Access to higher education: The case of the Career Preparation Programme at the University of the Free State

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A mini-thesis submitted in partial fulfilment of the requirements for the degree of Magister Educationis in the Department of Education, University of the Western Cape

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Keywords

- Access

- Admission

- Bridging programme

- Criteria for success

- Disadvantaged learners

- Foundation programme

- Preparation for higher education

- Resource-Based Learning

- Success rate

- Time to completion

ABSTRACT

Access to higher education: The case of the Career Preparation Programme at the University of the Free State

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MEd mini-thesis, Faculty of Education, University of the Western Cape

When it comes to education, the legacy of apartheid in South Africa has had major implications for the higher education system. The White population group long dominated the enrolment of students in higher education institutions, although they were, and still are, one of the minority population groups in the country. The under-preparedness of black students means that they require structures to prepare and assist them within the higher education environment. In order to assist these disadvantaged students, higher education institutions have established certain Academic Support Programmes. One such programme is the Career Preparation Programme (CPP) being offered at the University of the Free State. This study attempts to measure the success rate of the Career Preparation Programme and to time to completion of graduates.

15 November 2008

DECLARATION

I declare that *Access to higher education: The case of the Career Preparation Programme at the University of the Free State* is my own work, that it has not been submitted for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Neville Errol Rabie

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November 2008

Signed:

ACKNOWLEDGEMENTS

I dedicate this thesis to the following people:

- My wife, Maria, and my children, Mondray and Neashen, for all the time I was unable to spend with you.

- My late father, Jacobus Rabie and my late mother, Maria Rabie, who always believed in me and who passed away while I was busy with my thesis.

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I would not have been able to achieve my goal were it not for God who strengthens me from day to day; therefore, all praise goes unto Him. You never know what you have until you lose it. Life is precious, so enjoy every moment of it.
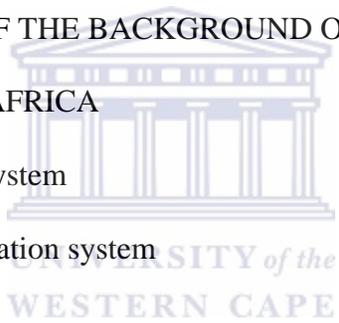
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CHAPTER 1
INTRODUCTION

1.1   BACKGROUND TO THE PROBLEM

When the apartheid government came into power in 1948, a crucial period for the black[1] community of South Africa started. The overall policy of the apartheid government was one of segregation that permeated in every aspect of society. This policy was part of establishing a capitalist political and economic system that required cheap labour in order to secure their position in the land (Graaff, 1995). The apartheid government promulgated the Population Registration Act (Act No. 30 of 1950) by means of which they classified every person in South Africa within one of four categories, namely, Black, Coloured, White and Indian. Due to this policy, the apartheid government spent less money on the education of black learners (Christie & Collins, 1984). This resulted in much disparity and inequity amongst black and White learners. This system created a situation where more resources and better facilities were available for the one population group.

From the above framework, there was unequal resource allocation between the different 'races' that, in effect, was an important reason for educational differentials. Table 1.1 outlines the inequalities that existed in the South African education system in terms of the allocation of resources. The differences in the educational level between Whites and blacks were significant, and these differences created significant problems for the higher education system, which is still evident today. These factors, amongst others, have

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[1] The term black refers to that section of society under apartheid classified as Coloured, Black and Indian as per the Population Registration Act of 1950 and the Employment Equity Act of 1998.

contributed to the high dropout rate of black students at higher education institutions (Cloete, Fehnel, Maassen, Moja, Perold, & Gibbon, 2002).

Inequalities between the different 'races' were the norm of the day (McKay, 1995). Table 1.1 illustrates the differences between 'races' in terms of the teacher-pupil ratio, under-qualified teachers, and the per capita expenditure by child in 1989.

Table 1.1: Inequalities between different racial groups in the school system in 1989

	White	Indian	Coloured	Black
Teacher-pupil ratio	1:16	1:21	1:25	1:41
Under-qualified teachers	2%	4%	43%	87%
Per capita expenditure	R3600	R2600	R2100	R750

Source: Sharwood (1998)

The major differences, in terms of the allocation of resources in the South African education system, are depicted in Table 1.1. The difference in the teacher-pupil ratio between White and black was one of the main reasons for the poor performance of black students at schools and at the higher education level. One of the arguments is that due to the overcrowded classes in black schools, the teachers were unable to provide students with quality education. This situation in black schools led to the under-development of the necessary skills needed in higher education (Sharwood, 1998).

The number of under-qualified black teachers in the system is also evidence of the apartheid government's approach to black education. Table 1.1 reflects the percentages of under-qualified teachers in 1989. These statistics date back to 1976 when only 1.7% of teachers had a university degree. Another 10.4% had a matriculation certificate, 43.9% had two years of secondary schooling, and 21% had completed primary school (Samuel,

1990:20). It is clear from these statistics that under-qualified black teachers were placed in teaching positions without the required training.

The per capita expenditure on African education was R17, 08 in 1953 and it decreased to R12, 46 in 1960. This contributed to the inadequate level of material and resources in the black education system. It should be noted that even though more learners were drawn into the schooling system, from the 1970s onwards, the funds for black education decreased (Hyslop, 1999). For example in 1989 the trend of unequal allocation of resources continued to exist.
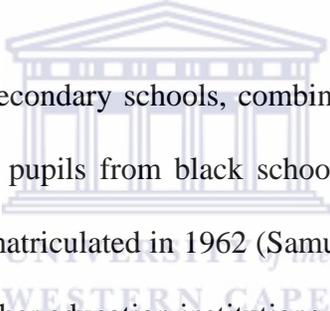
The lack of state funding for secondary schools, combined with poverty, contributed to the high dropout of secondary pupils from black schools. Of 200 000 black pupils in Standard A in 1950, only 894 matriculated in 1962 (Samuel, 1990). This impacted on the number of students entering higher education institutions. For example, by the late 1980s, the total university population was 55% White and 32% Black (Samuel, 1990:19). Thus, while the category black is demographically the largest component of the population, it had the smallest number of students enrolled in higher education institutions.

This situation changed with the beginning of democracy in the early 1990s (Cooper & Subotzky, 2001). The composition of the student population in the late 1990s changed drastically in terms of numbers. For example, the enrolment patterns of White and Black students became near opposites in the system as a whole. Furthermore, in 1998, the enrolment pattern shifted to 52% Black and 36% White. At technikons this shift was even more marked as, in 1988, the enrolment was 71% White and 12% Black, while in

1998 it was 65% Black and 24% White (Cooper & Subotzky, 2001). This is an indication that more Black students were entering the higher education sector.

With the demographic shift in the student population, universities in South Africa are being forced to accommodate a wide spectrum of students from different educational backgrounds. It is important to note that the socio-economic problems experienced by black students are of a completely different nature to those affecting White students (Griesel, 2001). According to Griesel (2001), the level of these students' schooling and examination results is not consistent with, and reflective of, their academic ability and potential. These students' levels of preparedness for university differ as a result of the vast difference in socio-economic backgrounds. There is thus a problem of access to the higher education institutions.
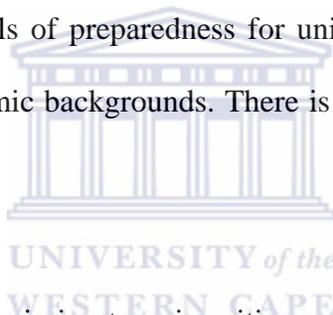
The problems of access and admission to universities are some of the main concerns for the higher education system. Due to the major disadvantages that have occurred in black communities and schools, structures needed to be put in place to assist those students wishing to enter higher education. Academic Support Programmes were established at several universities to assist under-prepared students (Advisory Council for Universities and Technikons, 1992). These programmes commenced in the early 1980s and focused on providing students with the necessary basic skills to be successful in higher education. Academic Support Programmes have been implemented at historically White institutions since the early 1980s. Examples of such programmes include the University of the Witwatersrand Integrated Study Programme for Engineering and the Bridging

Programme for Engineering Students at the University of Natal (Advisory Council for Universities and Technikons, 1992).

Academic Support Programmes were also established at other universities. For example, the Career Preparation Programme (*CPP*), based at the University of the Free State, was one such programme. The *CPP* is an academic support programme in the Free State region, which the University of the Free State, in collaboration with technical colleges[2], established in the early 1990s. The aim had been to prepare students for entry to higher education studies at the University of the Free State. It was originally established in 1991 with a pilot group of seven students, achieving the highest enrolment rate of 565 students in 1998. The programme is delivered at nine different technical college sites in South Africa.
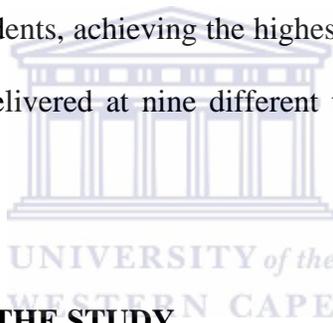
1.2   MOTIVATION FOR THE STUDY

This study is intended to ascertain whether the *CPP* played a role in the time to completion of a degree programme of those students who did not meet the entry requirements of the University of the Free State. Since the start of the *CPP*, limited research has been done to evaluate the success or otherwise of the programme. There is, therefore, a need to carry out an investigation to determine the success of this programme.

1.3   STATEMENT OF THE PROBLEM

Arising from the separate development policies of the government in South Africa, the social categories referred to as Blacks, Coloureds and Indians were disadvantaged by the disproportionate allocation of resources. The policies of the South African government were such that the black section of the population group was given differential access to resources. This situation permeated all spheres of life, including education. In education, the disadvantaged groups found it difficult to access higher education, because they did not meet the matriculation exemption requirement. Their poor performance at school was not because they were incapable, but because they were not offered the opportunity for total exploitation of their abilities (Griesel, 1999). As a result, bridging programmes had to be established at higher education institutions to give such students a second chance. As stated earlier, one such a programme is the *CPP*. The question would be whether this programme made a difference to those students who did not meet the entry requirements for a higher education institution.

1.4   AIMS AND SCOPE OF THE STUDY

The aim of the study was to ascertain whether differences existed in the graduation rate in terms of time to completion amongst students who completed the Career Preparation Programme and those who entered through the *Mainstream,* in similarly designated courses. In pursuance of this aim, the following was important for this study:

- Identifying the enrolments, graduation and time to completion rates of students registered for the *Career Preparation* and the *Mainstream* programmes;

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[2] In this study, the current further education and training (FET) colleges will be referred to as technical

- Establishing any statistical differences that exist between the graduation success rate of students completing the *Career Preparation* and those within the *Mainstream* programmes in the three specified options.

The term 'success rate' is defined by the number of *CPP* students who graduated at the UFS between 1995 and 2003. This study focuses only on students who successfully completed the *CPP* at the Motheo Technical College at the Bloemfontein and Hillside View campuses, which are situated in Bloemfontein. These colleges were easily accessible for the purposes of this research study. Although the *CPP* is presented at a further seven technical colleges across South Africa, this study focuses only on students who attended the two local technical colleges mentioned above. The students from these two institutions were attending programmes at the University of the Free State. In order to achieve the goals of this study, it is guided primarily by a quantitative approach. Where relevant, the study draws on qualitative techniques to probe some of the in-depth reasons that might explain certain differences.

1.5   SIGNIFICANCE OF THE STUDY

The significance of this study lies in its importance in determining whether or not a programme is fulfilling the purpose for which it has been set up. Evaluation of a programme can be vital to its existence. It is hoped that the findings of this study will provide useful information for policy formulation, research, future curriculum development and instructional practice. Furthermore, it is hoped that the findings will

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colleges, as they were known prior to 2002.

show what contribution Academic Support Programmes can make in the effort to improve the throughput rate at higher education institutions. The manager of this programme could use the results of this study to assist with any shortcomings that may exist in the programme or to improve the retention rate of students.

1.6   ETHICS OF THE STUDY

All information used in this study has been kept confidential. The full consent of the manager of the Career Preparation Programme was obtained before commencing with this study.

1.7   DELIMITATION OF THE STUDY

It is important to note that large numbers of students enrolled at the Technikon Free State[3] after completing the *CPP*. This study does not include those *CPP* students who completed the bridging course at any of the remaining seven technical institutions or who enrolled at the Technikon Free State after completing the *CPP*. The researcher is aware that the dropout rate in this study plays a vital role in determining the success of the Career Preparation Programme. However, the reasons for such dropouts are not discussed in this study, as insufficient data was available on the students' reasons for dropping out.

1.8   CHAPTER OUTLINE

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[3] The Technikon Free State changed its name to the Central University of Technology, Free State, in 2005.

The thesis consists of five chapters. Chapter 1 introduces the study and outlines the focus of the study. Chapter 2 addresses the issue of access and the Career Preparation Programme as a mechanism to prepare students for higher education. Chapter 3 focuses on the literature review related to this study and how different authors approach evaluation research. Chapter 4 presents the issue of success and the research methodology adopted in the study, including the design, the instruments development, and procedures for gathering and analysing the data. Chapter 5 discusses the results and presents the findings. Chapter 6 summarise and do the reflections of the study.

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CHAPTER 2

**BACKGROUND OF THE SOUTH AFRICAN EDUCATION SYSTEM AND
ACCESS PROGRAMMES**

2.1   INTRODUCTION

The aim of this chapter is to schematically outline the historical background of the South
African education system between 1948 and 1994, in relation to the systems of schooling
and higher education. Furthermore, the chapter sketches the resource limits in order to
show the under-preparedness of learners for higher education and the need for structures
to prepare those learners.   In light of this, it identifies some of the programmes
established to improve access to higher education post institutions in the period after
1994.
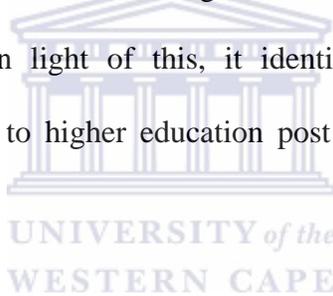
**2.2   BRIEF OVERVIEW OF THE BACKGROUND OF THE EDUCATION
SYSTEM IN SOUTH AFRICA**

South African society has been marked by a history of segregation and separation of the
different "races". This has shaped the education system. After 1948, when the National
Party and its apartheid policy came to power in South Africa, the government enforced
the segregation of black and White people into different areas (Christie & Collins, 1984).

2.2.1   The schooling system

In the 1960s separate education departments were set up to administer institutions classified as White, Coloured, Indian and Black. Resources were allocated along these racial groupings, with most of the resources being allocated to the White group. The distribution of resources was uneven, which, over time, led to huge disparities between the different groups (Du Pre, 1994). Under apartheid, the schooling system of the Blacks was called Bantu education. The aim of Bantu education was to train the Black population for certain types of jobs, thus "keeping them in their place" or subordinating them in all ways to the ruling minority class (Nkabinde, 1997). Furthermore, much emphasis was placed on technical skills in order for the black population to engage in manual labour, thus producing carpenters, labourers, plumbers and related manual workers. According to Arnold (1981), there was no place for black philosophers who would be able to challenge the government at the time.

The objectives of black education are explained by Nkomo (1990) as being to promote black intellectual underdevelopment by minimizing the allocation of educational resources for blacks while maximizing them for Whites. By 1975, although the number of Black pupils in the junior and secondary standards had risen from 122 000 to 317 000, the proportion of secondary pupils had dropped from 6.48% to 2.73% Samuel (1990:19). Further in 1975, about 74% of all Black pupils were in the lower primary classes. What these figures reveal is that the state was determined to ensure that, in line with the apartheid policy, the vast majority of Black children would receive a schooling that did not equip them for anything other than unskilled manual labour (Samuel, 1990).

