

**An Investigation of the Perceptions of Learners  
and Staff in Respect of the Dental Technology  
Extended First Year Programme.**

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## **Abstract**

This study investigates the perceptions of learners and staff of the Dental Technology Extended First Programme (EFYP) currently offered in the Department of Dental Services at the Durban University of Technology. The EFYP has been offered since 1995 in order to meet the needs of under prepared learners in the Dental Technology programme as well as to address transformation of the programme. The Dental Technology EFYP has evolved over a number of years and was one of the first extended programmes offered in South African higher education. No evaluation of this programme has occurred since its inception. Moreover, the present study is particularly relevant as it has been conducted at a time that the Department of Education is concerned with low throughput rates in South African tertiary education. It is hoped that insights into this programme gained from this study will be of benefit to educators either currently providing foundation provision or those contemplating foundation provision in the future. It is noted that little research into foundation provision has, to date, been conducted in South Africa.

For this study, learners currently registered in the Dental Technology programme and staff from the programme were interviewed in semi-structured interviews, and the main themes concerning foundation provision emerging from the study were identified.

I conclude that the current EFYP is an academically sound programme contributing to the academic development of individual learners as well as to the overall success of the Dental Technology programme. Learners were unanimous in their belief that the EFYP contributed positively towards their academic advancement. Furthermore, learners noted the contribution that the EFYP made to their integration into higher education through a range of interventions such the departmental mentorship programme. Staff, also, favourably viewed the EFYP as academically successful.

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## Declaration

This thesis is my own work and has not been submitted in part, or in full, to any other university for any purpose. I have not plagiarised the work of anyone else in completing the requirements for this task.

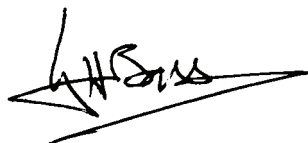
The research was conducted in Durban at the Durban University of Technology in partial fulfilment of the requirements for the degree of Master of Education at the University of KwaZulu-Natal under the supervision of Dr. S. McKenna.

**Date:** 03 September 2007

**Place:** Durban

**Name:** Gregory Hylton Bass

**Signature:**

A handwritten signature in black ink, appearing to read 'G. H. Bass', is written over a horizontal line that extends to the right. The signature is stylized and somewhat cursive.

## Abbreviations

AD	Academic Development
ASP	Academic Support Programmes
CPP	Career Preparation Programme (University of the Free State)
CTP	Committee of Technikon Principles
DET	Department of Education and Training
DOE	Department of Education
DVC	Deputy Vice-Chancellor
EAP	English for Academic Purposes
ESL	English Second Language
EFYP	Extended First Year Programme (Dental Technology, Durban University of Technology)
HEQC	Higher Education Quality Committee
HET	Higher Education and Training
HWI	Historically White Institution
HWU	Historically White University
ITS	Integrated Tertiary Software
MIS	Management Information Systems
NCHE	National Commission on Higher Education
NEPI	National Education Policy Investigation
NMMU	Nelson Mandela Metropolitan University
NSFAS	National Student Financial Aid Scheme
PMP	Preparatory Mathematics Programme (University of Southern Queensland, Australia)
SATAP	Standardised Assessment Test and Placement

## **Abbreviations**

SFP	Science Foundation Programme (University of KwaZulu-Natal)
TESOL	Teachers of English to Speakers of Other Languages
TN	Technikon Natal
UCT	University of Cape Town
UFP	University Foundation Programme (Nelson Mandela Metropolitan University)
UKZN	University of KwaZulu-Natal
UOT	University of Technology

# Chapter One - Introduction

## 1.1 Introduction

*The strategies for the transformation of the Higher Education system are at last in place. However, much work still needs to be done to turn the system around. We must succeed in this challenging task if we are to meet the aspirations and hopes of future generations of South Africans.*

Professor Kadar Asmal, Minister of Education (2002).

On 29 May 2002 the South African Cabinet approved a blueprint for the transformation of the higher education system. This was the culmination of years of extensive debate to transform the apartheid education system to reflect the thinking of democratic South Africa. In 1994 South Africa held its first democratic election and the new Government prioritised addressing transformation and redress in education. Apartheid had delivered unequal educational systems that favoured particular race groups over others. The ANC Government thus believed that by adopting the proposal set out in the National Plan for Higher Education that the right policies were now in place to achieve their mission.

In order to address the new social order, various policy initiatives were enacted by Government. These policy initiatives addressed a wide range of social issues, one of them being education. Various educational policies were tabled by Government "to give momentum to access issues" (Hay & Marais, 2004:61). For the purpose of this thesis the issue of access to higher education is of particular importance and is discussed in Chapter Two in greater detail. Policies addressing educational issues in the new social order arose from and included, the National Education Policy Investigation (NEPI) (1992), the National Commission on Higher Education (NCHE) Report (1996), the Education White Paper 3 of 1997, the Higher Education Act No. 101 of 1997 (1997) and the National Plan for Higher Education (2001).

Against the backdrop of the need for transformation and redress, in 1995 the Department of Dental Technology<sup>1</sup> at Technikon Natal first introduced its Extended First Year Programme (EFYP). This research will investigate and evaluate the EFYP, thus providing direction for future planning of extended programmes. To this end, this study will analyse data obtained from interviews with staff of the Department of Dental Services and learners who have successfully completed the EFYP.

## **1.2 Purpose of the study**

The purpose of the study is to provide educators with information and direction when planning or conducting extended programmes. This study is being conducted at a time when the Department of Education (DOE) is concerned about poor throughput in higher education. One of their initiatives to address this problem is through funding for extended programmes. Whilst this study specifically examines the Dental Technology EFYP, it is hoped that insight will be provided for a more general understanding of extended curriculum programmes.

An additional benefit of the study is that it will enable the Department of Dental Services to evaluate the EFYP and thereby improve on the programme.

## **1.3 Definitions**

Definitions of the various programmes that have been developed in South Africa to address under-preparedness of learners are difficult to establish. Often the terms foundation, bridging, augmented and access, are used interchangeably and refer to the same thing (Hay & Marais, 2004). For the purpose of this research access and bridging programmes are understood to have similar meaning and are used interchangeably. Similarly, extended curriculum programmes and foundation provision are understood to have similar meaning and are used interchangeably. Conceptual frameworks for these programmes as well as for an augmented programme are discussed in

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<sup>1</sup> The Department of Dental Technology became known as the Department of Dental Services in 2003. From January 2008, the Department of Dental Services will be known as the Department of Dental Sciences.



detail in Chapter Two. However, the following definitions are relevant at this time:

1. Access/Bridging programmes. Those programmes that allow learners who do not meet the necessary academic entry requirements, to enter tertiary education programmes in preparation for mainstream/traditional programmes. These programmes are not credit-bearing and have traditionally not been state funded.
2. Augmented/Add-on programmes. An augmented programme is the addition of academic interventions to an existing programme. The interventions are in addition to the workload and are usually limited to extra tutorials (Timm, 2005).
3. Foundation provision /Extended curriculum programmes. These interventions are a combination of credit-bearing and additional academic support modules. The credit-bearing subjects usually attract state subsidy whilst the additional academic support programmes are funded through specific state grants. An extended curriculum is “primarily intended to enable learners who are under prepared for the standard programme to gain a sound foundation for successfully completing the programme” (Scott, 2001:18) but at the same time allow the learner to achieve credits towards specific qualifications. These programmes “provide for learners to extend their period of study by a year while carrying a lighter load in the first two years” (De Klerk, *et al* 2005:1). The DOE defines extended curricula programmes as

a first undergraduate degree or diploma programme that incorporates a substantial foundational provision that is additional to the coursework prescribed for the regular programme. The foundational provision must be (a) equivalent to one or two semesters of full-time study, (b) designed to articulate effectively with the regular elements of the programme, and (c) formally planned, scheduled and regulated as an integral part of the programme

(DOE, 2006:2).

## 1.4 Developments in higher education

The developments in higher education will be discussed in greater detail in Chapter Two. The following discussion will locate the subject matter in its historical context.

South Africa became a democracy in 1994. It was the view of Government, conveyed via the Minister of Education Prof. S M E Bengu, that

the transformation of the higher education system to reflect the changes that are taking place in our society and to strengthen the values and practices of our new democracy is, as I have stated on many previous occasions, not negotiable. The higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities

(Bengu, cited in South Africa, 1997a:3).

