range of interrelated factors and therefore there is no one single explanation and solution to student attrition. Based on the literature, generalisations about student retention can be misleading because each country, each institution and each student is unique. South Africa, for instance, cannot be compared to other countries because of its previous political history, its uneven schooling system and the different social backgrounds of the various population groups. Moreover, issues related to retention in the different higher education institutions will not be precisely the same because of different educational systems that existed before political transformation started in 1994. Unfortunately, there is a tendency among both academics and non-academics to provide a single bold answer when asked why students do not perform well. One example of an answer is that “students do not study”. This answer is often provided without even considering other interrelated factors. The question is “do institutions understand the nature of the problem?”

If institutions and the key stakeholders in these institutions could understand the nature of problems faced by non-traditional students, especially undergraduate medical students, they could collaborate, communicate and work together as a team to provide an integrated and holistic programme of action to support and develop these students and therefore increase their retention rate. The programme of action as proposed in this study could start even before the students enter the university and continue up to their clinical years where they begin to specialise and become professionalised in the medical field.

At the beginning of the study it was anticipated that the study would reveal real problems affecting the academic performance of students with the hope that the study might be useful in faculties and disciplines such as medicine which is perceived to be difficult. It is therefore hoped that this study has indeed revealed some of the real problems and that the presented programme of action might be implemented in other medical schools, especially in SA, to be able to support and develop non-traditional undergraduate medical students. Besides the implementation of this programme of action, institutions are encouraged to monitor its impact.

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APPENDIX A: QUESTIONNAIRE

RESEARCH SURVEY

Dear respondent,

I am currently conducting a survey as part of my PhD. studies. The title of the study is: **"Designing an academic support and development programme to combat attrition among non-traditional medical undergraduates".**

Although the research will lead to a qualification, it will also benefit you as a medical student. Firstly, it will reveal factors that affect your academic performance. Secondly, it will evaluate the type of academic support you receive in the university and in the Faculty of Health Sciences. Lastly, the research will propose an integrated and holistic approach towards providing academic support and development for medical students.

The following is therefore requested from you:

- Complete the attached questionnaire as accurately as possible and return it to the researcher after completion.
- Please supply as much information as possible.
- If insufficient space has been provided for your input, you can add the information on the blank paper provided at the end of the questionnaire.

It should take you approximately 25 - 30 minutes to complete the questionnaire.

You remain anonymous and your feedback will be treated confidentially and will be used in summary format only.

Thank you in advance for your kind contribution to this research.

Ms. Mpho Jama

QUESTIONNAIRE

Dear respondent,

You have been asked to participate in a research study. Please note that by completing this questionnaire you are voluntarily agreeing to participate in this research study. You will remain anonymous and your response will be treated confidentially at all times.

INSTRUCTIONS:

- Complete the attached questionnaire as accurately as possible and hand it to the researcher after completion.
- You may answer in your preferred language.
- Please supply as much information as possible.
- If insufficient space has been provided for your input, you can add the information on the supplied folio paper.
- Choose the most appropriate response where required. You may also choose more than one response where requested.
- Please use a cross **(X)** in the spaces provided. If you do not get a suitable statement, respond by filling in your response next to “other”.

SECTION 1: PRE-ENTRY ATTRIBUTES

☐☐ 1-2

1. RACE

Black	☐	☐ 3
White	☐	
Coloured	☐	
Indian	☐	
Other (specify):	☐ _____	

2. GENDER

Male	☐	☐ 4
Female	☐	

3. FINANCIAL SUPPORT

What types of financial aid do you use for your studies? You may choose more than one response

Bursary	☐	☐ 5
Loan	☐	☐ 6
Family	☐	☐ 7
Other (specify)	☐ _____	☐ 8

4. PRIOR-SCHOOLING

What types of high school did you attend?