2.2.2   The higher education system

In 1953, the government appointed the Holloway Commission to investigate the practicality of applying apartheid to universities (Ruperti, 1976). However, it did not accept the Holloway Commission's report favourably. It consequently established a departmental committee to conduct the investigation that in turn proposed a Bill whereby all White universities would be closed to blacks and every group would have its own university. The universities designated for the Black population were further divided into Zulu, Xhosa and Sotho universities, which were tribal universities. These universities were also situated in the rural areas (Ruperti, 1976).
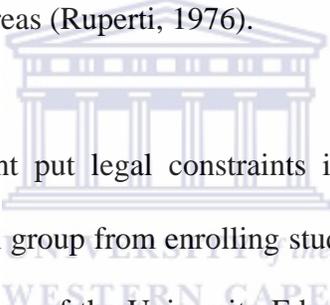
The National Party government put legal constraints in place to prevent institutions designated for use by one racial group from enrolling students from another racial group. In this regard, the 1959 Extension of the University Education Act barred black students from attending White universities. However, in 1984, controls on student admission into universities were relaxed, and it was against this background that there ended up being only a few higher education institutions catering to those students classified as Black (Nkabinde, 1997). This is evident in Table 2.1.

Table 2.1: Number of public higher education institutions in South Africa: 1984-1994

	Universities	Technikons	Total
White	11	8	19
Coloured	1	1	2
Black	8	5	13
Indian	1	1	2
Total	21	15	36

Source: Cloete *et al* (2002)

Although the White population was one of the minority population groups, they had access to the greatest number of higher education institutions. The latter is reflected in Table 2.1. The institutions for the Black population were also mainly located in the former Transkei, Bophuthatswana, Venda and Ciskei (Cloete *et al*, 2002), in countries referred to as the homelands of the Black population.
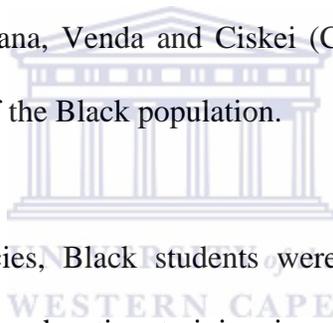
Following the apartheid policies, Black students were encouraged by the apartheid government to undergo higher education training in order to sustain the tribal-based political systems. However, this approach was within a framework where their skills would be used in the homelands to enable these areas to function administratively and economically. For example, a nationalist politician, quoted in Christie and Collins (1984), stated the following in relation to the Einselen Commission:

> *We should not give the natives an academic education, as some people are too prone to do. If we do this we shall later be burdened with a number of academically trained Europeans and non-Europeans, and who is going to do the manual labour in the country? I am in thorough agreement with the view that we should so conduct our schools that the native who attends those schools will*

know that to a great extent he must be the labourer in the country

(Christie & Collins, 1984:10).

As a result of the education policy propagated by the state, black schools did not have the necessary resources to improve the quality of their education. Opportunities for the black communities to develop to their full potential were obstructed by the policies of the apartheid government (Nkomo, 1990).

In 1992, the undergraduate headcount enrolments at seven historically Black universities were concentrated in the fields of Arts and Social Sciences (45%), Education (19%), Economic Sciences (15%) and Law (11%). A small number of students were enrolled in the Natural Sciences (5%), Health Sciences (4%) and Agriculture (1%) (Education Policy Unit, 1997: 97). It is clear that the government's policies did not provide opportunities for the black population to prepare themselves for careers in either engineering and/or science (Education Policy Unit, 1997).

Furthermore, in terms of government policy, White students were earmarked for managerial posts and careers like dentistry, medicine, engineering and so forth. To support this policy, several universities were established for the section of the population designated as 'Whites', to attend. There were two types of universities that White students could attend: six Afrikaans-medium universities, including the University of the Free State, the University of Stellenbosch, Potchefstroom University, the University of Pretoria and the Rand Afrikaans University; and four English-medium universities, namely the University of Cape Town, the University of the Witwatersrand, Rhodes

University, and the University of Natal. The University of Port Elizabeth was the only university that catered to both Afrikaans- and English-speaking White students (Cooper & Subotzky, 2001). On the other hand, if a black person wished to attend one of these institutions, special permission was needed from the Minister of Education, as black education was to be directed at black and not White needs. The system that guided education was such that the White child's skills, knowledge and attitudes equipped him/her to fulfil a superior role (Cloete *et al*, 2002).

2.3   REASONS FOR UNDER-PREPAREDNESS OF STUDENTS
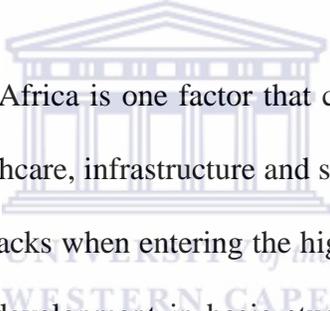
The historical legacy of South Africa is one factor that contributed to the differences in income, education, career, healthcare, infrastructure and so forth. These differences led to the obstacles encountered by blacks when entering the higher education sector. First-year black students lack sufficient development in basic study skills, high-level intellectual skills, communication skills and personal skills. There are also other factors that directly and indirectly contribute to the poor performance of black students at higher levels of education. Some of these include socio-economic factors, access to education, structures established to improve access, and admission requirements, amongst others (Booth, 2001). These factors are discussed below.

2.3.1   Education system

Among Black South Africans, one of the reasons for poor performance at school is the language of instruction. An argument is made for the fact that Black students face the

challenge of learning, studying and writing in another language, usually English (Baine & Mwamwenda, 1994). Due to the variety of African languages in South Africa, education in the mother tongue is not always possible. This creates major problems for students entering the higher education system. At most of the higher education institutions, books and other material are available in English only, and students are unable to understand properly, question/critique information, and express themselves (Du Pre, 2003).

Overcrowded classes in the black schools were a regular feature of the state in which South African schools were operating. As stated earlier, the existence of many under-qualified teachers made matters worse, as illustrated in Table 1.1. The teachers of natural sciences mostly had no formal training while, at the same time, the curriculum of black schools focused only on the skills needed by a labourer (Kachelhoffer, 1995). The development of cognitive skills did not form part of the curriculum and, moreover, there was a lack of pre-primary schooling. That meant that school-aged children were not prepared for school. During this time (1976-1989), school programmes were interrupted by boycotts and marches. The lack of facilities and equipment such as teaching aids, libraries, electricity and laboratories also contributed to poor academic performance in such schools (Simon, 1991).

The absenteeism and the disruption of classes between 1961 and 1988 had a major impact on the failure rate of black students. Much of the learning time was wasted by marches and the lost time was never recovered. This had a significantly negative impact on learners, resulting in them dropping out and having to repeat their school year (Nkabinde, 1997)

2.3.2   Socio-economic factors

Many black students came from deprived socio-economic backgrounds with few educational support services. The black population lived in overcrowded conditions with limited opportunities to study. There is a view that this lack of privacy led to consistent failure at school (Donald, 1995). The apartheid policies were such that black people were assigned certain types of jobs such as manual labour and other low-paying jobs. Furthermore, the society in which the pupils grew up was characterised by a lack of role models and by poverty, domestic violence, alcohol abuse and a high crime rate (Advisory Council for Universities and Technikons, 1992).
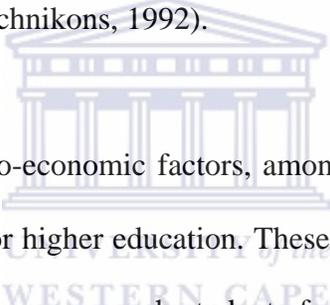
The education system and socio-economic factors, amongst others, contributed to black students' under-preparedness for higher education. These legacies of apartheid needed to be addressed in order to better prepare such students for higher education. Much effort was required to overcome the problems experienced by black students in higher education.

When South Africa was entering a time of negotiations for a non-racial, democratic government after 1990, the global market also opened its doors to South Africa. This meant the creation of a greater demand for qualified workers (Cloete *et al*, 2002). The opening of the global market required the higher education sector to provide more graduates for a competitive world market. One of the means of satisfying this demand was to prepare the large number of black students for the higher education sector. In order to achieve this goal, the government proposed the establishment of structures in

order to prepare black learners and to expand access to the higher education sector (Department of Education, 2001). The education system and socio-economic factors partially contributed to black students' under-preparedness for higher education. It also contributed to their poor performance and low pass rate. To this end, several access-type programmes in higher education institutions were established at historically White institutions in order to prepare prospective black students.

2.4   NEED FOR ACADEMIC SUPPORT PROGRAMMES IN SOUTH AFRICA

The origin of Academic Support Programmes (ASPs), is that it arises from the recognition that some students entering university are not prepared when it comes to carrying out university studies successfully (Tema, 1988). Support programmes can be described as an academic service designed with the aim to assist "at risk" students, to encourage them and to retain them. Higher education institutions in various parts of the world experience the same problems with access to higher education for students who are not ready to enter the system (Pretorius & Labuschagne, 1991).

The purpose of an academic support programme is to prepare students for higher education and to reduce the failure rate of first-year students. Several factors contribute to the under-preparedness and the failure rate of students. These factors include unrealistic aspirations, which lead to poor career choices, a lack of self-assertiveness, and difficulties with language and the ability to communicate. Other factors include an inability to cope with the new learning environment at a university or university of technology, coupled with poor study habits (Behr, 1981).

Academic Support Programmes, as argued by Sharwood (1998), are programmes designed to improve the learning of students. These programmes can focus on different areas such as student development, staff development, curriculum and organisational development. Furthermore, academic support is seen as a mechanism to improve disadvantaged students' access to higher education institutions (Advisory Council for Universities and Technikons, 1992).

The aims of Academic Support Programmes differ from institution to institution. In general terms, the aim of Academic Support Programmes is mainly to improve the academic performance of students who have been disadvantaged by the inadequacy of their previous educational opportunities. It also helps to develop learners into critical, independent and creative learners and seeks to improve the retention rate of "at risk" students. Another aim is to integrate language and cognitive and problem-solving skills into the subject fields to ensure that students realise the bigger picture (Advisory Council for Universities and Technikons, 1992).

2.5   ACCESS

Expanding access to higher education and ensuring greater success forms one of the main challenges of higher education transformation in South Africa (Cloete *et al*, 2002). In South Africa, the current means of accessing higher education are determined by the different admission requirements within the higher education institutions.

2.5.1   Admission requirements

Achieving the goal of improved access has its own set of problems and challenges. The routes through which students can be admitted to the higher education system in South Africa, especially for degree programmes are, firstly, the Senior Certificate with Endorsement; secondly, at the discretion of the Senate; and, thirdly, by qualifying for Mature Age Exemption (Griesel, 1999). The traditional cohorts of school leavers are admitted on the strength of their performance in the Senior Certificate examination. Research has proven that this mechanism has not supplied sufficient numbers of prepared students for admission to higher education studies (Kotecha, 2001). This is due to the fact that, in the past, there were severe inequalities in the education system. It was envisaged that the Academic Support Programmes offered by tertiary institutions could possibly address some of these problems.
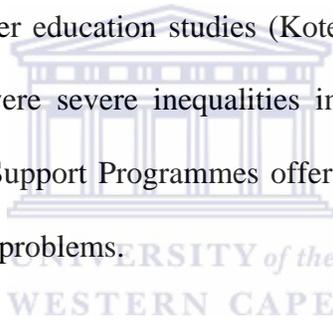
The entry requirements at the University of the Free State involve the candidate passing the Senior Certificate with Endorsement, achieving a matriculation score (M-score)[4] of 28 points, plus meeting the specific requirements of the faculty in question. A candidate with a matriculation score between 24 and 27 points undergoes a standardised test to establish whether it is advisable that he/she is permitted to a degree programme. The Matriculation-score is calculated according to the symbols achieved for subjects in the candidate's final matriculation (Grade 12) examination.

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[4] The M-score is calculated from the amount of points represented by the symbols that a candidate achieves for the Senior Certificate (Grade 12) examination. These are as follows:
HG: A=8; B=7; C=6; D=5; E=4; F=3 ; SG: A=6; B=5; C=4; D=3; E=2; F=1

2.5.2   Structures to improve access

After 1994, the government stepped in to enhance the enrolment of black students in the higher education system, according to the National Plan for Higher Education (NPHE, 2001). One of the aims of this policy is to enhance the participation of blacks in the higher education sector. The National Plan for Higher Education (Department of Education, 2001:18) states that the participation rate must grow to about 20% of the age group 20-24 in public higher education over the next 3 to 8 years. All of these issues are overshadowed by increasing costs in the higher education system, the increase in the personal cost of education to students, and decreasing contributions from the state (Kotecha, 2001).
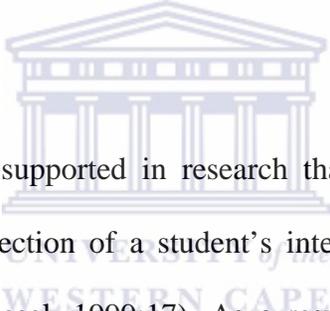
It is commonly assumed and supported in research that performance in poor-quality schooling is an inaccurate reflection of a student's intellectual ability or potential for success in tertiary studies (Griesel, 1999:17). As a result of this phenomenon, higher education institutions started implementing programmes in the 1980s that would prepare disadvantaged learners for entry into higher education. In line with the goals of equity and redress, programmes were designed and targeted mainly at black students so as to prepare them for diploma or degree studies. Much effort went into these programmes, which assisted students in coping with their higher education studies. Along with the Academic Support Programmes strategy, the higher education institutions also presented foundation and bridging programmes, as well as extra-curricular programmes, to address the under-preparedness of black students. In this regard, structures needed to be put in place to support these learners. The *CPP* was one such structure at the University of the Free State. This will now be addressed.

2.6   THE CAREER PREPARATION PROGRAMME

The Career Preparation Programme is a supporting structure established in the early 1990s by the UFS, in collaboration with technical colleges, to prepare students for access to higher education studies at the University of the Free State. The *CPP* is an alternative access programme.

2.6.1   Background of the programme

By way of addressing the educational backlogs arising from the historical legacy, the *CPP* was established in order to meet this need. It was designed mainly as a bridging programme, "providing an   opportunity to disadvantaged students to further their studies in higher and further education" (Marais, 2002).
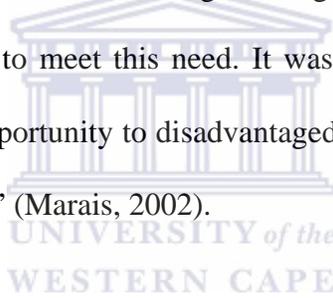
The Career Preparation Programme was launched in 1991, at which point it was referred to as the Need for Education and Elevation Programme. The name of the programme subsequently changed to the Career Preparation Programme in 1993. At this point it offered university-accredited courses in Human and Social Sciences (HSS) and the Natural and Agricultural Sciences (NAS). In 1994 it started offering university-accredited courses in Economic and Management Sciences (EMS) (Hay and Marais, 2004).

2.6.2 Aims of the programme

The main aim of the *CPP* is to provide disadvantaged students with opportunities to enjoy general-formative and vocationally-directed studies at various further and higher education institutions in the region. A second aim of this programme is to address, through a foundation course in lifelong learning, the student's wider needs with regard to the quality of personal life, reading skills, self-assertiveness, problem solving, and generic and numeric competencies (Marais, 2002). A third aim of the *CPP* is to provide access to students to enter higher education via an alternative route

2.6.3 Sites of delivery

The *CPP* and the university modules are presented at technical colleges which is now part of the Further Education and Training sector. The *CPP* is presented at nine different technical colleges throughout South Africa. Students attend classes in the Free State at the Motheo Further Education and Training College (Bloemfontein campus and Hillside View campus) in Bloemfontein, the Maluti College in Bethlehem, the Flavius Mareka College in Sasolburg, the Goldfields College in Welkom, and the Qwa Qwa College in Phuthaditjhaba. In the Northern Cape, the *CPP* is presented at the Northern Cape College in Kimberley. The *CPP* is also presented in the Western Cape at the South Cape College situated in Oudtshoorn. In the Eastern Cape, the *CPP* is presented at the Ikhala Public College in Aliwal North.