On 24 July 1997, a *White Paper* entitled *A Programme for the Transformation of Higher Education* was issued (South Africa, 1997b). This was the result of an intense consultative process that began in 1995. The *White Paper* noted, referring to the then current state of higher education, that “the Ministry [DOE] finds reason for concern and an imperative for transformation” (South Africa, 1997b:2). The DOE also noted that “the present system of higher education is limited in its ability to meet the moral, political, social and economic demands of the new South Africa” (South Africa, 1997b:2).

In respect of access the DOE noted that

there is an inequitable distribution of access and opportunity for students and staff along lines of race, gender, class and geography. There are gross discrepancies in the participation rates of students from different population groups

(South Africa, 1997b:8).

The DOE recognised the value of foundation provision as a means of addressing redress and transformation and increasing access to higher education (South Africa, 1997b).

However, it was only in 2004 that the DOE began funding foundation provision officially. Funding was granted for a three year cycle which was to be reviewed during the funding period. All submissions were considered and funding was allocated in terms of its policies at the time. In 2006 the DOE called for further funding proposals for foundation provision (Pandor, 2006). However, this time, the DOE indicated that only programmes that were of an extended curriculum nature would be considered (DOE, 2006). This will be discussed in greater detail in Chapter Two.

### **1.5 The history of the Dental Technology programme**

The profession of Dental Technology is concerned with the manufacture of oral and facial prostheses. Dental technologists (or technicians) do not deal directly with patients but work in conjunction with dentists and other oral surgeons to supply their services. The Dental Technology qualification is currently obtained at a University of Technology (UOT).

Dental Technology is offered at three UOT's in South Africa, the Durban University of Technology (DUT), the Tshwane University of Technology and the Cape Peninsula University of Technology. Dental Technology was first offered as a higher education qualification in 1979. Learners entering the programme registered for a National Diploma in Dental Technology. The programme consisted of three years full time study. Thereafter, learners completed a year of experiential training. At the conclusion of this training period, learners sat a national professional board examination which, if successfully passed, entitled them to be registered as practicing dental technicians. In 1980 the first learners were admitted to Technikon Natal<sup>2</sup>.

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<sup>2</sup> In April 2002 Technikon Natal merged with M L Sultan Technikon and became known as the Durban Institute of Technology. This was a voluntary merger and, in addition, was the first merger to take place between institutions providing higher education in South Africa. In 2006 the Durban Institute of Technology changed its name to the Durban University of Technology.

In 1987 the programme was re-curriculated as the need for postgraduate qualifications in Dental Technology became apparent. Learners graduated after four years with a National Higher Diploma. The fundamental change to the syllabus involved the introduction of *Research Methodology* as a subject and a course in computer science.

In 1997 the programme underwent further curriculum changes and a three year diploma and a one year postgraduate degree in Dental Technology was introduced. Students successfully completing the diploma programme were licensed to work only as employees in dental laboratories. The formal year of experiential training was removed from the diploma. Thereafter, a one year's postgraduate Bachelor's degree in Technology was introduced and the successful completion of this programme enabled the learner to open and manage his/her own dental laboratory. *Research Methodology* was now offered as part of the postgraduate qualification. The course in computer science was replaced by a course in business management (*Business Practice II*). The curriculum of Dental Technology remains today as described above.

The draft Higher Education Qualifications Framework positions the present B.Tech: Dental Technology as an undergraduate degree and it therefore proposes that it be funded as such. If this becomes a reality the Department of Dental Services will need to decide whether to offer a four year professional degree. If the department chooses this particular route this may involve a curriculum change (and in particular, changes to entrance requirements) which may, in turn, have implications for the foundation provision.

### **1.6 The history of the Dental Technology Extended First Year Programme (EFYP)**

The Department of Dental Services has offered an extended curriculum programme in Dental Technology from 1995. Since 2005 this programme has been known as the Dental Technology Extended First Year Programme (EFYP). Participants have been placed on the EFYP because they have been identified as having the necessary academic potential for success in tertiary

education but lack specific academic proficiencies to be accepted directly into the academic programme without additional interventions. Access mechanisms or placements into Dental Technology in general and specifically into the EFYP will be discussed in detail in Chapter Two.

The Dental Technology foundation provision has over the years undergone a number of developmental changes.

Initially, in 1995 and 1996, it was offered to learners as a means of reducing their workload. Learners were allowed to register for a limited number of subjects in each year and thus they could, if successful, complete the first year in two years, at the same time obtaining credits towards their qualification. It appears that the Dental Technology foundation provision programme was one of the first extended programmes offered in South Africa. Research has revealed few other long-running extended programmes in South Africa. One such programme was an extended programme that was introduced at Stellenbosch University in the same year, 1995 (De Klerk et al, 2005). Only anecdotal evidence exists as to why the Department of Dental Services decided on this particular route in 1995. However, it was decided to avoid the predicament of the Department of Commerce at Technikon Natal. Learners, on the Commerce Bridging Programme (run as a short course), had protested that they would receive no formal credits towards a qualification after completing this bridging programme. Thus, the Department of Dental Services decided rather to reduce the learners' workload thereby giving the learner a more favourable chance of passing but at the same time allowing them to earn credits towards a qualification. This was the embryonic stage of a model that 11 years later was to be accepted by the DOE in 2006 as the only model that they would fund as part of its mission of redress and to improve throughput rates in tertiary education (DOE, 2006).

In 1997, for the first time, learners formally registered for academic foundation provision as a learning supplement. Learners thus registered for credit-bearing first year subjects as well as dedicated non credit-bearing subjects. These foundation provision subjects included academic literacy as well as a basic Dental Technology practical course. Initially academic literacy was

offered as a stand-alone course (*English for Academic Purposes*) but was later included as part of *Introduction to Dental Technology*. Academic literacy as an educational concept relating to foundation provision will be discussed further in Chapter Two.

In 2004 the Department of Dental Services submitted a foundation provision proposal to the DOE and was granted three years funding in respect of the Dental Technology foundation provision. At this time the foundation programme became known as the Dental Technology Extended First Year Programme (EFYP). The DOE funded EFYP was officially offered for the first time in 2005. The proposal to the DOE involved a re-circulation process which will be discussed further in this study in Chapters Two and Four.

Notwithstanding the fact that the department had previously received DOE funding in respect of its foundation provision, it was again required by the DOE in 2006 to reapply for further funding for the period 2007/08 to 2009/10. This resulted in a further adjustment of the curriculum. Prior to the 2006 application, the department was informed that the format of its EFYP was acceptable to the DOE. In a letter to the Vice-Chancellor in respect of the existing DOE foundation provisions at DUT, it was stated that “only the Health programme [at DUT] is likely to satisfy the requirements of the 2007/08 to 2009/10 model” (Pandor, 2006:3). In December 2006 the Department of Dental Services received notice that its new proposal was accepted and the funding from the DOE was extended for a further three years.

There has been a general and constant improvement in the Foundation programme offered by the Department of Dental Services. From an embryonic beginning with a model resembling an augmented programme with questionable pass rates, it has grown into an accredited programme with learners completing their qualifications with greater academic confidence. This confidence will be discussed further in this study and evidence of its existence will be provided in Chapter Four. The journey thus far has been a progressive learning exercise by staff of the department. As a result, the department is now more confident of the quality of its offering. The success or failure of the

Dental Technology EFYP will be further discussed and analysed in this research dissertation.

### **1.7 Entry requirements into Dental Technology**

Learners gain admittance into the Dental Technology programme, either the traditional course or the EFYP, by means of placement testing. Annually, 25 learners are accepted into the traditional three-year programme and 15 learners are accepted into the EFYP. Currently, at the placement test, all learners are tested for manual dexterity capability and English proficiency. Manual dexterity is a requirement as Dental Technology is a practical profession that involves the manufacture of oral prostheses. A learner who lacks manual dexterity skills will not be successful in the profession. The TESOL Inc. test is used to test for English proficiency. Test results are immediately scored and candidates who meet the minimum departmental requirements are subsequently individually interviewed. Proficiency in spoken English and personal motivation for the programme are some of the criteria gauged during the interview. Whilst it is acknowledged that the interview process is subjective, there has been over time, consistency in the personnel conducting the interviews. I have been involved in Dental Technology learner selection for the entire 18 years that I have worked for the institution. Before I became the head of department in 1996, I was the dedicated first year lecturer. Since 1990 the selection panel has traditionally included the head of department, the dedicated first year lecturer (the same person since 2001), and the dedicated EFYP lecturer since 2004. The panel is presently demographically representative and makes its decisions by consensus, drawing on the experience of its panel members.

Learners are invited to the above placement tests on the basis of their matriculation point scores as well as their matriculation subject basket. Twenty-four (24) points is considered to be the minimum score to be accepted directly into the programme. Learners with less than 24 points may be considered for the EFYP, taking into account the placement test results. The policy of the Department of Dental Services is to offer places on the EFYP to learners who do not qualify in terms of the standard entry requirements and/or

who are under prepared for tertiary education but have the necessary academic potential for success and who meet the national minimum requirements for higher education.