Private school	☐	☐ 9
Public school in the township	☐	☐ 10
Public school in town/city	☐	☐ 11

5. PRIOR TERTIARY EDUCATION

If you have a post-school qualification or studied towards one but did not complete, please indicate the degree/diploma/etc, obtained or studied for, as well as the institution where you studied

Qualification/Study	Institution	Year obtained/studied	
			☐☐☐ 12-14
			☐☐☐ 15-17
			☐☐☐ 18-20
			☐☐☐ 21-23

6. SKILLS

How skilled were you in the following areas when you enrolled for tertiary education?

Skill	Poor	Average	Good	
6.1 Basic computer				☐ 24
6.2 Interpersonal relationships				☐ 25
6.3 Stress management				☐ 26
6.4 Problem solving				☐ 27
6.5 Conflict management				☐ 28
6.6 Study methods				☐ 29
6.7 Research skills				☐ 30
6.8 Culture sensitivity				☐ 31
6.9 Writing skills				☐ 32
6.10 Oral presentation				☐ 33
6.11 Budgeting				☐ 34
6.12 Leadership				☐ 35
6.13 Assertiveness				☐ 36
6.14 Self-confidence				☐ 37
6.15 Motivational				☐ 38

7. ATTAINMENTS

Did you receive any award, merit or were you honoured for anything in school? E.g. honours blazer, sportsmanship, etc.

Yes ☐

No ☐ ☐ 39

If Yes, specify

☐☐ 40-41

☐☐ 42-43

☐☐ 44-45

☐☐ 46-47

☐☐ 48-49

SECTION 2: ENTRY ATTRIBUTES

1. YEAR OF COMMENCEMENT OF MEDICAL STUDIES _____		☐☐ 50-51
2. PRESENT LEVEL OF STUDY		☐ 52
M.B.Ch.B. I	☐	
M.B.Ch.B. II	☐	
M.B.Ch.B. III	☐	
M.B.Ch.B. IV	☐	
M.B.Ch.B. V	☐	
3. LEVEL(S) OF STUDY REPEATED		
M.B.Ch.B. I	☐	☐ 53
M.B.Ch.B. II	☐	☐ 54
M.B.Ch.B. III	☐	☐ 55
M.B.Ch.B. IV	☐	☐ 56
M.B.Ch.B. V	☐	☐ 57
None	☐	☐ 58
4. MODULES FAILED How many modules have you failed in the exams since beginning of studies		
Level of study	Number of modules failed	
M.B.Ch.B. I		☐ 59
M.B.Ch.B. II		☐ 60
M.B.Ch.B. III		☐ 61
M.B.Ch.B. IV		☐ 62
M.B.Ch.B. V		☐ 63
None	☐	☐ 64
5. GOALS/INTENTIONS Did you have any goals/intentions regarding your academic performance when you started your studies?		☐ 65
Yes	☐	
No	☐	

If yes, please specify these goals/intentions

☐☐ 66-67

☐☐ 68-69

☐☐ 70-71

Please indicate whether you achieved them or not (please substantiate)

☐☐ 72-73

☐☐ 74-75

☐☐ 76-77

6. SOCIAL INTEGRATION

When you started with your studies, did you manage to adjust to the following within the first six months?

Area	Yes	No	
6.1 University	☐	☐	☐ 78
6.2 Faculty of Health Sciences	☐	☐	☐ 79
6.3 Fellow students	☐	☐	☐ 80

If No, what prevented you from adjusting? Please substantiate

☐☐ 1-2

☐☐ 3-4

☐☐ 5-6

7. ACADEMIC INTEGRATION

Are you satisfied with your academic performance? ☐ 7

Yes ☐

No ☐

7. 1 Which factors contributed <u>positively</u> towards your academic performance so far? You may choose more than one factor

Factors	Yes	No	
7.1 1 Understanding content			☐ 8
7.1.2 Teaching methods			☐ 9
7.1.3 Time management			☐ 10
7.1.4 Study methods			☐ 11
7.1.5 Personal attributes/matters			☐ 12
7.1.6 Financial assistance			☐ 13
7.1.7 Family support			☐ 14
7.1.8 Colleagues' support			☐ 15
7.1.9 Lecturers' attitude			☐ 16
7.1.10 Test/exam preparation			☐ 17
7.1.11 Motivation			☐ 18
7.1.12 Language of instruction			☐ 19
Other factors:			☐ 20
7.1.13			☐ 21
7.1.14			☐ 22
7.1.15			☐ 23
7.1.16			☐ 24
7.1.17			☐ 25
7.1.18			☐ 26