2.6.4 Admission to the programme

The Career Preparation Programme is presented outside the *mainstream* of the UFS. The requirement for admission to this programme is a Senior Certificate (Grade 12 or Standard 10) with a minimum matriculation score of 12 points. An extra criterion of Grade 12 Mathematics is required if a student wishes to register for Economics and Mathematics.

2.6.5 Funding of the programme

The *CPP*'s main source of funding is externally based, although the UFS had contributed to the programme (Strydom, 1994). It was noted that at the UFS, students had contributed approximately 60%, in the form of tuition fees, towards the funding of the programme. The programme had received a further 15% subsidy from the government for the first-year subjects presented. The funds received from donors constituted less than 10%, while the remaining 15% came from the annual business budget. The UFS assisted with the payment of the salaries of the co-ordinators and a percentage of the salaries of the Access Programmes division (Marais, 2002).

2.6.6 Curriculum

The duration of the *CPP* at the University of the Free State is one academic year. During this year, students can select one option from a range of three. The three options are Economic and Management Sciences, Human and Social Sciences, and Natural and Agricultural Sciences. These are outlined in Table 2.2.

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2.6.7   Teaching methodology

In seeking to meet the aims as mentioned earlier, the programme used Resource-Based Learning as a teaching method from 1997 onwards. Resource-Based Learning is a teaching system whereby the learning content is made accessible for students in more ways than merely the presentation of lectures. This method was being utilised for all university-accredited courses. By using Resource-Based Learning, the role of the lecturer changes from that of a teacher to a facilitator of learning and, finally, to that of an academic counsellor (Relf, 1996). The student plays the role of active discoverer. Learning sources entail, for example, printed material, multimedia packages, computer-based instructions and tutorials that serve as further support and help for the student during the learning process (Bitzer & Pretorius, 1996).
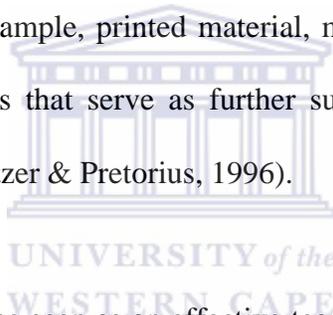
Resource-Based Learning can be seen as an effective teaching and learning methodology to promote open learning. Resource-Based Learning can consist of different types of applications such as enhancement of conventional courses, lecture substitution, distance learning on campus, hybrid self-pacing as substitute for the specific learning activity, and supportive learning activities (Gibbs, Pollard & Farrell, 1994).In practice, this means that the student can determine his /her own pace of study and they can collect information also on their own.

The need for Resource-Based Learning arose as a result of the different changes and problems being experienced by the higher education system. One reason for employing this method is that libraries cannot cope with the large number of students requesting

books while not purchasing any textbook themselves (Parsons & Gibbs, 1994). Furthermore, the student body is more diverse, as students are coming from different educational backgrounds and, therefore, large classes are not effective (Parsons & Gibbs, 1994). Relf (1996) also argues "teachers teach learners" but that "learners learn from books". This implies that, within Resource-Based Learning, a learner's perspective should shift from a passive to an active role.

2.7   SUMMARY

The National Plan for Higher Education (Department of Education, 2001) promotes access as one of the key policy goals for higher education. In seeking to fulfil this need, institutions have developed structures to promote this policy. The *CPP* at the UFS is such an example, which is a support system for students who did not meet the entry requirements of the university. In order to understand the position of the *CPP* in the higher education spectrum, the next chapter will discuss the different Academic Support Programmes.

CHAPTER 3

LITERATURE REVIEW

3.1   INTRODUCTION

This chapter surveys the literature that had an impact on the study. In this regard, various definitions of access are discussed, as are the different Academic Support Programmes offered by higher education institutions. This chapter also looks at current debates on academic support and furthermore provides insight into relevant research studies on access programmes both nationally and internationally.   Given that several of these studies draw on Evaluation research, some of the ideas are therefore also identified.

3.2   ACCESS TO HIGHER EDUCATION

Access is a multifaceted issue ranging in various components. These components include preparedness for higher education, admission and selection criteria as well the issue of success. The ways in which these issues are addressed have an important implication for developing an effective approach to improve equity in access and success. The key questions regarding access are: access for whom, access to what and access for what. Access for whom would relate to the question of equity in relation to the various barriers such as unequal socio-economic barriers and educational opportunities in our societies. These would refer to race, gender, class, age, language and locality. This would imply that, not only the enrolments in higher education be increased but also it has to be broadened to represent the demography of the population. Access to what would refer to the issue of quality and relevance of programmes to which students gain access. Access

for what would refer to the broader purpose of higher education (SAUVCA, 2001). Access programmes can be seen as all actions taken by higher education institutions to improve the participation rate of under-represented groups and students experiencing socio-economic disadvantages (Higher Education Authority, 2006).

Access to higher education would mean that a lower-income student should be financially able to attend a four-year course and live on campus. Most of the South African population is seen as belonging to the low-income and middle-income classes. Thus, access to higher education goes hand in hand with funding matters. However, the majority of South Africans cannot afford higher education studies nor do they have the skills to attend a higher education institution. This places limits on access to the higher education institutions for these individuals (Griesel, 1999).
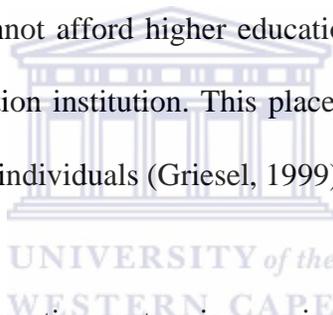
Given the above, the higher education system is experiencing several problems in trying to provide access and opportunities to all who can profit, while maintaining academic standards. Access can be grouped in four categories:

- *Access as gate keeping through entrance testing and placement;*
- *Access as redress through alternative routes of preparation;*
- *Access as institutional survival through flexible modes of delivery; and*
- *Access as quality assurance through a reconfiguration of curricula* (Griesel, 1999:16)*.*

While the Senior Certificate is formally the requirement to enter the higher education system, research has proven that it is not a good predictor of a student's intellectual

ability (Griesel, 1999). To this end, in South Africa, higher education institutions implemented entrance tests in order to identify talented students. Furthermore, support structures were implemented such as Academic Support Programmes, foundation programmes, bridging programmes and extra tutorial classes. The diverse student population group who enters the higher education system requires alternative modes of delivery other than a teacher-centered approach. Resource-Based Learning is used effectively for these diverse residential student populations (Griesel, 1999). In order to support those students who had been having difficulties with their higher education studies, academic structures have been put in place to support them.

3.3 THE REASONS FOR ESTABLISHING ACADEMIC SUPPORT PROGRAMMES

The need for Academic Support Programmes arises from the recognition that some students entering university are not prepared when it comes to carrying out university studies successfully (Tema, 1988). In this regard, support programmes can be described as an academic service designed with the aim to assist "at risk" students, to encourage and to retain them. Tertiary institutions in various parts of the world are experiencing similar problems with regard to access to higher education for students who are not ready to enter the system (Pretorius & Labuschagne, 1991). An argument made by Sharwood (1998) is that Academic Support Programmes do improve the learning of students in such a way that it helps with the development of underdeveloped skills. Academic Support Programmes can focus on different areas such as student development, staff development, and curriculum and organisational development (Hunter, 1990).

The aims of Academic Support Programmes differ from institution to institution. The aims of these programmes are mainly to improve the academic performance of students who have been disadvantaged by the inadequacy of their previous educational opportunities. It also helps to develop learners into critical, independent and creative learners and seeks to improve the retention rate of "at risk" students. A further aim is to provide a structured, systematic and holistic academic support programme while integrating language as well as cognitive and problem-solving skills into the subject fields to ensure that students realise the bigger picture (Advisory Council for Universities and Technikons, 1992). One outcome, as described in the National Plan for Higher Education (Department of Education, 2001), is that Academic Support Programmes are to improve the graduation rate of students. In order to achieve this, Academic Support Programmes are put in place by the different higher education institutions. Against this outcome of the National Plan for Higher Education, this study will measure the successes of the *CPP*.

The overall purpose of Academic Support Programmes is to help students who have academic shortcomings to work towards achieving academic success in a chosen field of study. One of the possible ways that this goal may be achieved is to provide students with Academic Support Programmes, which ensure that they develop the necessary basic skills that would ensure success on entrance (Tomlinson, 1989).

Student support can take a different forms from institution to institution. It can consist of the following programmes and initiatives: Pre-admission and pre-entry orientation courses; orientation programmes; skills development programmes; bridging programmes;

foundation programmes; extended curriculum programmes; language programmes; writing and reading centres; and mathematics centres (Sharwood, 1998).

3.3.1 Foundation programmes

According Department of Education (2002), a foundation programme is a programme that prepares potential students, who would otherwise not meet matriculation requirements, to qualify for admission to undergraduate courses. This would mean that foundation programmes seek to teach the academic skills that students need to become successful in their higher education studies. Foundation programmes differ from extended curriculum courses in that they do not provide automatic access to the *mainstream* and are often used as a selection or channelling system.

The term "foundation", as argued by Warren (1998), could have different meanings. Firstly, it may be understood as bridging in a backward-looking sense, which attempts to redress the gaps in knowledge and limitations of the cognitive, communication and learning skills. Secondly, bridging programmes can be forward-looking by means of laying a foundation for further studies, such as entry-level courses to introduce students to academic concepts and ways of learning. A foundation programme can also combine bridging courses with *mainstream* courses.

3.3.2   Bridging programmes

There is no uniformity either in the literature or in colloquial usage with regard to the use of the terms "support programmes" and "bridging programmes". One could argue that bridging programmes are a sub-category of support programmes. Academic Support Programmes are programmes that aim to support students who have not met the full requirements for admission to a university and who have the potential to achieve success at university. Programmes for students who had not met the requirements for university entrance and who needed to be brought up to the level of matric would be termed bridging programmes (Hunter, 1990).

There are two models of bridging from high school to university, as stated by Grayson (1995). The first is a phased transition, which matches both the beginning and the end of the year to the appropriate level (Figure 3.1).

Figure 3.1: From high school to university
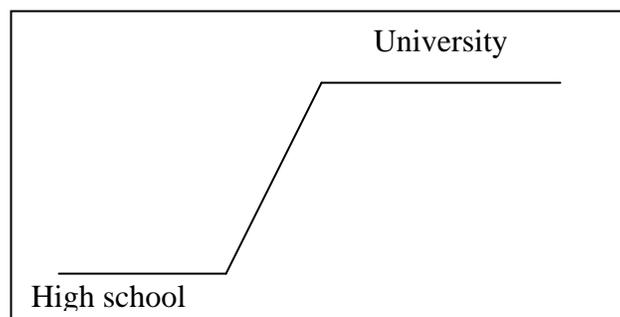
Source: Grayson (1995)

The second is the "intermediate level", with discontinuities at both ends, which requires students to shift from one level to the other (Figure 3.2).

Figure 3.2: From high school to a bridging programme to university

University
Bridging programme
High school
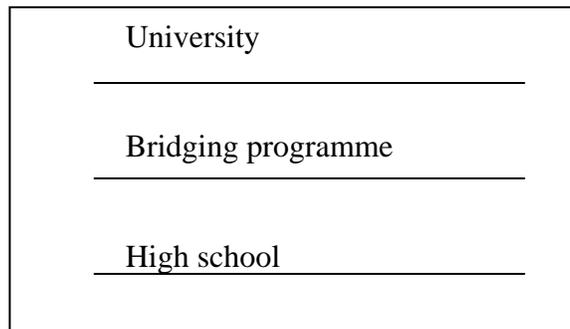
Source: Grayson (1995)

According to Grayson (1995), the term "bridging" is understood to refer to a mechanism of enabling a learner to make up for the knowledge or skill deficiencies he/she might have experienced so as to gain entry to a programme of study. A bridging course can also be defined as a course designed to equip a student to take up a new subject or course by covering the gaps between the student's existing knowledge and skills. A bridging course looks back at matric and tries to upgrade performance at that level. In designing bridging programmes, institutions need to take cognisance of the wide gap that exists between where students are when they enter and where they need to be when they exit if they wish to enter *mainstream* tertiary education (Advisory Council for Universities and Technikons, 1992).

3.3.3   Extended curriculum programmes

An extended curriculum programme refers to a reduced workload. The work of one academic year is spread over a period of two years and is supported by non-credit-bearing subjects and additional tutorials.

One type of extended curriculum programme is the separate extended programme. Students take a reduced load and have separate classes for their *mainstream* credit subjects in the first year. These classes include more contact time than the *mainstream*, but the students write the same tests and examinations as *mainstream* students. The students also attend other support courses. In the second year of study, the student takes the remaining first-year subjects (Sharwood, 1998).

Generally, Academic Support Programmes are labelled as structured teaching arrangements which are supplementary to the *mainstream* curriculum or which constitute enriched forms to *mainstream* courses. A bridging programme is a structured teaching arrangement which takes one year and which is completed outside a *mainstream* programme (Hunter, 1990). Against this backdrop, the *CPP* as an initiative of the University of the Free State had been established to support black students who did not qualify for entrance to the *mainstream*. The Career Preparation Programme is a bridging programme with a difference, as it offers two accredited, first-year-level university courses and is presented outside the *mainstream*.

3.4   ACADEMIC SUPPORT PROGRAMMES: ASPECTS OF THE DEBATES

Academic Support Programmes have been the subject of much debate in South Africa. Some of these touch on the language that scholars use to describe academic development work. In light of this, one argument as posited by Ndebele (1995), is that the term "disadvantaged student" in the South African context implies there is an accepted normal standard, set by First World countries. He argues that the term "disadvantaged students"

is used as a substitute for black students or the oppressed. He further notes that terms such as "under-prepared", "at-risk" and "ill-prepared" are used to describe students who come from an educationally disadvantaged background. He goes on to argue that terms may actually have a negative impact on students. In his view, these terminologies make these students begin their journey of post-secondary intellectual life with a backlog deficit. By this, he means that those students who are labeled with such terms are subsequently placed under pressure and the spotlight, to perform in the higher education system

Another argument by Masenya (1995) is that academic support is synonymous with the "under-preparedness" of black students, rather than with the under-preparing socio-educational forces in our society. According to her, this is indicative of power relations in the South African society. She goes on to state that Academic Support Programmes at historically White universities seem to be increasingly concerned with the accumulated intellectual deficit of the "under-prepared" students. She also states that terms like 'disadvantaged", "at-risk" and "under-prepared" puts the spotlight on those students who wear this label. She goes on to assert that an Academic Support Programme claims the provision of educational quality but does not offer much in terms of educational equity, the latter refers to the provision of equal educational opportunities to all citizens of South Africa. Hence access to these opportunities and educational justice would, therefore, refer to an educational system that avoids the subordination of one culture by another (Masenya, 1995). However, these terms have been questioned. Furthermore, scholars such as Masenya (1995) and Ndebele (1995) argue that these labels put extra pressure on students to perform.

A study on the success rate of "disadvantaged" students who attended the Port Elizabeth Technikon Foundation Programme, found that these students performed equally as well as those who entered the *mainstream* directly (Sharwood, 1998). As the discussion above indicates, the existences of the Academic Support Programmes have both their strengths and weaknesses.