Similar sentiments in respect of the rationale for offering places to learners on extended curriculum programmes have been expressed by Scott (2001:14) when he states that

minimum requirements for responsible widening of participation are (a) to use selection methods that facilitate the identification of students who have a fair chance of succeeding and (b) to ensure effective foundational provision in the form of extended curricula.

Moreover, access to Dental Technology requires a pass in one of the “gateway subjects” (Nair, 2002:98), namely Physical Science and/or Mathematics. This subject requirement places additional burdens on learner selection as these subjects remain problematic for many school-leaving learners. In general, applicants struggle to obtain the required departmental entry requirement for these subjects. Consequently learners with lower matriculation marks for the gateway subjects are accepted into the Dental Technology EFYP. As has been reported nationally, poor performance in the ‘gateway subjects’ is especially true of learners entering tertiary education from disadvantaged schools (Hay & Marais, 2004; Grussendorf, Liebenberg & Houston, 2004; Koch & Snyders, 2001; Webb & Erwee, 1990).

As a general, but not specific, rule, only learners who have acceptable manual dexterity skills but lack language proficiency and/or or the requisite matriculation points are considered for the EFYP.

### **1.8 Rationale for the study**

The Dental Technology programme has been identified by the Durban University of Technology as having a low throughput rate. Poor throughput combined with unacceptable dropout rates impact significantly on both the programme and the institution (Eiselen & Geyser, 2003). The consequence is



that “attrition/retention affects funding, facilities, planning and programmes offered” (Eiselen & Geysler, 2003:118).

The Dental Technology EFYP, since its inception, has not undergone any formal reflective process with the aim of evaluating the programme. The value of engaging in reflection, together with the aim of improvement, is well documented (Dewey, 1930; Schön, 1983; Bleach, 1999; Tickle, 1989). Schön (1983) argues that knowledge is gained by action, namely observation and reflection. At present, the Department of Dental Services is formally unaware of whether learners and staff within the department value the notion and operation of the EFYP. Questions as to whether learners have benefited educationally and socially from the programme need to be answered.

Additionally, it is necessary to establish whether staff are fully engaged and committed to offer the EFYP. As the head of the Department of Dental Services, I have guided the EFYP with the assistance of one other staff member. The department’s EFYP is seen as a departmental social responsibility programme in order to address national imperatives in respect of transformation and redress in the Dental Technology industry. However, it has become necessary to make the programme more inclusive of the department and to establish more specific direction for improvement. Moreover, it has become apparent that the Dental Technology EFYP was one of the first extended curriculum programmes to be offered in South Africa and thus valuable insight could be gained from the evaluation of a long-running programme. This evaluation will be of benefit to the greater educational community.

The fact that the Department of Dental Services has not fully reflected upon its EFYP and is consequently uninformed on its effectiveness is not uncommon. De Klerk et al (2005) similarly reported that no research had been conducted into the Stellenbosch University Extended Degree Programme (EDP) in the 10 years since its inception. This should not be seen as a justification for the lack, to date, of meaningful evaluation of the Dental Technology EFYP but should rather be viewed as an opportunity for the present research. This fact was also recognised by the Stellenbosch researchers as an opportunity rather than

being seen in a negative light. The need for research into access programmes is also recognised by Hay and Marais (2004:60) who argue that there is an “obligation to engage in vigorous research to prove that these programmes are indeed worthwhile and have a place in higher education”. Hay and Marais (2004:60) further state that “currently there seems to be a lack in South African research into the achievements brought about by such programmes”.

Moreover, staff within the Department of Dental Services need to reflect on current teaching practices. The EFYP should have presented opportunities for academic staff development. Cliff et al (1996) suggest two departure points for teacher reflection, for those teaching in a changing environment. These are:

1. changes in teacher thinking
2. the need for the teacher to understand learning from the learner’s perspective.

A dialogue with departmental staff will contribute to staff academic development within the department. Scott (2001:4) argues that the key requirements for academic development is “the need for systemic responses” rather than temporary, peripheral or ‘band-aid’ measures. This study will allow engagement with the staff to reflect on the foundation provision and to evaluate their teaching practices in terms of current philosophies.

Extended programmes also need to be seen within the context of a national response to educational objectives. The DOE’s *White Paper 3 of 1997* established specific aims to which educational institutions should aspire. These include offering access to all in respect of receiving an education in order to meet personal and national objectives (South Africa, 1997b). This research will attempt to investigate the extent to which the Dental Technology EFYP is meeting national objectives.

Research into the EFYP will result in knowledge that will be specifically beneficial to the Department of Dental Services as well as to the greater academic community presently engaged in offering foundation/extended curriculum provision. The findings of this research will consequently be shared

and communicated by means of research publications as well as conference proceedings.

### **1.9 Key research questions**

1. What factors are perceived by learners who have completed the extended programme, as indicators of success or failure of the EFYP?
2. What factors are perceived by staff as indicators of success or failure of the EFYP?
3. What are the national objectives of the Department of Education (DOE) in respect of extended programmes?
4. Do perceptions of learners and staff correlate with national objectives as stated by the DOE in respect of extended programmes?

### **1.10 Overview of the dissertation**

Chapter Two of the dissertation involves a discussion of the literature and the conceptual framework on which this study was constructed. Different foundational provision models are defined and discussed. A discussion on disadvantaged and *at-risk* learners and the need for redress and transformation in South Africa follows. In addition, the discussion on higher education in Chapter Two generates such data as to answer question three of the *Key Research Questions*. Thereafter, academic development in higher education is reviewed. This is followed by an analysis of learner selection and placement. The review then addresses the question of whether foundation provision addresses equity of access or merely broadens access. After a dialogue on the manner in which mentoring enhances foundation provision the chapter concludes with a discussion positioning the Dental Technology EFYP in a UOT.

The methodology of the study is addressed in Chapter Three. I have used an interpretive paradigm in which to analyse and present the data for this research. Data was collected during a series of semi-structured interviews with staff of the Department of Dental Services and successful learners who

participated in the Dental Technology EFYP. In total, sixteen interviews were conducted. Semi-structured interviews were chosen as an appropriate means of data collection allowing the discussion to flow in any direction depending on the responses obtained from the respondents. However, this rarely happened and interviews tended to follow the direction as presented by the interviewer. Ethical considerations as required by the University of KwaZulu-Natal were implemented. The findings of this study are discussed in Chapter Four. In general, both staff and students see the Dental Technology EFYP as positively contributing to the academic success of learners having passed through the EFYP. The EFYP has been successful in furthering the transformative and redress objectives of the Department of Dental Services in respect of national objectives.

The conclusions and recommendations emanating from this study are detailed in Chapter Five. The chapter suggests that the EFYP is developing in a positive direction and that no major reconstruction is necessary to a system with which both staff and learners are satisfied.

## **Chapter Two - Literature Review**

### **2.1 Introduction**

Today, higher education in South Africa still faces the same challenges as it did in 1994 when the first democratic government was elected. Poor throughput rates, with a projected national average of 16% for 2007 (Bunting, cited in DUT, 2007), remain problematic at most institutions of higher learning. The racial demographic profiles have improved in the tertiary sector but this has presented new challenges as learners' performance remains compromised, especially amongst those coming from the former Department of Education and Training (DET) schools (Jansen, 2006; Gussendorf, Liebenberg & Houston, 2004; Hay & Marais, 2004; Van Wyk, 2003; Nair, 2002; Koch & Synders, 2001; Futter, 1999). The average pass rate in South Africa in the 2006 school leaving matriculation examination was 66.5%. Of those that passed, only 24% of learners obtained the matriculation exemption pass required to enter the traditional universities. Of the learners passing with matriculation exemption only 59.3% were black. The overall pass rate for black learners was 61.6% as compared with 97.1% for whites. Moreover, 71.2% of black learners entered in the 2006 matriculation examination did not get university passes (Pandor, 2007). In 2006 DUT alone enrolled 5780 first-time learners. If all these learners had matriculation exemptions this would represent approximately 32% of the total number of black learners nationally passing with a matriculation exemption. This starkly illustrates the fact that, nationally, institutions compete to attract quality learners from a small number of learners with matriculation exemptions. Consequently, extrapolating from these statistics, it is inevitable that the majority of learners will have a significant chance of being under prepared for tertiary education.