7.2 Which factors contributed <u>negatively</u> towards your academic performance? You may choose more than one factor			
Factor	Yes	No	
7.2.1 Understanding content			☐ 27
7.2.2 Teaching methods			☐ 28
7.2.3 Time management			☐ 29
7.2.4 Study methods			☐ 30
7.2.5 Personal problems			☐ 31
7.2.6 Financial problems			☐ 32
7.2.7 Family problems			☐ 33
7.2.8 Health problems			☐ 34
7.2.9 Accommodation problems			☐ 35
7.2.10 Poor test/exam preparation			☐ 36
7.2.11 Lack of motivation to study			☐ 37
7.2.12 Language of instruction			☐ 38
7.2.13 Lecturer's attitude			
Other problems:			☐ 39
7.2.14			☐ 40
7.2.15			☐ 41
7.2.16			☐ 42
7.2.17			☐ 43
7.2.18			☐ 44

SECTION 3: ACADEMIC SUPPORT AND DEVELOPMENT

1. EXPERIENCES WITH VARIOUS ACADEMIC SUPPORT AND DEVELOPMENT SERVICES

Using the scale provided, indicate the level of effectiveness of the following services:

Options: Very effective, effective, ineffective, very ineffective, do not know

Service Code	Very effective	Effective	Ineffective	Very ineffective	Do not know	
1.1 Registration office						☐ 45
1.2 Student Dean						☐ 46
1.3 Accommodation services						☐ 47
1.4 Financial aid						☐ 48
1.5 Registrar's office						☐ 49
1.6 Student counseling						☐ 50
1.7 Social worker						☐ 51
1.8 SRC (Students' Representative Council)						☐ 52
1.9 DSLD (Division of Student Learning Development)						☐ 53
1.10 Faculty administration						☐ 54
1.11 Faculty Dean						☐ 55
1.12 MSA (Medical Student Association)						☐ 56
1.13 Sasol Library						☐ 57
1.14 Frik Scott Library						☐ 58
1.15 Computer services						☐ 59
1.16 UFS orientation programme						☐ 60
1.17 Health center						☐ 61
1.18 Tutor/mentor system						☐ 62
1.19 Support by lecturers						☐ 63
Others (specify)						
1.20						☐ 64
1.21						☐ 65

1.22	☐ 66
Were you made aware of all these services when you arrived at the university? Yes ☐ No ☐	☐ 67
If No, which services were you not made aware of? (list their codes as indicated above, e.g. 1.7).	
	☐☐ 68-69
	☐☐ 70-71
	☐☐ 72-73
	☐☐ 74-75
	☐☐ 76-77
	☐☐ 78-79
	☐☐ 1-2
	☐☐ 3-4
	☐☐ 5-6
	☐☐ 7-8
	☐☐ 9-10

Further comments on any of the above academic support and development services (please specify the item you are commenting on e.g. (1.5) Registrar's office	
	☐☐ 11-12
	☐☐ 13-14
	☐☐ 15-16

2. EXPERIENCES WITH ACADEMIC SUPPORT AND DEVELOPMENT IN THE FACULTY OF HEALTH SCIENCES

2.1 The curriculum

Rate the following areas of the curriculum

Selections: Always, Sometimes, Never, Not applicable.