3.5   ACCESS PROGRAMMES: A WINDOW INTO RESEARCH STUDIES

3.5.1   National

Certain Academic Support Programmes have been the subject of research. I have identified a few of these studies. Laugksch (1994) studied the performance of students who enrolled for the Academic Support Programme for Engineering at the University of Cape Town. This programme was established to address the academic under-preparedness of students as a result of the apartheid schooling system (Laugksch, 1994). The finding in terms of the graduation rate of students attending this programme was that it took students a maximum of five years to complete their studies. In this study there were statistically significant differences in the number of years taken to graduate by the different learners. This trend was influenced by the schools that students had attended.

An evaluation on the foundation programme offered at the Port Elizabeth Technikon, aimed at students enrolling for Science and Engineering courses was done by Sharwood (1998). This programme was developed for under-prepared students who had a high probability of failing or dropping out from higher education programmes. The finding on the outcome evaluation of the programme was that the graduation rate of students completing this programme has increased. However, the study identified that students

were taking longer to graduate than those students who had accessed through the *mainstream* programmes.

3.5.2 International

Research into the graduation rate of students at various institutions has proven that the high failure and dropout rate of undergraduate students is a common phenomenon internationally. This high drop out and failure rate would justify structures to support and develop students to their full potential (Pretorius & Labuschagne, 1991). I will briefly outline some of these studies.

It is noted that access programmes in the United Kingdom are planned for those students who are not prepared for entry to higher education. These courses are usually aimed at groups who are under-represented in the higher education system, catering for persons with a variety of needs. It is further noted that these programmes also differ in content, delivery modes, teaching methods and so forth (Pretorius & Labuschagne, 1991).

The Scottish Wider Access Programme was launched in 1988 as a one-year course providing access for students from minority ethnic backgrounds. The aim of the SWAP is to improve the rate of participation in higher education by older students, especially in terms of those who lacked formal entry requirements. Research done by Connelly and Chakrabarti (1999) indicates that the objective of the Scottish programme is to increase the numbers from certain social groups in higher education had not been achieved.

In another study conducted in the United Kingdom it was found that access courses were succeeding in opening up higher education opportunities to people who might otherwise have missed out, but noted limited progress in attracting students from traditionally under-represented groups (Connelly and Chakrabarti, 1999). Although these courses were initiated for the under-presented groups in the higher education system, it does not attract these groups.

Moving from Europe to the continent of Africa, we also observe the establishment of Academic Support Programmes. The University of Botswana established the Centre for Academic Development in 1999 to address the education needs of students. The main aim of the Centre is to ensure that the University of Botswana attains and maintains the highest levels of academic excellence. The Centre focuses on academic management development, academic programme review, academic teaching and learning, student development, research, and academic resource development. Student development aims at the development and review of the academic competencies of students (University of Botswana, 2006).

In an international evaluation research study into access programmes conducted by the Higher Education Authority (2006) in Ireland, it was found that access programmes tended to promote equity of access to higher education for under-represented groups in Ireland. The research also found that access programmes provide support to students upon entering the higher education system. One important finding was that access programmes tended to be more successful when delivered in partnership with the immediate community. This would entail that the local business and services be involved

in the development of the immediate community. The business sector played a vital role in the sponsorship of these programmes.

The importance of above research for this study is to indicate that access to higher education is an internationally recognized phenomenon. Higher education institutions have established Academic Support Programmes, firstly to, assist the students to get access to higher education institutions and, secondly, to equip students with the necessary skills required for their higher education studies. For this research, it is also evident that one way to systematically improve the funding of these programmes is through the use of evaluation research. In light of this I will outline to some aspects of Evaluation research.

3.6   EVALUATION
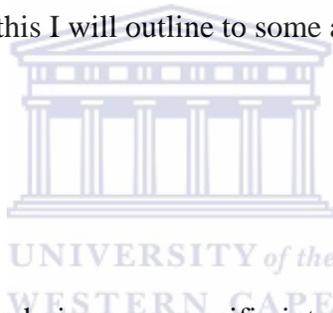
In the evolution of this study and given my specific interest in investigating the purpose of the *CPP,* I was interested to understand some of the ideas that inform evaluation studies. Since these have indirectly shaped my thinking and as identified earlier, form a component of the international programmes, key elements of the literature on evaluation of such programmes, are therefore identified. This is done in terms of definitional aspects as well as a broad brushstroke of elements of the different evaluation models.

What is evaluation?

Evaluation is a highly complex term. It has different meanings for different people. Worthen and Sanders (1987:22) argue that there is no agreed-upon definition for

evaluation but defines evaluation as "the determination of a thing's value". For example, some scholars see evaluation as a measurement; this would be an indication of whether any progress has been made in offering a programme. Other scholars see it as the assessment of the extent to which specific objectives have been achieved. The outcomes of the programme are measured in terms of the aims set at the start of such a programme.

Evaluation "is the process of systematically aggregating and synthesizing various types and forms of data for the purpose of showing the value of a particular programme" (Wilde and Sockey, 1995:2).There is a view that all programmes need to be evaluated in order to determine whether they are profitable and worthy of presentation. This view argues that in order to determine the value of a programme, all data – especially on student performance – must be used to determine the worth of the programme. In this regard an indicator of performance would be the graduation rates of students completing such a course. The completion of a qualification is an indicator of the attainment of specific skills to succeed in higher education (Wilde and Sockey,1995)

As defined by Alkin (1983), evaluation is the process of identifying areas of concern. This would be done by selecting appropriate information, and collecting and analyzing data in order to report a summary that could be useful to decision-makers. He argues that the information gathered could be used to expose the weak and strong points of the programme. It can also play an important role in the channeling and allocation of funding for the programme.

Outcome evaluation research aims to answer the question of whether an intervention has been successful or effective. The main aim of outcome evaluation studies is to establish whether the intended outcomes of the programme have materialized. This would include immediate or short-term outcomes, as well as long-term outcomes (Mouton, 2001).

Furthermore, student outcome evaluation can also be used for the justification of academic support and any other structures, such as counselling, that are needed. In light of this, outcome evaluation can be used to reallocate existing resources and shift the focus to critical areas. It can also justify decision-making policies (Roueche, Summer & John, 1993).
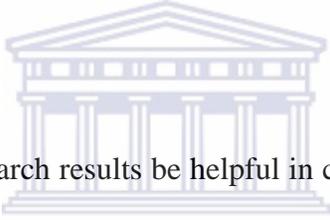
Further can evaluation and research results be helpful in clarifying programme objectives and priorities (Wholey, 1985). It also helps in stimulating needed improvements in performance and demonstrating effectiveness to appropriate parties. The way in which evaluation is set up can provide valuable information to those who administrate the programme. Individuals managing the programme can use the research information to help develop their priorities. It is further argued that, most of the time, more effort in a programme is directed to an area not viewed as relevant and therefore not measured, and then efforts within the programme can be redirected (Scott & Sechrest, 1988).

According to Scott and Sechrest (1988), evaluation results can assist in several areas, including monitoring progress and determining whether findings should be continued. These evaluation results may assist in the decision as to whether a programme should be

modified in order to improve its effectiveness. To conduct an evaluation, certain models are used to set the guidelines for the boundaries of such research.

Following the above, this section discusses various education evaluation models that are used in educational research. These include a range of models referred to as: the context, input, process and product; goal-free; countenance and a framework that are used by the University of California Los Angeles.

Stufflebeam (1985) has been an influential proponent of a decision-oriented evaluation approach. This approach assists the administration and decision-making processes. This evaluation framework is designed to serve managers and administrators and is based on four different kinds of educational decisions. These decisions revolve around factors such as context, input, process and product. Context is aimed at serving the planning decisions. The context evaluation also determines the objectives of the programme by identifying the needs of such a programme. Input evaluation assists in structuring the decision-making process. At this point, all the resources, as well as the alternatives, need to be identified. Process evaluation assists with the implementation of decisions taken. All the possible barriers also need to be defined during this process. Product evaluation focuses on recycling the overall decision-making process. The product evaluation phase is important in judging the programme's attainment (Worthen & Sanders, 1987:78).

Programme outcomes are not within the boundaries of the category of goals or objectives (Worthen and Sanders,1987). Scriven (1967) believes that the most important function of goal-free evaluation is to reduce bias and increase objectivity. In an objective-oriented

evaluation, the goals of the project are unavailable to the evaluator. This has the tendency to limit the evaluator in his/her perception. He notes that the goals are like "blinders", causing the evaluator to miss important outcomes not directly related to these goals. The evaluator has to determine the total effects of the programme without access to any information about the objectives of the programme. From the results of the evaluation, the evaluator will be able to formulate certain aims of the programme.

The characteristics of goal-free evaluation are that the evaluator purposefully avoids becoming aware of the programme goals. The evaluator focuses on actual outcomes rather than intended programme outcomes, which also increase the likelihood that unanticipated side effects will be noted (Scriven, 1967).

The two basic acts of evaluation, as argued by Stake (1983), are description and judgment. Stake's framework for evaluation is to provide the background, justification and description of the programme rationale, including its need. Secondly, it lists the intended antecedents, transactions and outcomes. Thirdly, it records observed antecedents and outcomes. It also states the standards for judging the programme outcomes and records the judgments made about antecedents, conditions and outcomes. This model gives the evaluator a conceptual framework of the complete evaluation process.

Another model has been developed by Alkin (1969) for the use at the University of California, Los Angeles. This model focuses on the following five types of evaluation: system assessment, programme planning, programme implementation, programme improvement, and programme certification (Worthen & Sanders, 1987).

Each of these types has varied focuses. The purpose of the 'system evaluation' is to provide information about the overall programme, while the 'programme planning' is mainly there to assist in the selection of content. This plays a vital role, as it is the curriculum of the programme that attracts students. The 'programme implementation' is used to determine whether or not a programme is successful. Furthermore, an evaluation is conducted to determine whether the programme is directed at a specific target group. The 'programme improvement' component provides information that can be used by the programme managers. Evaluation is necessary to adapt the curriculum to the demands of society. 'Programme certification' is used to provide information about the value of the programme and it's potential. This could serve as a benchmark for programmes in other organisations (Worthen & Sanders, 1987:81).
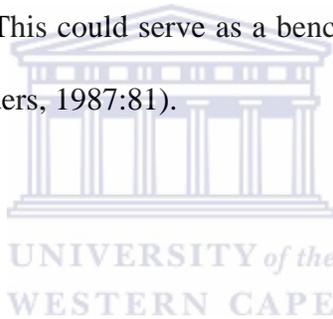
3.7   SUMMARY

In this chapter I outlined the problems of access as experienced by the higher education institutions in South Africa and internationally. In light of this, I further described the importance of a rationale for Academic Support Programmes and the role it had to play in preparing students for higher education studies. As shown, the debates on Academic Support Programmes indicate that there tends to be much more pressure on students who attend such courses. I also addressed the importance of these programmes internationally and finally I outlined aspects of the evaluation literature, given that this has acted as a cushion to assist my probing of the statistical data. The next chapter will look at the methodology and design used in this study.

CHAPTER 4

METHODOLOGY AND DESIGN

4.1   INTRODUCTION

The purpose of this chapter is to describe the research design followed in this study. Specific reference is made to the use of the case study as a research design strategy. Furthermore, this chapter describes the data used in this study, as well as the sample and the type of analysis used to analyse the data. The limitations of the study are also discussed. Given that this study tracked success in terms of whether students had graduated, it is important to provide insight into some of the complexities associated with the notion of success. Since some of these ideas have indirectly informed my thinking, it is timely to begin with a broad brushstroke of some of these debates.

4.2   CRITERIA FOR SUCCESS

Scholars such as Yeld (2001), Sanders (1986) and Sharwood (1998) have very different views on the criteria to be used to define success. Yeld (2001:268) defines the success of a programme as being dependent on those students who graduate or who are still busy with their studies. Sharwood (1998:84) measured the success of the Port Elizabeth Technikon Foundation Programme in terms of those students who entered the *mainstream,* these students were tracked until their completion of the course. For Sharwood (1998), it was therefore possible to compare the graduation rates of the students who were prepared by the foundation programme with those who had gained

direct entry to the *mainstream*. One of the findings of Sharwood's study was that those students who completed the foundation programme performed better than the students who enter the *mainstream* directly (Sharwood, 1998).

Furthermore, the question of success is defined by Sanders (1986), who argues that there is no agreement on the criteria for success of Academic Support Programmes. The assumption of this mini-thesis is that in order to evaluate a programme in terms of success, one need to determine what would be viewed as success. In this regard Sanders (1986) also argues that success is influenced by several factors outside the programme that may be difficult to measure. These factors would range from financial problems, transportation, emotional instability, adaptability problems amongst others.

In seeking to define success, research studies done by De Villiers and Rwigena (1998) have focused on the comparison of students who attended the one year bridging Pre-University Bursary Scheme (PBS) programme with the performance of those students who did not attend the programme. Their research indicates that students who come from a "disadvantaged" background and who attended this programme in the Faculty of Commerce at the University of the Witwatersrand experienced a marked effect in terms of their graduation prospects (De Villiers and Rwigena, 1998). The research study further indicates that of the total enrolments in this programme, 56% graduated, taking them 4.9 years on average to do so, that includes the PBS year. But of those students who entered the *mainstream* directly, 29% of them graduated within an average of 5.2 years time frame.

The University College, Stockton, in the United Kingdom has developed an innovative programme to encourage and support students with no previous experience of study in Science. This course focuses on opening access for women into Science programmes. In making an argument for opening access to science for women, Inman (1999) argues that the skills of the future will require higher levels of literacy and that these skills can be adequately addressed through a foundation programme. He further states that, during his study at the University College, Stockton, it emerged those students who had withdrawn from the access course did not regard themselves as failures. Instead they perceived the experience of attending a foundation programme as an opportunity to reassess priorities or as a chance to clarify their goals. Most of the students who attended the Science Access Programme experienced the course "as opening doors in their minds" (Inman, 1999:123).
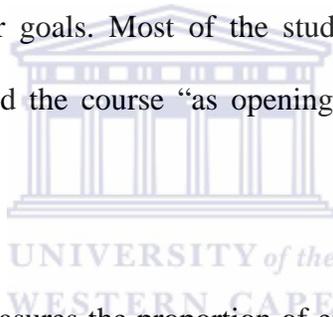
The throughput rate, which measures the proportion of enrolments graduating in a given year, is an internationally accepted indicator of efficiency in higher education. Low throughput indicates a high dropout and/or failure rate (Department of Education, 1996). The throughput rate in the higher education system is a matter of concern for the Department of Education as the higher education institutions do not even achieve a 20% of throughput (Cloete,Pillay,Badat & Moja,2004).

Given the above, the success rate in terms of this study refers to those students who obtained a qualification after completing the *CPP*. For this study, only undergraduate qualifications are considered as the main indicator to assess the success of the Career Preparation Programme and to compare with the time to completion of the *mainstream*

students. The initial aim of the *CPP* is to give the students who did not meet the entry requirements of the UFS an alternative route to participate in higher education. The reason for this measurement of success would be that the *CPP* is the access point for students who did not meet the entry requirements for higher education studies. One of the purposes of the *CPP* is to act as an alternative route to access higher education. The views of success noted in the interviews will be used as supplementary to the researcher's measurement of success.

4.3   RESEARCH DESIGN

Educational research can be done in different ways, depending on the topic of the research. Yin (1994) highlights the fact that every strategy has its own advantages and disadvantages based on three conditions, namely the type of research question; the control the investigator has over the actual behavioural events; and the focus of the present situation. The case study – the method used in this study – is briefly discussed below.