The provision of unequal education to the different race groups was entrenched during the 46 years of Nationalist Party rule. A similar situation existed before the Nationalist Party came to power in 1948 (Morris, 2004). The quality of education received by the different communities was racially based. The Nationalist Party Government divided the races into four groups,

Whites, Blacks, Coloureds and Indians<sup>3</sup>. Different laws governed the education of different race groups. Black (African) education was controlled under the Bantu Education Act No. 47 of 1953. The ideology behind the policies of the Nationalist Party is embodied in the words of the Minister of Native Affairs who was later to become the Prime Minister of South Africa, Dr. Hendrik Verwoerd, widely considered to be the architect of the National Party's Bantu Education policy, the implementation of which was to fall under his control ('End of a Dream', 1977). Prior to the introduction of the Bantu Education Act on 1 January 1954, Verwoerd stated:

It is necessary [that] native education should be controlled in such a way that it should be in accordance with the policy of State. Education should stand with both feet in the reserves and have its roots in the spirit and being of Bantu society. There is no place for him in the European community above the level of certain forms of labour. Within his community, however, all doors are open. For that reason it is of no avail for him to receive a training which has, as its aim, absorption in the European community where he cannot be absorbed. Until now he has been subjected to a school system which has led him away from his own community and misled him by showing him the green pastures of European society in which, he was not allowed to graze.

(Verwoerd, cited in 'Why we must heal the generation gap', 1979:20)

In subsequent years, the philosophy behind the Bantu Education Act was extended to other racial groups and thus the introduction of the Coloured Persons Act No. 47 of 1963 was to govern Coloured education matters and the Indian Education Act No. 61 of 1965 legislated Indian education (Mothata & Lemmer, 2002).

1994 saw the first democratically elected government take power in South Africa. The new government saw the reform of education as a priority. Hence,

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<sup>3</sup> The terminology to describe racial groupings used in this study may be offensive to some. However, given the focus of this study, it is necessary to identify the different racial groupings. The term *Black* will mean those persons of African decent. *White* will mean those persons of European origin. *Coloureds* referred to those persons of mixed origins and *Indians* are that group who have their origins in India.

the first legislation aimed at educational reform, the National Education Act No. 27 of 1996, was promulgated in 1996. This act empowered the Minister of Education “to determine National policy with the aim of transforming the education system into one which serves the needs and interests of all the people of South Africa” (Mothata & Lemmer, 2002:108). Mothata & Lemmer (2002) further point out that this Act stipulated that policies, as promulgated by the Minister, aimed at protecting an individual’s rights and provided for their advancement in society.

With the demise and crumbling of apartheid in the 1990’s, the racially segregated Technikons and Universities began opening their doors to people of other races. Some institutions of higher learning had opened their doors to all races earlier than 1990 and some never complied at all with the Government directive to exclude persons of colour. Indeed, the Dental Technology programme at Technikon Natal has included other races from its inception in 1980. In response to the call for equal education, Technikons and Universities sought interventions that would ultimately offer not only equal but better education in the tertiary sector. Soon it became apparent that many learners, particularly those who were the products of the Bantu education system, entering tertiary education were simply not ready for the challenges that tertiary education offered. This was attributed to the poor quality of school education (Jansen, 2006; Gussendorf, Liebenberg & Houston, 2004; Hay & Marais, 2004; Van Wyk, 2003; Nair, 2002; Koch & Synders, 2001; Futter, 1999; de Villiers & Rwigewa, 1998; Nolte, Heyns & Venter, 1997; Webb & Erwee, 1990).

In response to this and in order to bridge the gap between a poor schooling system and the demands of tertiary education, many institutions of higher learning sought interventions that would enable them to meet their objectives for transformation and redress, and at the same time improve pass rates.

A new funding formula governing the allocation of State subsidies to institutions of higher learning was introduced in the 2004/2005 financial year. The underling principle of the new formula was that of a

goal-orientated and performance-related distributive mechanism, which explicitly links the allocation of funds to academic activity and output and in particular to the delivery of teaching-related and research-related services which contribute to the social and economic development of the country

(South Africa, 2003: 25824)

Tertiary institutions receive Government subsidy allocations based on their DOE approved three-year enrolment plans as submitted to the DOE. The total annual enrolment cannot exceed these approved enrolment numbers. If they do, the extra learners are not subsidised. The portion of the subsidy relevant for first-time diplomas and degrees is then allocated according to what the formula refers to as 'teaching inputs and outputs'. 56% of the institution's annual subsidy is paid for 'teaching outputs, i.e. per completed module (subject). Thus, if a learner fails the subject no subsidy is received and the learner becomes part of the enrolment numbers for the next year. Consequently, the institution is prevented from replacing the poor learner with one that has better potential. On completion of the qualification, 14% of the subsidy is paid to the institution (South Africa, 2003). Thus, institutions of higher learning lose revenue for every learner failing to complete their qualification. The longer the learner takes to get a qualification the more the institution loses in real terms as the 'teaching output' is a once-off payment on completion and the smaller the real term subsidy is for the institution. Hence, there would be little point in accepting large numbers of disadvantaged students to address transformation but who would fail to obtain qualifications. As a result, financial as well as moral pressure was brought to bear on institutions to address levels of under-preparedness. Various strategies to empower learners for success in tertiary education were postulated. These included different foundational programmes or access programmes that are or have been offered in various formats, namely:

1. Bridging/Access programmes
2. Augmented/Add-on programmes



### 3. Extended programmes/foundation provisions

The difference between these interventions will be clarified later in this chapter. In the past these terms have been used in different ways. Hence, there is confusion as to the precise understanding when using specific nomenclature. This study will attempt to clarify the issue.

Despite twelve years of democracy since 1994, much debate has been generated as to whether there has currently been an improvement in the school and tertiary education system. Some believe that it continues to deliver under prepared learners to the tertiary sector. Writing in the *Sunday Independent*, Prof. Jonathan Jansen, the former Dean of Education at the University of Pretoria seriously questioned the quality of the present schooling system (Jansen, 2006). He elaborated further:

In my many years as a university teacher, I am astounded by the inability of undergraduates to compose a grammatically accurate sentence, the lack of logic in arguments, the emotional outbursts in writing and, more importantly, the incapacity to think creatively when faced with routine problems. How on earth did these students pass a matriculation examination? Or, more importantly what exactly does the matriculation examination actually measure?

(Jansen, 2006:8).

He expressed similar concerns in 2005 when he was quoted as saying that “the biggest barrier to higher education in South Africa is still the poor quality of school education” (in Blaine, 2005). This should be viewed against the fact that 49.9% of learners enrolling at South African tertiary institutions drop out before completing their studies (Tyali, 2005).

## **2.2 Foundational/Access programmes**

### **2.2.1 Introduction**

The widening of access into tertiary education is vested in the creation of equal and better opportunities for learners in their quest for quality education.

Some institutes of higher learning have deemed it necessary to formulate and adopt policies in respect of the delivery of equal opportunities at their institutions. In a study conducted in the United Kingdom, Morris, Newman and Stringer (1993:82) raise a number of issues which mitigate against the delivery of equal opportunity within a tertiary institution including “ageism, elitism, sexism, finance, domestic responsibility, class and stereotyping”. Whilst one can argue that in a South African context, racism should be added to the above list of factors responsible for the delivery of unequal opportunity in respect of education, this list nevertheless does include factors which motivate strongly for curriculum change in the tertiary sector. In South Africa, foundational provision has thus become relevant in providing equal opportunity rather than traditional access programmes to higher education.

Other criteria raised by Morris et al (1993) bear further consideration in a South African educational context. Firstly, one needs to consider domestic responsibility as a factor for poor educational performance. HIV/AIDS is placing increasing strains on families, especially those from disadvantaged backgrounds. Parentless homes and the need for children to assume domestic responsibility at an early age is a contributing factor to poor educational performance (Poulsen, 2006; Child-headed Households, 2004; Chabilall, 2004).

Secondly, access to finance, another factor identified by Morris et al (1993), impacts negatively on academic performance, especially amongst disadvantaged and/or minority groups (Anderson, 2004; Pieterse, 2004; de Oliviera, 2002; Morris, Newman & Stringer, 1993). Socio-economic factors that affect performance will be discussed in greater depth elsewhere in this chapter. Issues of class need to be considered (Stowell, 2002; McNamee, 1995). Many disadvantaged learners are born of working class parents and it is possible that this factor has played a role in the fact that the learner is under prepared for tertiary education. In South Africa, most higher education learners are ‘first generation’ learners – their parents either never attended university or had limited or no school education. Learners brought up in these homes have found difficulty integrating into higher education. On the other

hand, studies have shown that children raised in middle class households where the literacy practices are similar to those of a university, adapt better and are better prepared for higher education (McKenna, 2004a; Street, 1984; Heath, 1983).