Items	Always	Sometimes	Never	Not applicable	
2.1.1 The outcomes of each module are clear					☐ 17
2.1.2 The workload is manageable					☐ 18
2.1.3 The content is easy to understand					☐ 19
2.1.4 I know what is required in each module					☐ 20
2.1.5 Teaching methods suit the content					☐ 21
2.1.6 The assessment methods are fair					☐ 22
2.1.7 Teaching methods suit my learning style					☐ 23
2.1.8 Lecturers have the capabilities to make us understand content					☐ 24
2.1.9 Lecturers are concerned about our development					☐ 25
2.1.10 Lecturers are willing to go an extra mile to help us					☐ 26
2.1.11 Lecturers are sensitive to diverse students' needs					☐ 27

2.1.12 Lecturers are enthusiastic about the curriculum					☐ 28
2.1.13 I am motivated to learn in this curriculum					☐ 29
2.1.14 The class timetables are structured properly					☐ 30
2.1 15 The learning material is helpful					☐ 31
2.1.16 There is an alignment between outcomes, content, teaching and assessment methods					☐ 32
2.1.17 Group work facilitates my learning					☐ 33
2.1.18 I am able to function as an independent learner					☐ 34

Any comment on any of the above .Please specify the item you are commenting on e.g. 2.1 3. The content is easy to understand

☐☐ 35-36

☐☐ 37-38

☐☐ 39-40

2.2 General Skills Module (MEA112)

Did the module help you with academic work? ☐ 41

Yes ☐

No ☐

Please substantiate

☐☐ 42-43

☐☐ 44-45

☐☐ 46-47

2.3 Division of Student Learning Development (DSLD)

Were you ever called in for a consultation in the division regarding your academic performance? ☐ 48

Yes ☐

No ☐

If Yes, did you attend the consultation? ☐ 49

Yes ☐

No ☐

If you did attend, did the consultation help you? ☐ 50

Yes ☐

No ☐

Please substantiate

☐☐ 51-52

☐☐ 53-54

☐☐ 55-56

If No, why would you say the consultation was futile?

☐☐ 57-58

☐☐ 59-60

☐☐ 61-62

2.4 Mentoring/tutoring

Do/Did you have a mentor/tutor? ☐ 63

Yes ☐

No ☐

If Yes, does/did the mentoring/tutoring help? ☐ 64

Yes ☐

No ☐

If Yes, explain how it helped

☐☐ 65-66

☐☐ 67-68

☐☐ 69-70

If No, why not?

☐☐ 71-72

☐☐ 73-74

☐☐ 75-76

2.5 Support by lecturers

Have you ever consulted lecturers outside class for assistance with any academic problems? ☐ 77

Yes ☐

No ☐

If Yes, were the consultations helpful? Always ☐ Sometimes ☐ Never ☐	☐ 78
If No, why not?	
	☐☐ 79-80
	☐☐ 1-2
	☐☐ 3-4
2.6 Tutorials by lecturers Did you attend tutorials offered by lecturers? Always ☐ Sometimes ☐ Never ☐	☐ 5
If Yes, did the tutorials help? Yes ☐ No ☐	☐ 6
If Yes, how did the tutorials help?	
	☐☐ 7-8
	☐☐ 9-10
	☐☐ 11-12

If No, why did the tutorials not help?	
	☐☐ 13-14
	☐☐ 15-16
	☐☐ 17-18
3. ANY OTHER SUPPORT Please mention any other support you received e.g. from friends, class mates. Also comment on how this type of support helped you.	
	☐☐ 19-20
	☐☐ 21-22
	☐☐ 23-24
4. RECOMMENDATIONS How can students who experience the same problem/s that you had, be assisted?	
	☐☐ 25-26
	☐☐ 27-28
	☐☐ 29-30

SECTION 4: THOUGHTS TO SHARE

Is there any thought that you want to share with us (challenges, suggestions, positive and negative experiences)? Please remember your comments are anonymous and confidential, so be free to share anything.

☐☐ 31-32

☐☐ 33-34

☐☐ 35-36

Thank you for your cooperation.