4.3.1   Case study

The case study has several advantages and disadvantages as a method of research (Cohen and Manion,1992). In light of this, he notes that data of a case study is "strong in reality because it is down to earth and attention holding, providing a natural basis for generalisation" (Cohen and Manion, 1992:122). He further notes that this type of approach "recognises the complexity of social truth and is a step to action" (Cohen and Manion, 1992:124). By this he means that a case study engages in the day-to-day life and

to get actively involved, one can be able to bring about change. Another advantage of a case study is that the researcher has the benefit of focusing on one programme, collecting data on both qualitative and quantitative levels. Beginning form the world of practice, the researcher is able to raise some of the hidden aspects as well as difficulties that may be evident in the programmatic cases study (Yin, 1994). It is noted that the findings may be used to improve elements of the overall programme. In a case study, the researcher collects data on a programme on which the investigation is focused. These data are gleaned from interviews, documents and records.

According to Stake (1995), "a case study is not a methodological choice but a choice of what is to be studied by whatever methods chosen to study the case" (Stake, 1995:25). He states that a case study is defined by the interest that an individual has in a case, not by the methods of inquiry. Furthermore, it is important to note that the strength of a case study method lies in the fact that it enables one to conduct an in-depth inquiry, which can lead to a better understanding of the subject study. In this regard, we are told that "the scientific benefit of the case study method lies in its ability to open the way of discoveries" (Berg, Hughes & Tight, 2001:231) that may be used for future planning. In this study, the decision to use a case study approach is motivated by my interest in having a more focused approach to one sing scenario. In this way, the knowledge gathered by the study may contribute to understanding certain aspects of the overall field of study, namely, that of Academic Support Programmes.

4.3.2   Criteria for selecting the *CPP*

I have drawn on the case study as a strategy to investigate the success rate of the Career Preparation Programme at the UFS. The selection of the *CPP* is guided by several factors. Given my background as a previous teacher, this experience alerted me to the fact that many students, who wish to further their studies, do not meet the requirements for entry to a university. I was therefore curious to find out if the university in the Free State, which serve the Free State and the Northern Cape, has any programme in place to provide the disadvantaged students with access to higher education studies. I was also interested to see whether such a programme would make an impact on the graduation rates of these students.
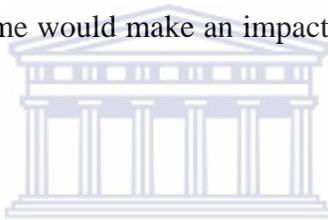
As outlined earlier, the *CPP* is delivered at nine campuses throughout South Africa. However, this study only draws on the students who attended the programme at the two Further Education and Training colleges, Motheo and the Hillside View campus, which are situated in Bloemfontein. The reason for only selecting these campuses is based on the "geographical convenience". The researcher resides in Bloemfontein and the university is in the nearby vicinity. This would allow the researcher to access data and personnel involved in the programme on a frequent basis.

4.3.3   Statistical selection of students and cohorts

This section outlines the selection of students and cohorts involved in this study. As outlined in Chapter 2, the *CPP* is delivered at nine sites. However, this study uses the

data from two Further Education and Training College, namely, Motheo and Hillside View campuses, in respect of students who enrolled and graduated at the UFS. These students had completed their different bridging courses and were registered at the UFS from 1993 until 2000 and graduated between 1996 and 2003. The following Table provides the data on the enrolment of *CPP* students and *mainstream* students at the UFS during the specific period.

Table 4.1: CPP and mainstream enrolments at UFS: 1993-2000

	Economic and Management Science (EMS) (Bachelor of Commerce)	Human and Social Sciences (HSS) (Bachelor of Arts)	Natural and Agricultural Sciences (NAS) (Bachelor of Science)
Period	1994-2000	1993-2000	1993-2000
CPP student enrolment	253	1 197	296
Mainstream student enrolment	2 616	2 409	4 025

The data of the *CPP* students was compared with the data of the *mainstream* students who enrolled for the BCom degree in Economic and Management Sciences (EMS), the BA degree in Human and Social Sciences (HSS) and the BSc degree in Natural and Agricultural Sciences (NAS). The enrolment of *mainstream* BA and BSc students applies from 1993 to 2000 and that of the BCom students as from 1994 to 2000. The graduation of these students applies to the years 1996 to 2003.

It is also important to note that, for the purposes of this study, the term 'normal' for the *mainstream* student is taken to mean three years while the term 'normal' for the *CPP*

students is taken to mean four years in total. These four years consists of one year for the *CPP* bridging programme plus three years for completing of the qualification.

4.3.4   Sources and Collection of Data

This study draws on an existing quantitative data set, which comprised enrolments and graduates of the *CPP* and *Mainstream* students at the UFS. The data was adapted for this study. It was carefully organised and clarified the data along the years of registration, year of graduation and faculty in which the students were enrolled. It was also sorted according to the years that students took to complete a qualification.

Quantitative

The main source of statistical data on *CPP* students was the records kept by *CPP* management.

The data focusing on the period 1993 to 2003 were as follows:

- Registration figures at the two colleges (1993- 2000). This database includes those students who enrolled at the two Further Education and Training Colleges for the said period.

- Enrolment data of the *CPP* students (to ascertain the different options chosen). This data was sorted according to chosen options, gender, name and student number.

- Graduation figures of *CPP* students at the UFS. These documents were grouped in the year of registration at the University of the Free State, the

completing of modules; in which year the students has completed his/her study.

- Enrolment and graduation rates of *mainstream* students enrolled in all BA, BCom and BSc degrees at the UFS. This data consists of the years of registration of students in the three different fields as well as the year in which the student completed his/her studies.

The data on the enrolment and graduation of *mainstream* students was obtained from the Management Information Centre at the University of the Free State. The data of the *CPP* students was acquired from the database kept by the *CPP* Management. This data are provided by a person who do a longitudinal study for the programme manager on the performance of the *CPP* students attending the University of the Free State. The data gleaned from 1992 to 2003 was used to identify the enrolments, graduation and completion rates of students registered for both the *CPP* and the *Mainstream* programmes.

Given that one of the aims of the *CPP* is to prepare students for higher education, it is important to determine whether students were being prepared for access to higher education by examining the graduation rate of these students. As noted by Scott, Yeld and Hendry (2007:19) "*Since graduate output is the unique responsibility of the sector, the situation calls for concerted action to ensure substantial and continuing improvement*". Therefore I found it useful to examine the graduation rate of students who had participating in the *CPP*. The time to completion is an indicator of whether students were being prepared by the *CPP* for higher education studies. This study therefore seeks

to do a statistical comparison of the time to completion of students who entered via the *CPP* and those students who entered the *mainstream* directly.

It is important to note that in this study, only undergraduate qualifications were used in order to determine the success of the *CPP*. In other words, the study did not take any postgraduate qualifications when quantifying the number of degrees and diplomas earned by the *CPP* students. The reason for this is only a few students engaged in postgraduate studies after completing an undergraduate qualification.

Qualitative

In certain instances, the quantitative data was complemented with qualitative data. In light of this, certain areas needed in-depth probing and therefore a face-to-face interview (Appendix A) and a telephonic interview (Appendix B) were held. The face-to-face interview was held to ascertain the vision from the side of management on their perceptions in terms of the success of this programme. The telephonic interview was conducted in order to explore more in-depth reasons for the success or weaknesses of the programme

Interviews

The face-to-face interview is the most common method of collecting data. One disadvantage of this means of gathering data lies in the interpretation of the research question (Babbie & Mouton, 2001). Interviews were conducted to determine whether the programme was achieving the success that was initially planned. A semi-formal interview

was conducted with the director of the Career Preparation Programme. He had worked on the programme for several years and was able to answer questions pertaining to the success of the programme and, specifically, to clarify how *CPP* management was experiencing success.

The researcher drew up carefully worded questions to elicit possible answers to the research questions. The interview was held in the office of the director. The interview was transcribed. Every question was formulated clearly in order to eliminate any confusion. The questions asked in the interview are listed in Appendix A.

A telephonic interview was held with the principle researcher who conducted a longitudinal study on the *CPP* students. The reason for choosing this method was because it was cost effective as this person is residing in the vicinity of Pretoria. However, this interview was followed-up by an electronic mail to clarify any confusion. The questions asked in the interview are listed in Appendix B.

4.3.5   Data analysis

The analysis of the quantitative data was done by using the Chi-square test to determine the proportion of students completing their studies within a period of 6 years and then to compare the two student groups. The Chi-square test is a frequently used test of significance in social science. It is based on the null hypothesis, which refers to the assumption that there is no relationship between the two variables (Babbie & Mouton, 2001:481). The p-value is a probability element that ranges from 0-1 that measures the

support or lack thereof, as provided by the sample of the null hypothesis. In other words, the larger the p-value, the more support the sample provides for the null hypothesis and, the bigger the chance that the null hypothesis will be true. Conversely, the smaller the p-value, the bigger the chance that the null hypothesis will not be true and that the alternative hypothesis will be true. The analysis of the contingency tables is indicated in Appendices C, D, and E.

By comparing the p-value to the level of significance (alpha), the decision can be made to as to whether it is small enough to reject the null hypothesis. In general, the alpha values are chosen as 0.05, 0.01 or 0.1. For this study, I have used alpha=0.01, which means that the test results will be 99% accurate as 100% accuracy does not exist.

The analysis of the qualitative data relied mainly on explanation building, as stated by Babbie and Mouton (2001), with the idea being to generate explanations about the case. The technique for analysis of the quantitative data will be addressed.

4.3.6   Validity of data

As noted earlier, the data on the *Mainstream* students was acquired from the institution's management and information system. The data for the *CPP* students was acquired from the database kept by the programme management. It is important to note that in both instances, the data was carefully managed and administrated. All records were systematically filed. The data was also used for official purposes. On negotiating access

to the data, certain protocols were followed. All data that I used in this study was overseen by the management.

The motivation for deciding on 1993-2003 period of study lies in the fact that the researcher's findings would be more reliable based on the argument of Simpson (2001:8) that, in order to conduct proper evaluation research on a programme, data needs to be collected over a sustained period of time. As she states:

> *When studies are replicated or longitudinal in nature, we gain the advantage of strengthening the internal reliability of our findings, increasing confidence that we draw reasonable conclusions* (Simpson, 2001:8).
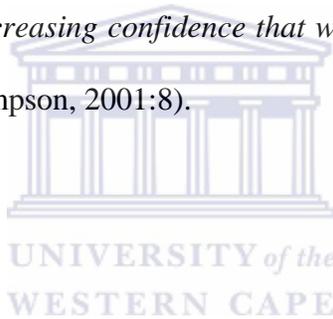
4.3.7   Limitations

This study drew only on students who had graduated at the University of the Free State. A further limitation of this study is that it does not include those students who graduated at the Central University of Technology and those students who participated in the *CPP* at other delivery sites. It is important to note that this study does not focus on the number of students who dropped out. It also does not include the number of students who are still enrolled in the system.

4.4   SUMMARY

In this chapter I outlined the complexities associated with success and the reasons for drawing on the case study as a strategy to understand the nature of the *CPP*. In light of this, I signalled the different techniques used to glean the data. I also included some of the processes involved in the collection and organization of the statistical data available for the different degree programmes. I concluded with some of the limitations of this study.

CHAPTER 5

RESULTS AND DISCUSSION

5.1 INTRODUCTION

In this chapter the data is presented, analyzed and discussed in accordance with the research aims. The overall aim is to understand the level of success achieved by *CPP* students after entering the *mainstream* at the University of the Free State (UFS). In light of this, the specific aims are to identify the enrolment and completion rates of students registered for both *CPP* and *mainstream* programmes and to establish any differences – specifically related to the completion of qualifications – between the two programmes.

The chapter begins with a statistical outline of the enrolments in the *CPP* and *mainstream* routes between 1993 and 2000. The aim is to show the distribution of enrolments, graduates, and time to completion, not only within each of the routes but also across the different options. This is followed by a discussion of the enrolments in relation to each option, beginning with Economic & Management Sciences

5.2 ENROLMENTS

Table 5.1 outlines the enrolments in the *CPP* and *mainstream* routes of access to specific programmes at the UFS.

Table 5.1: Enrolments

	CPP				Mainstream			
	EMS	HSS	NAS	Total	EMS	HSS	NAS	Total
1993	-	34	13	47	-	261	494	755
1994	6	113	39	158	263	259	535	1057
1995	9	169	48	226	294	348	525	1167
1996	8	194	50	252	313	362	612	1287
1997	24	260	67	351	301	351	496	1148
1998	53	175	28	256	391	361	539	1291
1999	67	138	29	234	487	264	414	1165
2000	86	114	22	222	567	203	410	1180
Total	253	1197	296	1746	2616	2409	4025	9050

Source: Adapted from the UFS Information System (2005)

5.2.1 Economic & Management Sciences Option

The Bachelor of Commerce (BCom) degree is a three-year degree aimed at providing the graduate with a solid academic grounding in the major subject areas of commerce. The curriculum provides for specialisation up to third-year level in two or more of the fields of Accountancy, Science, Social Science, and Statistics & Management. As outlined earlier in Chapter 2, these *CPP* students completed one of two course combinations, namely Economics/Accountancy or Industrial Psychology & Public/Business Management, during the bridging year.

CPP enrolments

Between 1994 and 1996 the enrolments were fairly stable. However, after 1996, there appears to have been a rapid increase in enrolments. For example, in 1997, enrolments increased more than threefold, from 8 to 24 students. From 1997 onwards there was a steady increase, again almost threefold, from 24 to 86. This increase is an indication of more students entering the university via an alternative route. The participation of *CPP* students in the higher education system indicates an increasing trend in enrolments.

Mainstream enrolments

As is evident from Table 5.1, with the exception of 1997 there was an annual increase in the number of enrolments in the EMS *mainstream* programme. There was no specific reason for the increase in students in the EMS stream. Over a period of four years, enrolments increased from 301 students to 567 students. Enrolment increased by over 100% from 263 students in 1994 to 567 students in 2000.

Comparison

From Table 5.1, we note that the participation of *CPP* students increased from 6 in 1994 to 86 in 2000. Enrolments of *mainstream* students also increased from 263 in 1994 to 567 in 2000. The increase in enrolments reflects a national pattern post-1994. In 1994, *CPP* student enrolments constituted only 2% of the total EMS *mainstream* enrolments. By 2000 this situation had changed to such an extent that *CPP* student enrolments in that year constituted 20% of the total *mainstream* enrolments. The participation of students in higher education via an alternative route has increased overall. The enrolment of *CPP*

students had increased more than fourteen-fold by 2000, while *mainstream* enrolments increased by almost double between 1994 and 2000.

5.2.2. Human & Social Sciences Option

The Bachelor of Arts (BA) degree is a three-year degree aimed at providing the graduate with a solid academic grounding in the major subject areas of the arts. As outlined earlier, the *CPP* students in this field completed one of four course combinations, namely Political Science/English or English/ Sociology or English/Psychology or Psychology/Sociology, during the bridging year.

CPP enrolments

Enrolments increased from 34 students in 1993 to 113 students in 1994. Enrolment reached its peak in 1997 when 260 students enrolled at the University of the Free State. After 1997, the student numbers started declining, reaching as few as 114 students in 2000. The enrolment pattern of *CPP* students at the University of the Free State indicates an increase followed by a drastic decline. This could be due to various factors not investigated in this study.

Mainstream enrolments

The enrolment of students in the *mainstream* programme indicates a relative increase. This increase in enrolments was due to increased participation of students in higher

education. From 1993 until 1999 there was a gradual increase in enrolments. Although the increase was not major, in 2000 the number of enrolments decreased by 23%.