Many other reasons for under prepared learners entering higher education in South Africa have been postulated (Jansen, 2006; Gussendorf, Liebenberg & Houston, 2004; Hay & Marais, 2004; Van Wyk, 2003; Nair, 2002; Koch & Synders, 2001; de Villiers & Rwigewa, 1998; Nolte, Heyns & Venter, 1997; Webb & Erwee, 1990). These include government policy issues, the present and past schooling system, the quality of teaching staff at South African schools, etc. These factors will be addressed elsewhere in this dissertation and will not be expanded upon at this point.

### **2.2.2 Different foundational or access programme models**

In South Africa there exist a number of different programme models formulated to prepare under prepared learners for success in tertiary education.

A general lack of understanding of the nomenclature of foundational programmes exists. Hay and Marais (2004) reported that often the terms: foundation, bridging and access, are used interchangeably and may refer to the same thing. Currently new terms, extended programmes and foundation provision, may be added to the list. As has been reported in Chapter One, the terms 'Foundation Provision' and 'Extended First Year Programme' are used in this study to have the same meaning. This conforms to the nomenclature (see page 28) currently being used by the DOE (DOE, 2006). For the purposes of this review the different models will be examined and the most commonly understood name will be attributed to that model. In this way the conceptual frameworks around which these models are formulated will be better understood.

Foundation or Access programmes to institutions of higher learning are offered in countries outside South Africa. Timm (2005) reported that access programmes are offered in the United States, Australia and various countries

in Europe. These too will be discussed in this chapter. However there is a fundamental factor that differentiates foundation provision offered in South Africa and access programmes offered in the rest of the world. In South Africa, foundation provision is primarily available to the majority of the population whilst, internationally, access models, referred to in the literature, are offered to minorities. This observation is confirmed by Timm (2005). However, whilst foundation provisions in South Africa are offered to the black majority, they are offered to small groups of disadvantaged learners. The majority of programmes offered in higher education remain the traditional offerings associated with institutions of higher learning.

Philosophically, the majority black group in South Africa is often referred to as a minority group because of its political past<sup>4</sup>. Currently, there is “a lack of consensus concerning the definition of minority at international level” (Mothata & Lemmer, 2002:106). The literature suggests that minority can be defined either in literal or political terms. The Concise Oxford Dictionary (1999:908) defines minorities as “a relatively small group of people, differing from others in race, religion, language, or political persuasion”. However, McNergney and Herbert (cited in Mothata & Lemmer, 2002:106) suggest that the term *minority* “carries both a quantitative meaning and a political connotation”. Clearly, during the apartheid years the black majority was, in a political sense, a minority. Wirth, cited in Mothata and Lemmer (2002:106) suggests that minorities are those who “regard themselves as objects of collective discrimination”. Undoubtedly, the Black group are still seen as ‘objects’ of a past collective discrimination. The effects of past discrimination are still evident in post-apartheid South Africa. Given Wirth’s interpretation (cited in Mothata & Lemmer, 2002) the Black group can claim to be considered as an educational minority and thus, given past injustices, can claim to be in need of redress. However, whether one wishes to argue that the Black group is a majority or minority grouping is of academic interest only. The fact remains that this group has been identified as being in need of remedial interventions to empower them to succeed at a tertiary educational level.

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<sup>4</sup> The understanding of ‘majority’ and ‘minority’ is thus different in South Africa. This argument is further developed in section 2.2.2.2. on page 31 of this dissertation.

### **2.2.2.1 South African foundational programmes**

In South Africa various terms have been used to identify programmes established to widen access and promote success for disadvantaged learners in tertiary education. As reported earlier, confusion exists as to nomenclature. Customarily, a matriculation exemption is an entrance requirement at the traditional universities. Foundational programmes at these universities are offered to widen access to those learners who do not have a matriculation exemption and who are, in addition, under prepared for tertiary education (Wood & Lithauer, 2005; Hay & Marais, 2004; Grussendoff, Liebenberg & Houston, 2004). However, the requirement of a matriculation exemption is not needed at a University of Technology (formerly known as Technikons) where a senior certificate only is sufficient for entry into most programmes. Consequently the reality is that problems of under prepared learners at a UOT will be significantly higher than those at a traditional university where a matriculation exemption is required for entry. As a result, UOT's will inevitably draw on under prepared learners. and foundational programmes are needed to cater for them.

In the context of this study, the following is used as an understanding of the various foundational programme models:

#### **Bridging/Access programmes**

These programmes are offered as 'stand-alone' programmes and are usually required as pre-registration to specific traditional programmes. Success in the bridging programme allows access to various traditional programmes. Two examples of bridging programmes are used to understand a conceptual framework for bridging programmes. These are:

1. The Science Foundation Programme (SFP) initially started at the University of Natal (Pietermaritzburg), (now known as the University of KwaZulu-Natal).
2. The University Foundation Programme (UFP) offered by the Nelson Mandela Metropolitan University (NMMU)

The difference between the two programmes is subtle. These types of programmes do not currently qualify for a DOE subsidy for foundation provision.

Sometimes bridging/access programmes are called *foundation programmes*. It is extremely difficult, from the literature, to find any academic differences between a foundation programme and a bridging programme. As reported previously, the terms are often used interchangeably (Hay & Marais, 2004). Thus, when used in this context, bridging and foundation is taken to mean the same thing. However, in order to avoid confusion between a foundation programme and foundation provision which will be discussed later in this study, the term *foundation programme* will be avoided.

The Science Foundation Programme (SFP) is one of the longer-running bridging programmes in South Africa. This programme was initially started in 1991 and has grown from 31 learners to a current enrolment of approximately 280 learners (Grussendoff, Liebenberg & Houston, 2004).

The SFP is a year long programme. Learners successfully completing the SFP may then enter any one of a number of specific science related degrees, including a BSc, offered at the University of KwaZulu-Natal (UKZN). Learners are primarily selected from a pool of candidates who would not ordinarily, using selection criteria applicable at the time, be selected directly into a science related programme. However, all learners are in possession of a matriculation certificate, although not necessarily a matriculation exemption. Various methods for the selection of participants have, over the years, been used for the final selection of students into the SFP. Selection criteria for foundational programmes will be discussed further in this thesis.

Learners in the SFP are registered for bridging courses in *Mathematics, Physics, Chemistry, Biology* and *Academic Communication Studies*. Learners are also required to attend a counselling programme.

The University Foundation Programme (UFP) offered by the Nelson Mandela Metropolitan University (NMMU) differs slightly from the SFP in that it offers “streams leading to all the main mainstream academic programmes at

NMMU” (Wood & Lithauer, 2005). The UFP was established in 1999. The programme offers entry into Business, Science and the Humanities. All learners study *English for Academic Purposes* and *Life Skills* as core subjects. Depending on their chosen stream, they do subject-specific foundational courses. Another difference from the SFP programme as previously described is that the programme is managed independently from the specific academic faculties. This is a fundamental difference to the SFP at UKZN which is faculty managed. A feature of the UFP is “small group teaching, monitoring sessions and a focus on holistic development of the student” (Wood & Lithauer, 2005:1003). Wood & Lithauer (2005) note that the primary aim of the UFP is to prepare under prepared learners for further studies. As is the case with the SFP, a senior certificate only is required for entry into the UFP. What distinguishes the SFP and the UFP from the currently accepted DOE model for foundation provision is that learners register for a generic programme that is different to that for which they will register in their second year of study.

The term *Access Programme* is not widely used to describe foundational programmes in the South African context. No evidence could be determined that would define *Access Programmes* any differently to the bridging model referred to above.

Internationally however, the term *Access Programme* is widely used to describe courses that widen access to higher education. Given the above, the *Access Programme* model will not be discussed further under the present analysis of South African foundational models but will rather be referred to in the discussion on international access programmes.

Thus, the following structural elements may be identified in bridging/access programmes:

1. A senior certificate is the minimum requirement to enter the programme.
2. They are, at most, a year’s duration. However, they can be shorter.

3. They aim to empower the disadvantaged learner with foundational knowledge so that they may be on par with other traditional learners once they have entered their first year of study.
4. Learners are not generally registered for credit-bearing subjects. However some programmes, e.g. the UFP, do contain some credit-bearing subjects that can be carried forward into the second year of study, i.e. their first year on a formal programme.
5. They are programme specific but can be generic in nature. For example, the SFP allows entry specifically to science related programmes at UKZN whilst the UFP offers entry into a number of faculties.
6. In addition to specific foundational subjects that will form the basis of their future career path, learners are required to complete a generic language skills programme. Some programmes offer an academic literacy programme.
7. Interventions such as extra tutorials and counselling (mentoring) are common practice.