APPENDIX B: TABLE OF ACADEMIC SKILLS BEFORE ENTRY

	Poor		Average		Good		
Skill	**Group 1**	**Group 2**	**Group**	**Group 2**	**Group 1**	**Group 2**	**Total**
Basic computer	16%	8%	40%	42%	43%	50%	49
Study methods	3%	0%	76%	33%	22%	67%	49
Research skills	24%	33%	54%	50%	22%	17%	49
Writing skills	3%	0%	49%	25%	49%	75%	49
Oral presentation	16%	58%	35%	25%	49%	17%	49

APPENDIX C: TABLE OF SOCIAL SKILLS BEFORE ENTRY

	Poor		Average		Good		
Skill	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Total**
Interpersonal relationship	5%	0%	40%	42%	54%	58%	49
Conflict management	8%	17%	51%	58%	40%	25%	49
Culture sensitivity	13%	25%	54%	33%	32%	42%	49
Budgeting	11%	33%	57%	25%	32%	42%	49
Leadership	8%	17%	49%	50%	43%	33%	49

APPENDIX D: TABLE OF PERSONAL SKILLS BEFORE ENTRY

	Poor		Average		Good		
Skill	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Total**
Stress management	8%	8%	43%	67%	49%	25%	49
Assertiveness	13%	8%	38%	50%	49%	42%	49
Self-confidence	8%	0%	40%	58%	57%	42%	49
Motivational	8%	8%	21%	33%	70%	58%	49

APPENDIX E: TABLE OF FACTORS THAT AFFECTED ACADEMIC PERFORMANCE POSITIVELY

	Yes		No		
Factor	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Total**
Understanding content	83%	100%	17%	0%	48
Teaching methods	53%	42%	47%	58%	48
Time management	64%	66%	36%	33%	48
Study methods	58%	67%	42%	33%	48
Personal attributes/matters	42%	58%	58%	42%	48
Financial matters	56%	58%	44%	25%	48
Family support	77%	67%	23%	33%	47
Colleagues support	69%	50%	31%	50%	48
Lecturers' attitude	39%	50%	61%	50%	48
Test/examination preparation	64%	83%	36%	17%	48
Motivation	75%	83%	25%	17%	48
Language of instruction	54%	58%	46%	42%	47

APPENDIX F: TABLE OF FACTORS THAT AFFECTED ACADEMIC PERFORMANCE NEGATIVELY

	Yes		No		
Factor	**Group 1**	**Group 2**	**Group 1**	**Group 2**	**Total**
Understanding content	28%	0%	72%	100%	47
Teaching methods	33%	9%	67%	91%	47
Time management	36%	18%	64%	82%	47
Study methods	33%	9%	67%	100%	47
Personal problems	69%	45%	31%	55%	47
Financial problems	44%	36%	56%	64%	47
Family problems	33%	55%	67%	55%	47
Health problems	39%	27%	61%	73%	47
Accommodation problems	31%	27%	69%	73%	46
Test/examination preparation	36%	36%	64%	64%	47
Lack of motivation to study	37%	18%	63%	82%	47
Language of instruction	14%	18%	86%	82%	47
Lecturers' attitude	24%	30%	76%	70%	43

APPENDIX G: TABLE OF EFFECTIVENESS OF ACADEMIC SUPPORT AND DEVELOPMENT SERVICES

SECTION THREE: ACADEMIC SUPPORT AND DEVELOPMENT

SERVICE	Very effective		Effective		Ineffective		Very Ineffective		Do not know	
	Group 1.	Group 2.	Group 1.	Group 2.	Group 1.	Group 2.	Group 1.	Group 2.	Group 1.	Group 2.
Registration	19%	0%	61%	50%	6%	0%	0%	0%	14%	50%
Student Dean	5%	0%	16%	8%	22%	8%	8%	0%	49%	83%
Accommodation	11%	0%	57%	58%	11%	8%	8%	17%	14%	17%
Financial Aid	14%	8%	38%	33%	24%	8%	3%	8%	22%	42%
Registrar	8%	0%	31%	17%	6%	0%	0%	0%	56%	83%
Student Counseling	24%	0%	30%	8%	0%	0%	8%	8%	38%	83%
Social Worker	11%	0%	16%	0%	5%	0%	3%	17%	65%	83%
SRC	3%	0%	16%	0%	14%	17%	24%	25%	43%	58%
DSLD	14%	17%	38%	25%	5%	0%	3%	25%	41%	33%
Faculty Admin	24%	17%	59%	42%	3%	0%	3%	8%	11%	33%
Faculty Dean	8%	0%	24%	8%	8%	8%	22%	8%	38%	75%
MSA	3%	8%	19%	17%	19%	17%	22%	17%	36%	42%
UFS Library	32%	17%	59%	75%	3%	0%	0%	0%	5%	8%
Faculty Library	54%	50%	46%	50%	0%	0%	0%	0%	0%	0%
Computer	27%	17%	35%	67%	19%	8%	5%	0%	14%	8%
Orientation	8%	8%	68%	17%	5%	17%	0%	8%	19%	50%
Health Centre	14%	8%	51%	50%	11%	17%	8%	8%	16%	17%
Tutor/Mentor	11%	17%	49%	42%	14%	25%	11%	8%	16%	8%
Lecturers	15%	20%	46%	30%	8%	10%	8%	30%	23%	10%