Comparison

Participation in the *CPP* increased from 34 students in 1994 to 260 students in 1997 before dropping to 114 students in 2000. The enrolment of *mainstream* students also increased from 261 in 1994 to 361 in 1998 before dropping to 203 in 2000. In 1994, *CPP* student enrolments constituted only 13% of the enrolments in *mainstream* programmes. This changed in 2000 when *CPP* student enrolments constituted 56% of the total *mainstream* enrolments. The participation of *CPP* students had increased almost threefold by 2000, while *mainstream* enrolments decreased by almost 23% between 1993 and 2000.
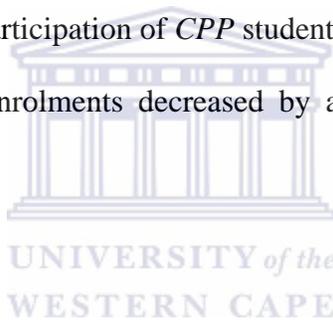
5.2.3 Natural & Agricultural Sciences Option

The Bachelor of Science (BSc) degree is a three-year degree aimed at providing the graduate with a solid academic grounding in the major subject areas of science. As outlined earlier, these *CPP* students completed a single course combination, namely Mathematics & Chemistry, during the bridging year.

CPP enrolments

The enrolment of students in this option was overall very low – starting with 13 students in 1993 and peaking in 1997 with the enrolment of 67 students. After 1997, enrolments

decreased to as few as 22 students in 2000. This could be due to the fact that few learners take Mathematics and Science at secondary-school level. The level of schooling in these two subjects is generally not up to standard, as outlined in Chapter 2. Research in this field has indicated that South Africa is struggling when it comes to educating learners in Mathematics and Science (Agar, 1990). The low enrolment figures are a reflection of the poor participation of learners in fields such as Mathematics and Science.

Mainstream enrolments

Enrolments in this option were higher than in the other two options. The enrolment pattern of *mainstream* students indicates an upward and downward movement. Enrolments peaked in 1996 when 612 students enrolled at the UFS. In contrast, the lowest enrolment of 410 students occurred in 2000.
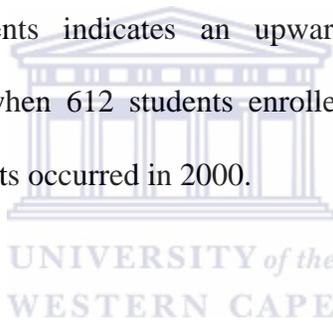
Comparison

The participation of *CPP* students increased from 13 in 1993 to 67 in 1997 before dropping to 22 students in 2000. The enrolment of *mainstream* students also increased from 494 in 1993 to 612 in 1996 before dropping to 410 in 2000. In 1993, *CPP* student enrolments constituted only 3% of the enrolments in *mainstream* programmes. This situation went on to change, and in 2000 the *CPP* student enrolments constituted 5% of the total *mainstream* enrolments. *CPP* enrolments increased by almost 100% in 2000, while *mainstream* enrolments decreased by almost 17% between 1993 and 2000.

5.2.4 Comparison

Enrolments in the *CPP* at the UFS increased from 47 students in 1993 to 351 students in 1997. After 1997 there was a decrease in enrolments, dropping to 256 in 1998, after which they continued to decrease. The enrolment of *mainstream* students increased from 755 in 1993 to 1287 in 1996. After 1996, enrolments fluctuated between 1200 and 1300 enrolments per year. The fields of enrolment within the two groups were in total contrast.

The improved participation of *CPP* students in higher education was reflected in the increase in enrolments at the UFS over the period under review. One of the reasons cited for the increase in *CPP* enrolments was that the programme had strengthened its marketing and recruitment strategies. In light of this, it was mentioned that in certain instances, many of the marketing strategies had been targeted at senior secondary schools. Furthermore, it was also mentioned that the programme had access to increased funding from certain donors, which enabled the allocation of student bursaries. It is important to note that the *CPP* enrolments were clustered in the field of Human & Social Sciences, whereas the *mainstream* enrolments were clustered in the field of Natural & Agricultural Sciences.

The higher education sector post-1994 witnessed a sharp increase in enrolments – from 571 000 in 1995 to 599 000 in 1997, reaching 600 000 in 2000. In 2000, enrolments reached about 645 000, meaning a 13% increase from 1994 (Department of Education, 2003). Although there was an increase in enrolments, the numbers stagnated after 1997. This was due to various reasons, including the productive level of the school system.

Cloete (2004) stated that the schooling system has failed to produce sufficient numbers of qualified school leavers. The overall trend in enrolment in higher education is reflected in the enrolment in the three options discussed in this study.

University enrolments overall increased from 32% in 1990 to 60% in 2000. This major increase in the number of students could be due to the large numbers of black students entering the higher education system at the time (Cooper & Subotzky, 2003). There was an increase in the enrolment of students in the fields of science, technology and commerce, although this is not reflected in the graduation numbers (Bunting, 2002). The trend of increasing enrolments reflects a national pattern during the period, where there was a general increase in the number of students participating in higher education (Cloete, 2004). It is important to note that one of the aims of the National Plan for Higher Education (1994) is for higher education institutions to increase participation by students between the ages of 18 and 24 years. The clustering of enrolments in the humanities is also noticed in the enrolment pattern of *CPP* students at the UFS.

5.3   GRADUATES

The number of graduates is calculated in terms of the number of students that enrolled and the number that graduated. Table 5.2 outlines the number of graduates at the UFS for each option of the *CPP* and *mainstream* programmes between 1995 and 2003.

Table 5.2: Graduates

	CPP				Mainstream			
	EMS	HSS	NAS	Total	EMS	HSS	NAS	Total
1993	-	16	3	19	-	154	323	477
1994	0	65	17	82	150	198	349	697
1995	6	84	23	113	165	227	318	710
1996	3	95	24	122	149	274	381	804
1997	6	119	17	142	159	244	292	695
1998	22	76	9	107	202	184	234	620
1999	8	28	3	39	265	126	215	606
2000	5	15	0	20	266	91	194	551
Total	50	498	96	644	1356	1498	2306	5160

Source: Adapted from the UFS Information System (2005)

5.3.1 Economic & Management Sciences Option

CPP graduates

From 1995 to 1996, the percentage of graduates decreased from 67% to 38%, and then again to 25% in 1997. With the exception of the 1995 group, which experienced a 67% graduation rate, the 1998 group with 42% performed best in terms of the percentage of students that graduated. An interesting aspect of these two high-performing groups is the fact that the 1995 group was taught by means of the old teacher-centred system, while the 1998 group adopted a new teaching method, namely the resource-based learning method. In contrast to these two groups, the graduation rates of the other groups were far below 50%. The difference in performance of the 1995 and 1998 groups cannot definitively be

explained. The overall tendency is for the number of graduates to decrease each year. Another important aspect is that a large percentage of enrolments were still in the system in 2003, which had an impact on the overall graduation rates of these students.

Mainstream graduates

With the exception of the 1996 and 2000 groups, the overall graduation rate of students was above 50%. The number of graduates decreased until 1999, at which point the number increased again. In 2000 the graduation rate dropped to 47% due to the fact that there were many students still in the system at the time of this research study. The overall trend with regard to graduation is that more than 50% of total enrolments do graduate.
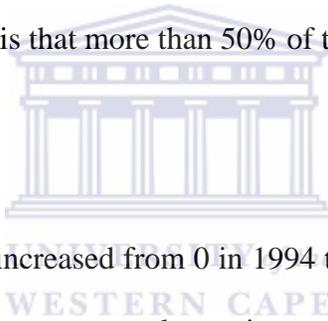
Comparison

The number of *CPP* graduates increased from 0 in 1994 to 22 in 1998 before dropping to 5 in 2000. The number of *mainstream* graduates increased from 150 in 1994 to 266 in 2000. In 1995, *CPP* student enrolments constituted only 5% of *mainstream* graduates. This number increased to 10% in 1998 before dropping to a mere 2% in terms of total *mainstream* graduates.

Figure 5.1 compares the graduation percentages of students in order to determine the slope of the graduates. The slope is an indication of whether the number of graduates increased or decreased during the period of this study. This is furthermore an indication of whether the *CPP* plays an important role for students entering the *mainstream* via an alternative route.

Figure 5.1: Percentage of mainstream and CPP Bachelor of Commerce students graduating between 1994 and 2000
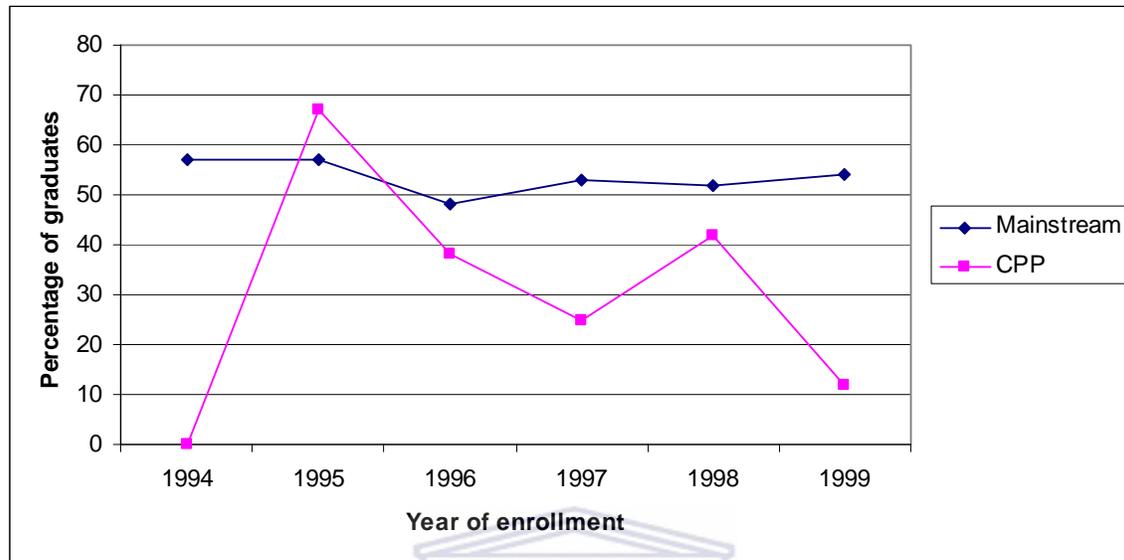
The percentage of *mainstream* graduates remained more or less constant over the years. However, the slope indicates a negative trend and therefore a slightly downward motion of the curve, meaning that the percentage of graduates decreased over the years under review. The slope fluctuates between 50 and 60 percent.

The percentage of *CPP* graduates indicates an upward and downward movement. The slope is negative, which indicates that the number of graduates decreased over the years in question. The total number of *CPP* graduates did not remain consistent for the duration of this study.

5.3.2 Human & Social Sciences Option

CPP graduates

The percentages of time to completion are calculated only on the basis of the number of graduates. The years between 1993 and 1997 had the highest number of graduates, varying from 47% for the 1997 group to as high as 57% for the 1994 group. The 1994 group performed the best in terms of the percentage of students who graduated (57%). The number of graduates appeared to decrease after 1998, as many of these students were still enrolled at the time of this study.

Mainstream graduates

With the exception of the 1999 and 2000 groups, the overall graduation rate was above 50%. The 1994 group produced the most graduates at 76% of total enrolments. After 1996, when 75% graduated, the graduation rate dropped to as low as 44% in 2000. The low graduation rate of the 2000 group is due to the fact that there were still many students remaining in the system at the time of this study

Comparison

The number of *CPP* graduates increased from 16 in 1993 to 119 in 1997 before dropping to 15 students in 2000. The number of *mainstream* graduates also increased from 154 in 1993 to 274 in 1996 before dropping to 91 in 2000. In 1994, the *CPP* graduates constituted 10% of the *mainstream* graduates. The number of graduates from the student cohort of 2000 was low for both the *CPP* and *mainstream* programmes, as many students were still in the system in 2003.

Figure 5.2 compares the graduation percentages in order to determine the slope of the graduates. The slope is an indication of whether the number of graduates increased or decreased during the time of this study. This will reveal whether the *CPP* plays an important role for students entering the *mainstream* via an alternative route.

Figure 5.2: Percentage of mainstream and CPP Bachelor of Arts students graduating between 1993 and 2000
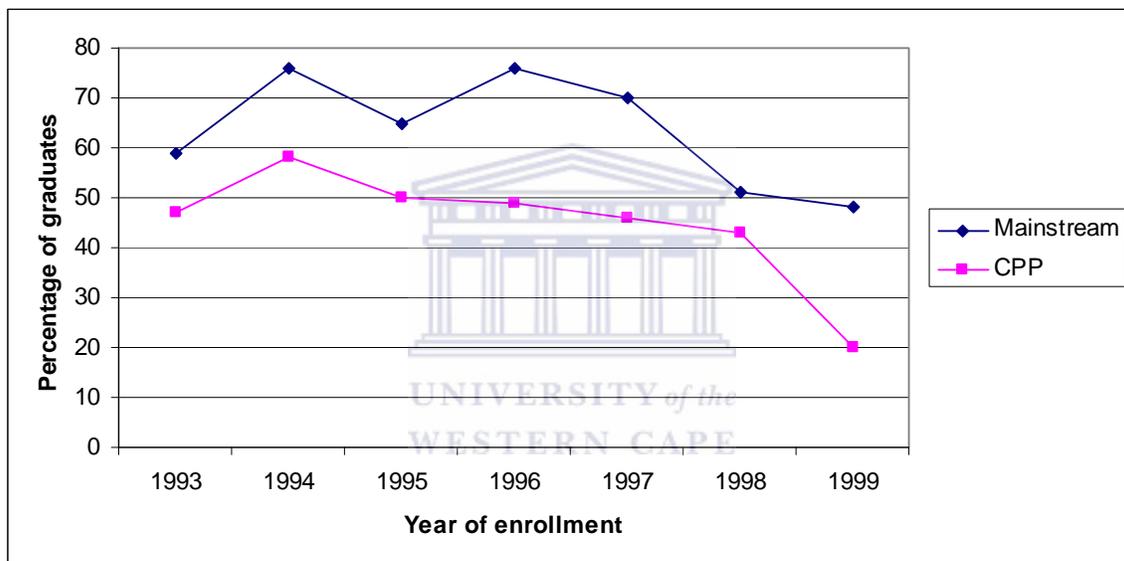
The percentage of *mainstream* graduates remained more or less constant over the years. The slope indicates a negative and therefore slightly downward motion of the curve, meaning that the percentage of graduates decreased over the years under review. The slope in the Human & Social Sciences indicates a major decline in the number of graduates.

The percentage of *CPP* graduates indicates an upward and downward movement, which means that the percentage of graduates fluctuated over the years under review. The slope

is negative, which indicates that the number of graduates decreased over the years under review.

5.3.3 Natural & Agricultural Sciences Option

CPP graduates

The percentage of time to completion is calculated only on the basis of the number of graduates. The number of graduates in this option was low in comparison with the other two options. The same can be said about the enrolments in this option. The 1995 and 1996 groups produced the most graduates at 48% in both years. The number of students still remaining in the system in 2003 influenced the number of graduates in 1998 and 1999.
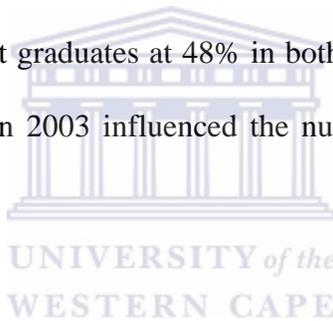
Mainstream graduates

With the exception of the 1998 and 2000 groups, the overall graduation rate was above 50%. The graduation rate declined until 1998, when it once again improved. In 2000 the graduation rate dropped to 47% due to the fact that there were many students still in the system at the time of this study.