Currently, these types of programmes do not elicit state (DOE) funding.

### **Augmented/Add-on programmes**

An augmented programme adds additional academic interventions to an existing programme. This can be achieved by either adding a year to the qualification, thus dividing the first year into two years, or by offering additional academic interventions in addition to the normal workload. The academic interventions are offered to programme participants in the form of extra tutorials or other interventions, for example, *Academic Literacy*. Often the tutorials merely supplement the existing tutorials already offered by the programme (Timm, 2005). These extra tutorials can be the only academic interventions offered in the programme. Learners are registered for traditional programmes but are identified as needing additional academic support. They



can complete their studies by either reducing their workload and/or attending additional interventions offered to specifically address problems experienced by the learner in his/her credit-bearing subjects. Timm (2005) identified an augmented programme as existing at the former M L Sultan Technikon.

The augmented programme model is identified thus:

1. The three year diploma is obtained in more than the minimum time needed to obtain a qualification. The learners registered for the M L Sultan programme obtained their qualifications in a minimum of four years.
2. The first year may be offered over two years.
3. The programme is discipline specific.
4. During their years of study, learners are provided with extra tutorials and possibly additional academic instruction. Thus, learning is achieved at a slower pace.
5. Other than the interventions described in point 4 above, there are no other extra interventions such as those designed to address the social integration of learners within the tertiary environment.
6. Augmented learners joined with traditional learners as they advance academically. In the M L Sultan programme this occurred in the traditional learner's second year. Thus, the augmented learners were in their third year.
7. A Senior Certificate was required for entry into the augmented programme. However, in addition, the programme may require a specific school subject mix. The M L Sultan Technikon augmented programme stipulated that learners had to have completed *Mathematics, Physical Science and English* at school (Timm, 2005).

The augmented model described does not qualify for DOE foundation provision grants for the added interventions. However, as the learners are

registered for credit-bearing subjects, the institution would get the normal DOE subsidy which in real terms would be reduced as learners would take longer to obtain a qualification.

### **Extended Programmes/ Foundation Provisions**

An extended programme or a foundation provision is a programme that is a combination of credit bearing and non-credit bearing subjects that add an additional period of study (6 months to a year) to the completion of a qualification. An extended programme or a foundation provision can be defined thus:

a first undergraduate degree or diploma programme that incorporates a substantial foundational provision that is additional to the coursework prescribed for the regular programme. The foundational provision must be equivalent to one or two semesters of full-time study, (b) designed to articulate effectively with the regular elements of the programme, and (c) formally planned, scheduled and regulated as an integral part of the programme

(DOE, 2006:2).

The Dental Technology Extended First Year Programme (EFYP) is described so as to provide a conceptual understanding of an extended programme.

The EFYP was established in 1995, thus making it one of the first extended programmes to be offered in South Africa. The EFYP conforms to the definition of foundation provision as described above and has on two separate occasions, in 2004 and again in 2006, received a DOE grant for foundation provision. Thus, the programme can be said to fully embrace the conceptual framework of an extended programme as determined by the DOE.

Learners registering for the EFYP register for a national diploma in Dental Technology. The minimum time to complete a three year diploma for an EFYP learner is four years. The first year is comprised of a combination of first year credit-bearing subjects and added academic interventions. These are designed to integrate learners into the Dental Technology academic

environment as well as to empower them with general academic and specific dental technology skills. Academic literacy is integrated into a general Dental Technology subject and thus the skills learnt are applied in a specific dental context. At the end of the academic year they have obtained more than half the first year credits needed for the traditional first year. During their second year of study they are required to complete additional academic interventions. The EFYP focuses upon what Hay and Marais (2004:63) describe as a “holistic approach towards learner development and not only focusing on academic development”. Admission into the EFYP requires a senior certificate.

As previously indicated the DOE is currently only funding extended curricula programmes. A number of extended programmes in the Faculty of Health Sciences at DUT are currently being funded by DOE’s foundation provision. These include the Somatology extended programme which was formally curriculated at the same time as the Dental Technology EFYP in 2004. The Dental Technology and the Somatology programmes were the only programmes that were funded in the Faculty of Health Sciences during the first round of DOE grants in 2004. Both were renewed in 2006.

The following structural elements may be identified in extended or foundation provision programmes:

1. The three year diploma/degree is obtained over an additional period of time.
2. Learners register for a specific qualification when they enter the extended programme, i.e. in the first year of their studies.
3. The first year is completed over two years. (Although in some cases foundation provision only extends the study period by six months.)
4. Foundation provision can be provided for in the second or even third year of study. Thus, not all aspects of the foundation provision need to be offered in the first year of study. In fact, currently the DOE

recommends that additional provision is offered to learners in subsequent years.

5. Initially, in the first year, extended programme learners receive foundation provision in separate classes to the traditional learners.
6. Extra academic interventions are provided for these learners, more intensely in the first year than in the second year.
7. The first (and possibly the second) year is a combination of both credit-bearing and non credit-bearing subjects.
8. Different entry requirements are determined by individual programmes; however, a matriculation pass is required. In the case of the Dental Technology EFYP, a Senior Certificate is required and for entry into the Stellenbosch Extended Degree Programme a matriculation exemption is required (De Klerk *et al*, 2005).

### **Summary – South African foundational models**

Different models have been described to define the nomenclature currently used in South Africa to describe foundational models. However, the only model currently attracting a DOE subsidy is the extended curricula or foundation provision model. The subject matter of this research project, namely, the Dental Technology EFYP is offered as an extended curricula programme and thus currently attracts a DOE funding subsidy.

Current DOE nomenclature suggests that the terms foundation provision and extended curricula programme mean the same thing (DOE, 2006). Unfortunately, their adoption of the nomenclature serves to confuse rather than clarify matters. Commentators in South Africa tend to understand the term *foundation* in a context as previously detailed, in the section describing bridging/access programmes.

### 2.2.2.2 International access programmes

Internationally, the primary need for alternative access into higher education remains vested in the class system. Usually, minorities (for example, the Aborigines in Australia) are affected. In addition, minorities often make up the poorer sections of the population of a particular country. Thus the lower one's social status, often the poorer is the quality of education received from the state (McNamee 2005; Heath, 1983).

When comparing the need for access programmes internationally with the need for such programmes in South Africa, it must be noted that internationally access programmes are established to cater for minority groups within society. In South Africa access programmes cater for the disadvantaged sections the population. Internationally, access programmes are seen as "successfully promoting social justice and access to higher education to the disadvantaged" (McNamee, 1995:106). Thus, it can be seen that the motives for providing access programmes internationally and in South Africa are similar.

The format of access programmes internationally are varied (McNamee; 1995, Stowell, 1992: *et al*). However, in attempting to establish a conceptual framework to understand international access programmes, the *Preparatory Mathematics Programme*, first offered in 1989 by the University of Southern Queensland, is examined. This programme is chosen as it is typical of the many access programmes offered, particularly in Australia (McNamee, 1995). Access programmes in Australia are sometimes referred to as *Equity Bridging Programmes* or simply *Bridging Programmes*. In making the claim that the *Preparatory Mathematics Programme* is typical of Australian access programmes McNamee (1995:106) notes that "it shares [the same] concerns pertaining to ideology, politics, resources, curriculum and pedagogy".

Access programmes such as the *Preparatory Mathematics Programme* can be described as being similar to the South African bridging/access programme model as previously discussed above. As the name *Preparatory* implies, learners enrolled in the *Preparatory Mathematics Programme* are required to

do modules (courses) that are a prerequisite for the intended programme for which they wish to enrol on the completion of the access programme. In addition, learners complete modules in academic development. These include strategies to increase learner “confidence, co-operation in learning, persistence, interest and enjoyment, initiative and creativity and other such personal characteristics” (McNamee, 1995:108). This is achieved “through its choice of pedagogy” (McNamee, 1995:108). The curriculum is divided into small parts (making success identifiable by achieving ‘many successes’) and a variety of teaching methods are used. Conscious effort is made to use simple English in all offerings. Feedback to learners is considered vital and learners are required to reflect on their learning by keeping journals. Learners are also encouraged to visit student counsellors (McNamee, 1995:108). As evidenced from the Australian experience, this access programme is typical of many international access programmes. The international conceptual framework for access programmes is offered as a comparison to the currently accepted practice for foundation provision in South Africa. These are as follows:

1. Learners are selected onto access programmes. Because funding is linked to learner success, participants are selected by employing merit ranking (McNamee, 1995).
2. They are not credit-bearing, unlike South African programmes which are credit-bearing.
3. They consist of preparatory prerequisite models for specific subjects.
4. Academic development interventions are offered to enhance a learner’s personal characteristics.
5. On completion of the programme, the learner enters the mainstream in first year. This is different to South African foundation provision where the present norm is to register immediately for the qualification.