APPENDIX H: LETTER TO PEER REVIEWERS

REQUEST TO ACT AS A REVIEWER FOR, AND COMMENT ON PHD STUDIES

I am a lecturer in the Division Health Sciences Education (DHSE) of the Faculty of Health Sciences (FHS) at the University of the Free State (UFS). My core portfolio in the DHSE is to provide academic support for students in the faculty.

I am currently busy with my PhD. studies with the title "*Designing an academic support and development programme to combat attrition among non-traditional undergraduate medical students"*. Based on a literature review, I proposed a theory for non-traditional students focusing on the South African (SA) social and academic environment. This theory has been used as a framework for both the design of the empirical investigation and the design of the proposed programme.

The study followed a case study design focusing on medical students in the UFS. The research methodology used was a mixed methods approach with the research conducted in two phases. Phase 1 of the research was data collection with the questionnaire being the primary data collection tool, followed by data analysis, interpretation and the design of a draft programme. I am currently on Phase 2 of the research, whose aim is to have the draft programme reviewed by peers. According to Chenail (1995: 2 of 8), and Creswell and Plano Clark (2007: 135), peers can be asked to review and comment on some content of a research.

South Africa has eight medical schools, with UFS medical school being one of them. As indicated that I am responsible for the academic support of the students in the FHS, I regard the other staff members responsible for the academic support of medical students in the other seven medical schools as peers who will be able to act as reviewers of, and comment on the draft programme.

You have therefore been identified as a peer reviewer with knowledge and experience of the social and academic background of medical students in SA. Your participation in acting as a reviewer of this draft programme will be highly appreciated. Your comments will be very valuable and will hopefully contribute to increasing the retention of non-traditional undergraduate medical students in SA.

Please be assured that all information will be handled confidentially, but with your consent, recognition will be given for your participation in the study. The draft programme will be sent to you within the next two weeks and it will be appreciated if you can return it as soon as possible.

I am looking forward to hearing whether you will be able to participate in this study or not.

Yours sincerely
Mpho Jama (Ms)
Student Number 1997175284

APPENDIX I: CRITERIA FOR PEER REVIEW

CRITERIA FOR THE REVIEW OF THE PROGRAMME OF ACTION

Instructions:

Kindly conduct this review by:

- Filling in the required information in the blank spaces.
- Circling your response where appropriate.
- Using a separate page if the space is not enough.

1. Academic profile:

Name of University: …….

Name of Medical School: ……..……..

Name of Department/Division/Unit: ……..……

Your core duties in the Department/Division/Unit: ……..……

2. REVIEW OF ACTION PLANS

Are the stakeholders in each of the following action plans appropriate? YES/NO.
If NO, please provide your responses in the following table.

Action plan before entry	Action plan on entry	Action plan during the teaching and learning experience	Action plan during ongoing social and academic integration
Comments	Comments	Comments	Comments

Are the actions in each of these action plans appropriate? YES/NO.
If NO, please provide your comments in the following table:

Action plan before entry	Action plan on entry	Action plan during the teaching and learning experience	Action plan during ongoing social and academic integration
Comments	Comments	Comments	Comments

3. FURTHER COMMENTS/RECOMMENDATIONS

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Thank you for your participation