Comparison

The number of *CPP* graduates increased from 3 in 1993 to 24 in 1996 before dropping to 3 again in 1999. The number of *mainstream* graduates also increased from 323 in 1993 to 381 in 1996 before dropping to 194 in 2000. In 1993 the *CPP* graduates constituted only 1% of the *mainstream* graduates. This situation went on to change, and in 1996 the *CPP*

graduates constituted almost 10% of the total *mainstream* graduates. The *CPP* graduation rate reached its peak in 1996. The decreasing number of graduates is an indication that the NAS students were taking longer to complete their qualifications.

Figure 5.3 compares the graduation rates of students in order to determine the slope of the number of graduates. This slope is an indication of whether the number of graduates increased or decreased during the time of this study. This is furthermore an indication of whether the *CPP* plays an important role for students entering the *mainstream* via an alternative route.

Figure 5.3: Percentage of mainstream and CPP Bachelor of Science students graduating between 1993 and 2000
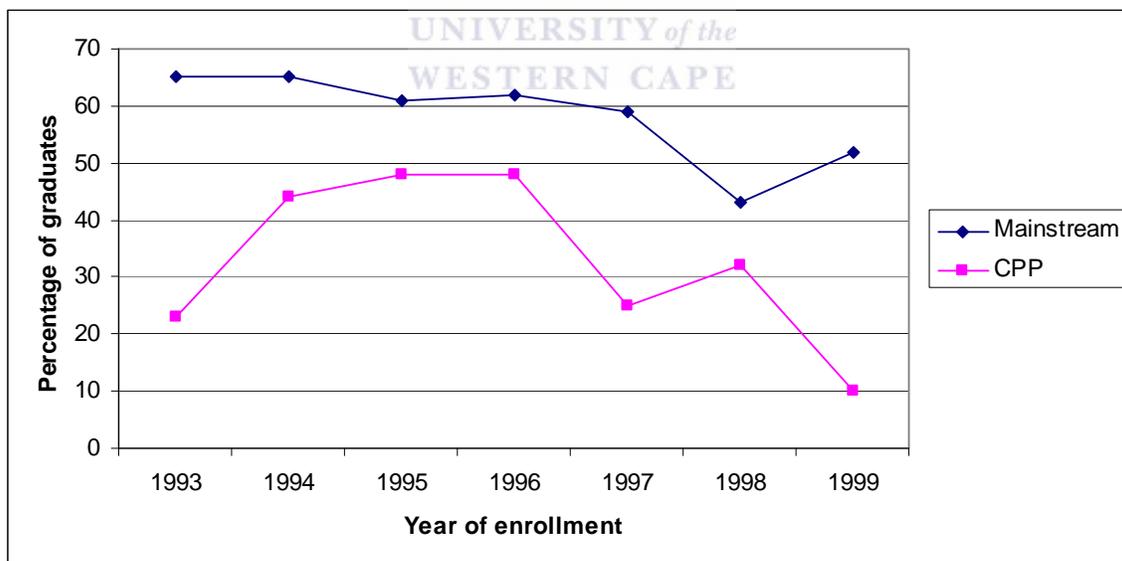
The percentage of *mainstream* graduates remained more or less constant over the years. The slope indicates a negative and therefore a slightly downward motion of the curve, meaning that the percentage of graduates may have decreased over the years. The

percentage of *CPP* graduates indicates an upward and downward movement, which means that the graduation rate fluctuated over the years. The slope is negative, which indicates that the number of graduates decreased over the years under review.

5.3.4 Comparison

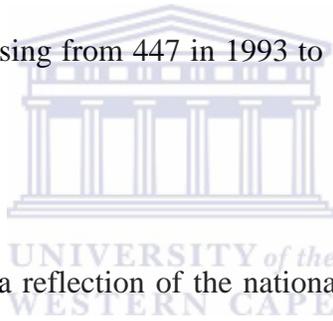The graduation rates of *CPP* and *mainstream* students show a similar pattern. The number of *CPP* graduates increased from 19 in 1993 to 142 in 1997, at which point the number of graduates dropped. The *mainstream* graduates reflect a similar pattern, with the number of graduates increasing from 447 in 1993 to 804 in 1996 before going into a decline.

The *CPP* graduation rates are a reflection of the national trend of low graduation rates. Higher education institutions managed to achieve a 20% throughput by 1998. The trend is a 25% dropout of first-year enrolments by the end of the first year of enrolment. Of a student population of 600 000, about 100 000 students drop out. In terms of the graduation rate, the average for the system increased from 15% in 1993 to 16% in 1999. This is an indication of low graduation rates (Cloete, 2004). These national trends are also evident in the graduation rates of *CPP* and *mainstream* students at the UFS.

Just as the number of *CPP* graduates was a matter of concern for the programme management, so it was for other higher education institutions. In 1993 it was revealed that only 17% of students registered at a university were able to complete their degrees. According to the data, the status quo remained, as the situation was almost identical in

2000. Moreover, the graduate output is dominated by the education and broader humanities fields (Cloete, Fehnel, Maassen, Moja, Perold & Gibbon, 2004).

In all three options, the trend of the slope indicates a negative movement. This implies that although the number of enrolments increased, the same cannot be said for the number of graduates. This confirms the Department of Education's (2005) concern that the low graduation rate is linked to the high dropout rate amongst students.

5.3.5   Graduation Percentages

Table 5.3 indicates the graduation percentages in relation to the total enrolments in the specific cohort for each of the options.
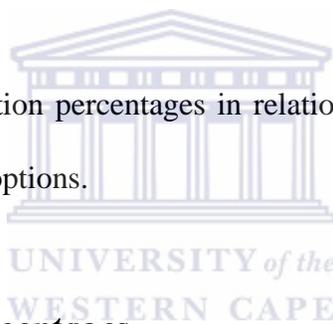
Table 5.3: Graduation percentages

	CPP				Mainstream			
	EMS	**HSS**	**NAS**	**Total**	**EMS**	**HSS**	**NAS**	**Total**
1993	0	47	23	40.4	0	59	65.4	63.2
1994	0	57	44	51.8	57	76.4	65.2	65.9
1995	67	50	48	50	56.1	65.2	60.6	60.8
1996	30	49	48	53.9	47.6	75.7	62.3	62.5
1997	25	45.7	25	40.5	52.8	69.5	58.9	60.5
1998	42	43	32	41.8	51.7	50.9	43.4	48
1999	12	20	10	16.6	54.4	47.7	51.9	52
2000	6	13	0	9	46.9	44.8	47.3	46.7
Total	19.8	41.6	32.4	36.9	51.8	62.2	57.3	57

The total percentage of *CPP* graduates indicates that less than 50% of the total enrolments were able to graduate. The *CPP* HSS option produced the most graduates in terms of enrolments. Although the *mainstream* enrolments were clustered in the NAS field, the HSS field produce the most graduates. The percentage of *CPP* EMS graduates was low compared to the *mainstream* EMS graduates, with the same applying to the NAS option. The *CPP* HSS produced the highest percentage of graduates. The *CPP* produced almost 37% of graduates from the total enrolments for the period of the study, while the *mainstream* produced 57% of graduates for the same period. The percentage of *CPP* graduates does indeed make a difference to the overall percentage of graduates at the UFS.

5.4   TIME TO COMPLETION

The average *CPP* student should take a minimum of four years to complete his/her studies (normal time to completion), consisting of a one-year bridging course and three years for the degree programme. A *mainstream* student should complete an undergraduate qualification in the normal amount of time, which is three years.

Table 5.4 compares the different options in order to determine the average number of years taken by students to complete their qualifications.

Table 5.4: Time to completion

	CPP				Mainstream			
	EMS	**HSS**	**NAS**	**ALL**	**EMS**	**HSS**	**NAS**	**ALL**
Min	4	4	4	4	3	3	3	3
Max	7	9	9	9	8	8	8	8
Mean	4.9	5.1	5.8	5.2	3.9	4.1	4.5	4.0
Median	5	5	6	5	4	4	4	4

5.4.1   Economic & Management Sciences

The *CPP* EMS graduates took a minimum of 4 years and a maximum of 7 years to complete their qualification. The *CPP* EMS graduates took 4.9 years on average to complete their studies, while the median was 5 years. In comparison, the *mainstream* EMS graduates took a minimum of 3 years and a maximum of 8 years to complete their qualification. The *mainstream* EMS graduates took 3.9 years on average to complete their studies, while the median was 4 years. The difference in the time to completion between these two groups was 0.9 years.

5.4.2   Human & Social Sciences

The *CPP* HSS graduates took a minimum of 4 years and a maximum of 9 years to complete their qualification. The *CPP* HSS graduates took 5.1 years on average to complete their studies, while the median was 5 years. In comparison, the *mainstream* HSS graduates took a minimum of 3 years and a maximum of 8 years to complete their

qualification. The *mainstream* HSS graduates took 4.1 years on average to complete their studies, while the median was 4 years. The difference in the time to completion between these two groups was 1.0 years.

5.4.3   Natural & Agricultural Sciences

The *CPP* NAS graduates took a minimum of 4 years and a maximum of 9 years to complete their qualification. The *CPP* NAS graduates took 5.8 years on average to complete their studies, while the median was 6 years. In comparison, the *mainstream* NAS graduates took a minimum of 3 years and a maximum of 8 years to complete their qualification. The *mainstream* NAS graduates took 4.5 years on average to complete their studies, while the median was 4 years. The overall time to completion of the NAS graduates was longer than the minimum number of years required for the completion of a qualification. The NAS graduates also took longer than the other graduates to complete their programme. The median of the *CPP* NAS graduates was six years whereas the median of the *mainstream* NAS graduates was four years. The difference in the time to completion between these two groups was 1.3 years.

5.4.4 Comparison

The *CPP* graduates took an average of 5.2 years to complete their studies, while the *mainstream* graduates took an average of 4.0 years to complete their studies. This is an indication that the difference in the time to completion between the two groups was 1.2 years. If the minimum for *CPP* students is taken as four years and for *mainstream* students as 3 years, then the difference of 1.2 is acceptable, as this will form part of the

CPP bridging year. This would imply that there is no significant difference in terms of the time to completion of the two groups. A further interesting point is that the EMS graduates took the shortest time to graduate amongst both the *CPP* and the *mainstream* groups, taking 4.9 years and 3.9 years respectively.

A similar study done by Laugsch (1992) on the ASPECT programme at the University of Cape Town revealed that students entering the *mainstream* via an alternative route took an average of 5 years to complete their qualification. A study done by De Villiers and Rwigema (1998) found that students who had attended the Pre-university Bursary Scheme programme took 4.9 years on average to complete their studies. The time of completion of the *CPP* graduates is similar to that of students who partake in similar programmes.
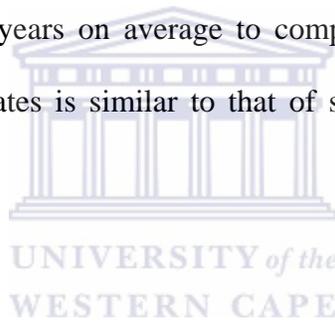
5.5 SUMMARY

The *CPP* as an alternative access route did assist the UFS to increase enrolment by "disadvantaged" students. However, although the number of enrolments of disadvantaged students increased, the same cannot be said for the number of graduates from this group. The high dropout rate of students has a direct impact on the graduation numbers. The interviews revealed that a lack of finances is one of the major reasons why students drop out. Given that such "disadvantaged" students come from resource-poor backgrounds, their lack of funds is a matter that needs to be addressed urgently by higher education institutions. It is pointless for students to have access to higher education institutions but not have the necessary resources to pursue their studies. Successful access implies that

students should be able to enter the higher education arena and also be able to complete

the programmes for which they have enrolled (Ramrathan, Manik & Pillay, 2007).

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

This chapter raises some general comments on this study, as well as possible areas for further research. This chapter also reflects on the study as a whole.

6.1   GENERAL COMMENTS ON THE SUCCESS OF *CPP* STUDENTS

This section discusses the quantitative and qualitative results in terms of the successful performance of *CPP* students.

6.1.1   Quantitative results

The success of the *CPP* was evaluated on the basis of the number of graduates it delivered. Although the throughput of *CPP* students at the University of the Free State (UFS) reflects national trends, the attendance of the *CPP* did contribute to the success of these students. The hypothesis that there would be no difference in the time to completion of a qualification between the *CPP* and the *mainstream* students was confirmed.

However, it was also revealed that the dropout rate of both *CPP* and *mainstream* students has an impact on the graduation rate of students. This is a tendency observed throughout the higher education system. The high dropout rate of students is a crucial factor in the throughput of students. Further research could pinpoint the specific reasons for the high drop out rate.

6.1.2 Qualitative response

The measurement of success, as illustrated by the researcher, was supplemented by the measurement of success in terms of the management of the programme. One member of *CPP* management was interviewed on how he would define the success of the *CPP*. It was revealed that the establishment of the programme itself could be seen as an indication of success, as it provided disadvantaged students with an opportunity to enter higher education and to develop their skills. The structure of the *CPP* makes it possible for students to revise their options to either technical or academic work. This means that after completion of the *CPP*, a student would be able to attend a higher education institution in order to obtain a qualification. The *CPP* as an access programme has made a positive contribution to student throughput at the UFS.
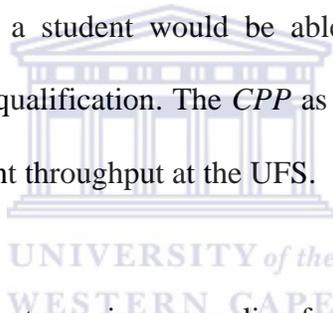
While busy with the *CPP*, students receive counseling for any problems they experienced during the programme and which have an impact on their performance. Counseling plays an important role in the success of the *CPP* and in the success achieved by the students once actively involved in the *mainstream*.

The Resource-Based Learning/teaching methodology is another strategy serving to make the programme more student-friendly. This method enables the student to progress at his/her own pace and it enables the facilitator to identify problem areas.

Although the support systems that are in place, there is no control over the dropout rate of *CPP* students who fail to complete their studies. At the time of the study, most of the

dropouts had failed to reregister at the university and were therefore lost to the programme. Any student obtaining a qualification is seen as a victory for the *CPP*, with one remark being, "As long as the *CPP* can make a difference to a disadvantaged student, it will be presented."

6.2   SUMMARY

In terms of graduation at the UFS, the *CPP* can be seen as a bridging programme that makes a difference to the total number of UFS graduates. The *CPP* also serves to increase the number of graduates from amongst the disadvantaged student group at the UFS. The statistics reveal that on average, *CPP* students took about 5.2 years to graduate (see Table 5.4).
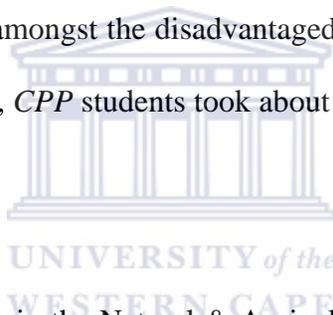
The enrolment of *CPP* students in the Natural & Agricultural Sciences, as well as in the Economic & Management Sciences, would have to increase to satisfy the aims of the National Plan for Higher Education. No specific reason could be found for the high number of enrolments in the HSS/BA field, although this is a general tendency throughout the higher education system, as indicated in studies done by the Education Policy Unit (EPU, 1997). The low number of enrolments in the NAS/BSc field is due to the difficulty factor as experienced by students, especially if one considers the disadvantaged educational background of those students. Evidence from numerous studies indicates that students who come from a disadvantaged background lack the proper numeric and mathematical skills needed for higher education.

The high dropout rates in all three options are cause for concern, as revealed in the interviews. Several reasons for these high dropout rates were cited, including "lack of progress" and "lack of money". The only other means of ascertaining the specific reasons for dropouts would be through interviews with those students who have dropped out. It is important to establish the specific factors contributing to students withdrawing from higher education studies. Some of the lessons could be built into the programme, which may then reduce the number of students who drop out. In this way, the success of the *CPP*, in terms of graduates, may improve. This is an area for future research.