The move to widen access to higher education in the United Kingdom gained momentum in the 1990’s (Benn, cited in Stott 1994; Stowell, 1992).

Interestingly, this was at the same time that South Africa was grappling with the problem of providing access to higher education to the majority racial grouping in the country as the apartheid system began to crumble. Facing universally similar problems, countries were able to draw on the experiences of interventions in other countries (Anderson, 2004).

The acceptance of access courses as an alternative to higher education access was not always universally accepted in the UK. Stott (1994) lists some of the criticisms of access programmes as suggested by Tight (1993). These are that:

1. they are often unnecessary,
  2. they are often over-elaborate,
  3. they help to create and sustain ghettos,
  4. they over-emphasise higher education,
  5. they sustain conventional perceptions of further and higher education
- (Stott, 1994:124).

This list poses questions about the nature and value of access programmes. South African educators have been slow to evaluate the success and the even the need for such programmes (De Klerk *et al*, 2005; Hay & Marais, 2004). Despite the validity of some of the issues raised and noting the criticisms of access programmes that Tight (1993) raises, South African educators have concluded that offering foundation provision is the correct path for addressing the needs of redress and transformation and not the international model as discussed above. The discussion now turns to look at the learners within foundation provision programmes.

### **2.3 Disadvantaged learners**

Much is made of the unacceptably high dropout rate from South African institutes of higher learning. 49.9% of learners registering at institutes of higher learning fail to graduate (Naidoo, 2005; Tyali, 2005).

Unquestionably the apartheid years, and the struggle to end them, had an effect on the culture of teaching and learning in black schools (du Plessis, Janse van Rensburg & van Staden, 2005). This resulted in learners who were disadvantaged in their quest for post school education.

The Concise Oxford Dictionary (1999:407) defines disadvantaged as being “in socially or economically deprived circumstances”. In defining disadvantaged in socio-economic terms one can understand the meaning of *disadvantaged* in an educational context in general and more specifically, in the South African context, as it refers to that part of society historically denied their democratic rights. However, today, disadvantaged is better understood as referring to the majority of under prepared learners accepted into higher education institutions as a result of attending inadequate and under resourced schools.

Socio-economic factors in respect of learner success in access or extended curriculum programmes, and indeed tertiary education in general, should not be ignored. Apartheid has played a significant role in many South Africans living “in economically dire and often violent circumstances” (Anderson, 2004:81). The role of socio-economic factors in determining learner success needs to be examined, understood and acted upon. In a study of ‘disadvantaged’ in the United States of America, the researcher concluded that “the vulnerability to violence or family challenges ..... often makes a college dream a too distant and seemingly unattainable goal amidst more immediate and pressing problems of street and family life” (Anderson, 2004:80).

The apartheid system in South Africa isolated communities and compartmentalised them into racial groupings based on the colour of their skin. Apartheid segregated people into groups of either whites or non-whites. Whites were positioned advantageously in a social order designed to



perpetuate the white group's advantage over the non-white (blacks, coloureds and Indians) group by attributing favours to the white group at the expense of the non-white group. As an illustration of this point, the following illustrates the unequal spending on black education. During 1991/92 "the apartheid government spent 4.2 times as much on a white child in primary school as it did on an average black primary school learner. For secondary schools, the ratio was 4:1 .... In Bophuthatswana, for example, the racial resource ratio stood at 5.5:1" (Wildeman, 2003: 284). Moreover, the apartheid Government further recognised a social pecking order in respect of the different races. The lower a racial group was in the pecking order the worse that group was treated and the more disadvantaged it became. Blacks were placed at the bottom of its pecking order. In order to understand the above the following is relevant.

In May 1948, the Nationalist Party under the leadership of D F Malan was elected by the white minority to govern South Africa. The Nationalist Party remained in power for the next 46 years. The Government recognised its black citizens as being on the lowest level of society. In the early years of Nationalist Party rule, the then Minister of Native Affairs, Dr Hendrik Verwoerd stated, "There is no place for him in the European Community above the level of certain forms of labour" (Crys-Williams, 1994:56). In order to understand how the Malan Government justified treating blacks as they did by relegating them to the bottom of the South African racial groupings and, how its vision and that of subsequent Nationalist governments was formulated, it is necessary to go back a further 36 years to 1912 when Pixely Ka Isaka Seme addressed the founding conference of the African National Congress (ANC). At that conference he claimed that blacks in South Africa were being treated as the Israelites (Joshua 9.3-27) in biblical times had treated the Gibeonites as "good for little more than cutting wood and carrying water" (Morris, 2004:159). Morris goes on to state;

From May 1948 Seme's biblical metaphor became the virtual objective of government. By means of policy, law and decree, the single-minded Nationalists would attempt to construct a state and a society in which,

they dreamed, most blacks would be nothing more than hewers of wood and drawers of water

(Morris, 2004:159).

Thus in South Africa, the black group was forced to become the working class of society and consequently little economic wealth accrued to this section of the population.

The apartheid Government's policy of separate development was formulated so that each racial grouping had its own set of laws and Government structures applicable specifically to them. Education was no exception and black education was governed by the Bantu Education Act No. 47 of 1953. To complicate matters further, the Government legislated policies that divided the black population into homelands based on ethnic groupings "based not only on colour but [on] common culture, language, and other unique characteristics" (Mothata & Lemmer, 2002:107). Thus the black majority was divided up into a number of ethnic minorities and hence became associated with minority groupings. Moreover, the Homeland Governments were only given limited powers over education and "a separate department catered for education of Africans, particularly those living in townships" (Mothata & Lemmer, 2002:107). Publicly, the Government's stance was that equal education was provided for blacks in the Homelands. In reality this was not so as control in black education remained firmly with Central Government. Whether education was provided in the towns or in the Homelands it was controlled and intentionally made inferior. It was a policy that ensured the continued subjugation of the black race.

Internationally, class systems invariably affect minorities and often the poorer sections of the population of a particular country. Inevitably, the lower your social class the more inferior the quality of the education you were likely to receive (Heath, 1983). The black population of Brazil are descendants of slaves. As slaves they were constitutionally not allowed to be literate. Since the abolition of slavery in 1888 various Brazilian Governments were slow to address the educational needs of the black population and as a result they were simply "left out of school" (De Oliveria, 2001:31).

In the United States of America minority groups are similarly affected. Rumberger (cited in Anderson, 2004) notes that in the past 50 years there has been a rise in the high school dropout rate among African American and Latino males. Mauer (cited in Anderson, 2004:72) states that there are “more African American and Latino males in the criminal justice system than on the college campuses”.

Similar observations have been reported in the United Kingdom (UK). Layer and Smith (2001) report that cultural divisions exist in British education. These differences are evident in low participation rates of minorities in education. Cultural divisions also reflect poorly on the attitudes to learning in general, and specifically to learning at a tertiary level. The identified cultural divisions in the UK reflect “long-standing divisions based on class and wealth” (Layer & Smith, 2001:148) and currently continue to affect tertiary education (Sargent, 2000; Sargent *et al*, 1997 cited in Layer & Smith, 2001).

There are a number of different minority groupings in Australia who have been disadvantaged educationally. These include, amongst others, “people from low socio-economic backgrounds, [and] rurally isolated people” (McNamee, 1995:110). Whilst the Australian minority groupings do not only refer to racial groupings, the Australian Aborigines have been identified as a minority group that received poor schooling (Timm, 2005). In Australia the Aborigines are under represented in higher education. Timm (2005) reports that this under representation is not dissimilar to the South African situation in respect of black learners.

Therefore, it is evident that many of the educational problems faced internationally are similar in nature to those experienced in South Africa. The major difference in South Africa was the overt legislation of discrimination against particular racial groups over a long period of time. A second difference, as previously discussed, is that internationally the section of the population affected are minority groups within the particular country whilst in South Africa, it is majority of the population who have been and, as a result thereof, continue to be disadvantaged. However, as argued previously in this thesis, the term ‘minority’ can be used to mean that group who has been

exposed to political inequalities (Mothata & Lemmer, 2002) rather than a simple numerical minority. Moreover, the apartheid system divided the black majority into smaller ethnic groupings, helped in part by the creation of the Homelands. This had the effect of creating minority groupings from the ethnic majority. Consequently, we can conclude that locally and internationally the problems faced in respect of minorities are similar and solutions need to be found in order to address the needs of disadvantaged learners. However, notwithstanding the similarities that exist, South Africa has contextual nuances not found elsewhere in the world. These include, amongst others, the size of the disadvantaged population, the legacy of past apartheid education legislation and the redress agenda of the present Government.