As is evident from the data, many students took longer than normal to graduate. One of the reasons cited was that the *CPP* students had been advised to take fewer semester modules in order to cope with their studies. It was revealed that this strategy had been adopted, since "students were not coping well with their studies". These students had therefore taken fewer modules per semester in order to be successful.

Given some of the themes raised earlier in Chapter 2 regarding the way in which these students are referred to in terms such as 'disadvantaged' and 'at risk', it may be true that they were under a lot of pressure to perform. For example, students enrolled in similar academic development programmes have been labelled as under-prepared students (Masenya, 1995). However, it is important to note that although they took longer than the *mainstream* students to graduate, those who did graduate managed to complete their studies within the period of time specified for the *CPP*.

The difference between the *mainstream* students and the *CPP* students in terms of years taken to complete a degree is satisfactory. Since the *CPP* prepares students for participation in higher education, this would mean that it plays a vital role in the lives of those students. In other words, the *CPP* students were able to access the system in a similar way to the *mainstream* students.

The hypothesis used to measure the success of the *CPP* was that, in terms of graduation, there would be no significant difference between the *CPP* students and the *mainstream* students when it came to number of years taken to complete a degree. This study has shown that the difference between the *CPP* and the *mainstream* students in terms of time to completion was very slim. Therefore, this is an indication that the *CPP* has played an important role in the performance of such students at the higher education institution in question. The *CPP* NAS/BSc students, as well as the *CPP* EMS/BCom students, competed very well with the *mainstream* students, although the *CPP* HSS/BA students performed the best. The *CPP* NAS/BSc students took longer than the *mainstream* students to complete a degree programme.

The p-value of each of the three options supports the null hypothesis, which means that there was a slim chance of there being any difference between *CPP* and *mainstream* students when it came to the time taken to complete a qualification. At a 1% level of significance, there is not enough evidence to state that there was a difference between *mainstream* and *CPP* students regarding the time to completion. It is therefore statistically shown that there was no difference in the time to completion between the two groups. This would be an indication that the *CPP* has made a difference when it comes to

preparing students who had been denied access to higher education on the basis of their Senior Certificate results.

In summary, the *CPP* has made a significant difference to those students who failed to meet the admission requirements of the UFS, but who were then able to graduate after completing the *CPP*.

6.3   AREAS FOR FURTHER RESEARCH

This thesis looked at the issue of the success of the Career Preparation Programme in terms of graduates delivered. This study gave rise to a number of possible questions that would require further research. The issue of cost-effectiveness was not addressed and this could be deserving of a follow-up study. The questions here could focus on the reasons for the high dropout rate amongst students. A study on the performance of the *CPP* students and the *mainstream* students within the same faculty might be warranted, and in this regard it may prove useful to investigate the types of skills that have been developed by the *CPP*.

The *CPP* sets the example for a future bridging course or a type of access course to pave the way to higher education. The *CPP*'s ability to improve the underdeveloped skills of learners is an advantage to all newcomers to higher education. The *CPP* is presented in more than three provinces in South Africa and may be applicable to other provinces. However, it is important to be aware of the differences in the various institutions' student profiles.

6.4   REFLECTIONS ON THE STUDY

A total of 644 students graduated from the *CPP* between the years 1995 and 2003. This relatively high number of students has certainly had an impact on the economy of South Africa; in other words, such students have most likely been able to contribute to the economy in some way. Research done by Wood and Lithauer (2005) indicates that a well-structured foundation programme provides students with a broad range of knowledge, skills, values and attitudes. This added value contributes greatly to student academic success in the higher education system. Other longitudinal studies have indicated that students who have completed a foundation year tend to perform better than those students who enter the *mainstream* directly.
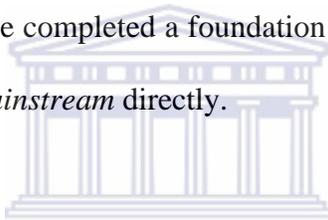
It can be deduced from this study that the *CPP* did play an important role in the lives of those 644 students who graduated from the programme between 1995 and 2003. Those students would otherwise have been lost to the higher education system, as they had failed to meet the entry requirements of the university. Those students who between the years 1995 and 2003 managed to complete one of the three options discussed above are certainly playing an important role in the economy – particularly those students who completed the Bachelor of Science degree – since they can seen as an economic investment in these times when the country is experiencing a shortage of scientists. Similarly, the 50 students who obtained the Bachelor of Commerce degree may also be contributing to the country's economy in terms of financial management skills. With regard to the Human & Social Sciences option, which delivered the most graduates (498),

it may be that the foundation skills from this option could be applied in their further and continuing education experiences.

The number of students who obtained degrees is also an indication that the Senior Certificate is not the best indicator when it comes to selecting students for admission to higher education. Based on the *CPP* students' matriculation results, they did not meet the requirements for university study. Despite these results, after completing the *CPP*, they went on, to obtain a higher education qualification.

Furthermore, a question arises as to the extent to which the success of the *CPP* as a bridging programme justifies the existence of such a programme. Given that certain students are entering the system from a disadvantaged schooling background, programmes of this nature are able to provide some mush-needed foundational skills. In this way, these programmes could assist the higher education sector to increase the numbers of graduates. Hence, these programmes need to be supported by the government.

The dropout rate amongst *CPP* students who continue their studies at the UFS is extremely high. This is cause for concern, as these students are seen as an investment for the higher education system and the economy of the country. The situation seems to be out of control. In order to reduce the number of dropouts, prospective students must receive more pre-counseling on higher education studies. The high dropout rate has been addressed as a matter of concern by both the Mail & Guardian (2005) and the Department of Education (2005). Their reports revealed that dropouts cost the government approximately R4.5 million in subsidy money annually. It was further observed that 30%

of the students enrolled in higher education in 2000 had dropped out by the end of that year. Of the 50% of students remaining in the system, less than half had graduated within the normal number of years. The Department of Education (2005) has also stated that the low graduation rate is linked to the high dropout rate.

The success of the *CPP* is a further indication of the fact that there is a place for such programmes in the South African education system. The *CPP*'s delivery system, in that it is outside the *mainstream*, is also unique. This could contribute to further thought being given to the establishment of community colleges in order to cater for students who do not have the requisite skills. This could draw significant sponsorship from the business sector and could also encourage community involvement, which would then sustain the programme. This is of vital importance given the limited (government) funding available for these types of programmes. This is indeed an area for further research.
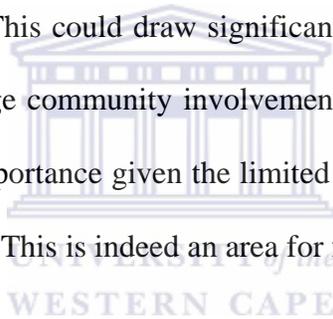
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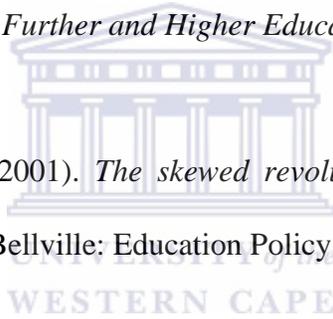
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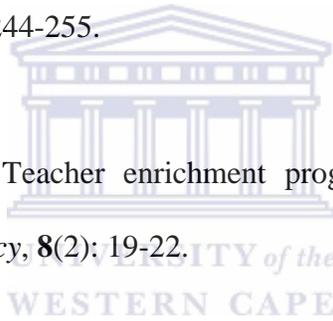
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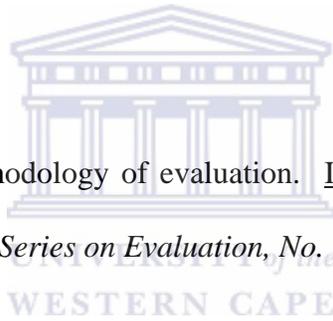
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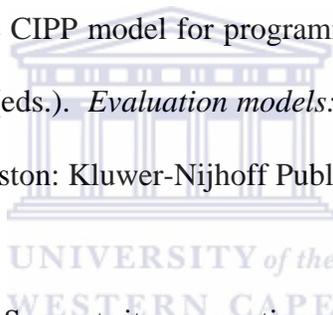
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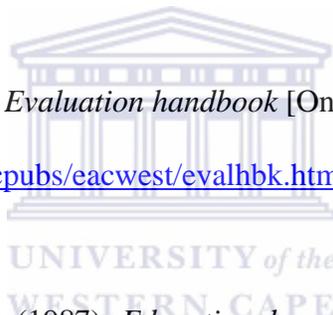
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APPENDIX A

INTERVIEW QUESTIONS FOR MANAGEMENT OF THE CAREER

PREPARATION PROGRAMME

1.   How long have you been involved with the programme?

2.   When students start the programme, what difficulties do they experience?

3.   How does the programme address these problems?

4.   How would you define success for the programme?

5.   How could the success rate have been increased?

6.   How could you help to increase enrolment in Option 1 and Option 3 of the

        programme?
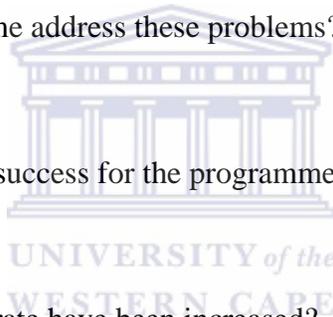
APPENDIX B

EMS

1.   **What happened to the 1994 enrolments in the EMS (6 students), when no students graduated?**

There are no resources to follow up on students who drop out and there are probably many reasons why students do drop out – lack of progress and money to continue are surely the top two!

2.   **What were the reasons for the rapid increase between 1997 and 2000?**

This is also difficult to explain, but there was an increase in marketing and perhaps more finances available to students. One just doesn't know the reasons why and it is impossible to pinpoint.

3.   **Why was there a high graduation rate in 1995 and in 1998? In 1995 the teacher-centred system was used and in 1998 the RBL teaching method was used.**

Again, these things are so difficult to explain. It could be the group of students who are just better than others. There is no way for us to determine the reasons.

HSS

1. **Why do so many students enrol in this field?**

   This we can answer. Due to their subject choices at school or lack of choice, most students have no option but to go in this direction, as they do not qualify to register for degrees in the other directions which have subject prerequisites.

2. **Are there any reasons for the high dropout rate?**

   Again, impossible to know without asking each and every student why they dropped out! Lack of progress and money are usually the top reasons.

NAS
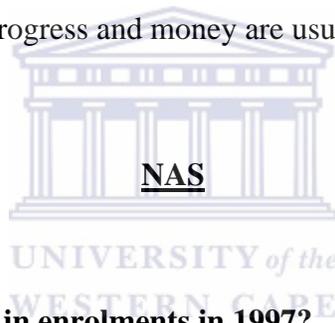
1. **Why was there a drop in enrolments in 1997?**

   There are very few students who take Mathematics and Physical Science at school and even fewer who actually pass both, which is a requirement for enrolment. The number of students who take these subjects at school also seems to be dropping. Those who pass both well go straight into the *mainstream* at universities and so we have to rely on those who fall in-between – pass both but not well enough to go into the *mainstream*.

2.   What are the reasons for the low enrolment?

Same as above.

OVERALL

Why is it that the *CPP* students took so long to complete their degrees (5-8 years)?

Again, this is difficult to pinpoint without asking each student their reason and one can only guess at the reasons. These are marginal students and so they do struggle more than students who go straight into the *mainstream* do. There are also many other things that put stress on the students, money worries, depression, and many other outside factors. The mere fact that they persevere is a credit to them.
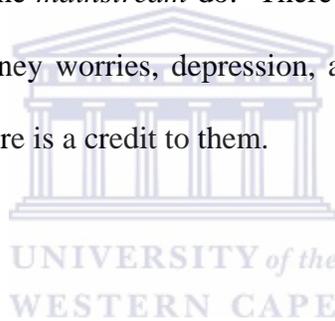
Appendix C

CPP Bachelor of Commerce : Analysis of the contingency table for BCom students (Chi-square test)

Contingency table:

	Normal	Normal + 1	Normal + 2	Normal + 3	Normal + 4	>Normal + 4	Total
Mainstream	578	489	178	62	23	26	1356
CPP	21	17	10	2	0	0	50
Total	599	506	188	64	23	26	1406

Time to completion (header spanning above)

Expected frequencies:

	Normal	Normal + 1	Normal + 2	Normal + 3	Normal + 4	> Normal + 4	
Mainstream	577.69844	488.00569	181.31437	61.72404	22.182077	25.0753912	
CPP	21.301565	17.9943101	6.685633	2.2759602	0.8179232	0.92460882	
				p-value	0.6073318		

H0: Type of student and time to completion are independent OR

Mainstream and *CPP* students are homogeneous regarding the time to completion

Ha: Type of student and time to completion are dependent OR

Mainstream and *CPP* students are not homogeneous regarding the time to completion

$\alpha = 0.01$

p-value > 0.01

$\Rightarrow$ do not reject H0

The type of student and time to completion are independent

The time to completion is not influenced by the type of student

OR

Mainstream and *CPP* students are homogeneous regarding the time to completion

There is no difference between the two types of students regarding the time to completion

Appendix D

CPP **Bachelor of Arts : Analysis of the contingency table for BA students (Chi-square test)**

Contingency table:

Time to completion							
	Normal	**Normal + 1**	**Normal + 2**	**Normal + 3**	**Normal + 4**	**>Normal + 4**	**Total**
Mainstream	510	554	299	90	30	15	1498
CPP	149	194	105	30	15	0	493
Total	659	748	404	120	45	15	1991

Expected frequencies:

Time to completion							
	Normal	**Normal + 1**	**Normal + 2**	**Normal + 3**	**Normal + 4**	**>Normal + 4**	
Mainstream	495.8222	562.78453	303.96384	90.2862883	33.857358	11.285786	
CPP	163.1778	185.21547	100.03616	29.7137117	11.142642	3.71421396	
				p-value	0.1001077		

H0: Type of student and time to completion are independent OR

   Mainstream and *CPP* students are homogeneous regarding the time to completion

Ha: Type of student and time to completion are dependent

   Mainstream and *CPP* students are not homogeneous regarding the time to completion

$\alpha = 0.01$

p-value > 0.01

$\Rightarrow$ do not reject H0

The type of student and time to completion are independent

The time to completion is not influenced by the type of student

        OR

Mainstream and *CPP* students are homogeneous regarding the time to completion

There is no difference between the two types of students regarding the time to completion.

Appendix E

CPP Bachelor of Arts: Analysis of the contingency table for BSc students (Chi-square test)

Contingency table:

	Normal	Normal + 1	Normal + 2	Normal + 3	Normal + 4	> Normal + 4	Total
Time to completion							
Mainstream	692	1015	392	138	46	23	2306
CPP	8	39	31	9	9	0	96
Total	700	1054	423	147	55	23	2402

Expected frequencies:

	Normal	Normal + 1	Normal + 2	Normal + 3	Normal + 4	> Normal + 4	
			Time to completion				
Mainstream	672.02331	1011.8751	406.09409	141.124896	52.8018318	22.08076603	
CPP	27.976686	42.124896	16.905912	5.87510408	2.19816819	0.919233972	
				p-value	0.6073318		

H0: Type of student and time to completion are independent OR

   Mainstream and *CPP* students are homogeneous regarding the time to completion

Ha: Type of student and time to completion are dependent OR

   Mainstream and *CPP* students are not homogeneous regarding the time to completion

$\alpha = 0.01$

p-value > 0.01

$\Rightarrow$ do not reject H0

The type of student and time to completion are independent

The time to completion is not influenced by the type of student

                                   OR

Mainstream and *CPP* students are homogeneous regarding the time to completion

There is no difference between the two types of students regarding the time to completion