Thus, in reaching an understanding of the use of the term *disadvantaged* in a South African educational context we need to take into account the following:

1. Socio-economic standing
2. minority grouping
3. quality of education received

In democratic South Africa, claiming to be disadvantaged in terms of one's racial group is becoming more difficult. Class has become associated with wealth or the access to wealth. South Africa is seeing a shift in distribution of wealth within the society. The emergence of a black middle and upper class will in future, severely test the claim to being *disadvantaged* on the basis of race. It is, therefore, argued that being educationally disadvantaged in 2007 must depend on the educational stimuli that one is exposed to.

Notwithstanding the new social order in South Africa, and the fact that South African schooling is now united under one education department, the system remains flawed and continues to produce under prepared tertiary learners. Primarily former Department of Education and Training (DET) schools, especially those in rural areas, continue not to deliver education of an acceptable quality. Prof. Jonathan Jansen, noting that although officially South Africa has one school system, in practice, a "two-school" system exists.

He draws a distinction between the urban and rural schooling systems and observes that the rural system is inferior and thus disadvantaged. Rural schools continue to offer poor quality education as they are under resourced and manned by under qualified and unmotivated teachers. The Cape Province claims to have the best matriculation pass rates in South Africa. Jansen is not surprised by these figures as the Cape has the lowest rural to urban school ratio presently in South Africa (Jansen, 2006).

The quality of the teaching staff in former DET schools is seriously questioned and is a contributing factor in the production of disadvantaged learners. Many of the teachers are not qualified for the tasks that they are performing. In 1987 only 9.9% of teachers in the previously designated black secondary schools were graduates of higher education themselves and 30% of primary school teachers did not even have a matriculation certificate (Webb & Erwee, 1990). In 1999, Du Rand and Viljoen (cited in Timm, 2005) reported only a marginal improvement on the 1987 statistics in respect of the qualifications of teachers in former DET schools.

Therefore, one can define *disadvantaged*, within the context of education, as referring to those learners who have, through circumstances beyond their control (e.g. by being born into a particular class system and living in a specific geographic location [i.e. rural areas]), been exposed to inferior educational stimuli by poor and often under-qualified teachers. Moreover, the teaching environment has been such that resources at traditional black schools have been limited. In addition to very large classes, black schools previously administered by the DET were insufficiently staffed (Futter, 1999). Other significant resource lacking includes the lack of any computer equipment and a decaying infrastructure. This lack of resources was raised by all learners interviewed for this study.

## **2.4 Redress and transformation**

As a result of a combination of a previously disadvantaged political order and an education system that has not adequately reformed itself since democracy, the need for redress and transformation in education can be appreciated. Pieterse (2004:700) argues that section 29 of the constitution confirms the “constitution’s transformative objective with regard to the right to education”. Albertyn and Goldblatt, cited in Pieterse (2004:701) define transformation as:

a complete reconstruction of the state and society, including a redistribution of power and resources along egalitarian lines. The challenge of achieving equality within this transformation project involves the eradication of systematic forms of discrimination and material disadvantage based on race, gender, class and other grounds of inequality. It also entails the development of opportunities which allow people to realise their full human potential within positive social relationships.

It is acknowledged that equality, and therefore transformation in education, is a slow process presenting many challenges. However, past inequalities should not be seen as an excuse for a lack of acceptable progress in addressing redress. Section 9(2) of the Constitution of South Africa acknowledges that equality is a process that will take time to be fully implemented and consequently that “the state should take steps to promote equality in the long term” (Pieterse, 2004:702).

Furthermore, section 29(1)(b) of the constitution provides for the right of every citizen to have access to further education and declares that the State must provide this access. Clearly, the funding of foundation provision by the DOE is an initiative of the State to meet this provision of the constitution.

The need for redress and transformation in education is not unique to South Africa. In other countries the need for interventions in education as a result of inequitable past practices exists (Layer & Smith, 2001; McNamee, 1995; Stott, 1994; Morris, Newman & Stringer, 1993; Leicester, 1993; Brown & Brimose, 1993; Stowell, 1992). Internationally, one of the ways that this need has been

addressed, like in South Africa, is by means of foundation provision. However, the desire to achieve desired objectives is not without its challenges. It has been argued that the desire for transformation, especially in respect of black people is often rhetorical. Without targets and monitoring, access to universities by the socially disadvantaged will not be achieved (Leicester, 1993). This argument is likewise often presented in the South African context where institutional audits by the HEQC assess learner and staff demographics and equity benchmarks. These audit criteria are deemed controversial by some but are nevertheless necessary if targets are to be met.

If foundational programmes in South Africa are a means of addressing access to tertiary education, institutions offering these programmes need to be transparent in their evaluation of these programmes in order to determine whether they are achieving the objectives of their redress and transformation agendas. Moreover, targets for redress and transformation will need to be determined and closely monitored.

### **2.5 Factors used in determining access**

Traditionally, access to tertiary education programmes, both internationally and locally, has been based on merit. Thus, if the required entry requirements for a programme are met, then access can be gained. In this scenario “unfair discrimination, in relation to sex and race for instance, is rendered impossible since assessment and thereby selection is based on merit” (Stowell, 1992:166). Stowell describes this as an “equal access/equal treatment view of equality of opportunity” and further states that this “has been typical of the liberation tradition within higher education” (Stowell, 1992:166). Persons subscribing to this view, regard discrimination allowing access other than by merit, as being contradictory to any political values of institutions of higher learning. Nevertheless, this notion is in itself political as it does not take into account socio-economic factors that make the success of one group more likely than another because of better educational opportunities.

In South Africa, if the tertiary education sector were to apply criteria for selection based solely on merit, redress and transformation of disadvantaged

persons wanting to enter higher education would not be addressed. Thus, any agenda for redress and transformation would have limited success. Consequently, it would better serve the interests of institutions of higher learning to broaden their thinking when identifying suitable learners for higher education. Layer and Smith (1993:161) identify several broad factors around which an institution of higher learning should base their admission criteria. These include: “academic skills; motivation, ability to communicate; experience; organisational ability; adaptability in learning; and potential”. It is understood that institutions of higher learning will always practice some form of selection of merit. Additionally, those that provide foundation provision should adopt the criteria as identified by Layer and Smith (1993) for learner selection. Indeed, the Dental Technology placement test is testing all these criteria except for ‘adaptability in learning’.

It has been argued that by removing merit from the selection process a form of positive discrimination is practised. Traditionally, access programmes removed the competition and allowed the targeted group an advantage over the non-targeted group (Stowell, 1992). Clearly, if redress and transformation in South Africa is to be successfully dealt with, then institutions will practice some form of justifiable discrimination for entry into higher education. The challenge is not to lower standards by adopting such policies (Stowell, 1992). In the conclusions to this thesis it will be argued that the results thus far achieved in the Dental Technology EFYP show that standards have not been lowered but on the contrary, have been raised.

## **2.6 At-risk learners**

Whilst general under preparedness has particularly affected black learners entering the sciences (Hay & Marais, 2004), it is recognised that the “changing profile of students as a result of demographic and socio-political change” (Eiselen & Geyser, 2003:119) has resulted in a general under preparedness of school leavers for tertiary education. Various reasons for the under preparedness of learners has been postulated. Cliff *et al* (cited in De Klerk *et al*, 2005) note that factors that need to be considered are learning in a language other than one’s mother tongue; being schooled at an under-



resourced school; inappropriate teaching methods and socio-economic inadequacies.

As a result, many learners can be classified as being *at-risk* learners. An *at-risk* learner is defined by Kawakami (cited in Eiselen & Geysers, 2003:119) as “one who is in danger of failing to complete his/her education with adequate skills, knowledge, and attitudes to function as a responsible citizen of his/her community”. In the South African educational context one would view ‘at-risk’ learners as those learners negatively affecting throughput rates. If one accepts this definition, it logically follows that interventions to increase access should not be limited exclusively to the so-called disadvantaged population groupings. However, it is recognised that the majority of learners who are registered for bridging, access, augmented and foundation type provisions must come from the designated groups.

The interventions that address the general under preparedness of *at-risk* learners entering tertiary education is consistent with the objectives of the DOE’s *White Paper 3 of 1997* which states that “in the short to medium term, in order to improve equity of outcomes, the higher education system is required to respond comprehensively to the articulation gap between learners’ school attainment and the intellectual demands of higher education programmes” (South Africa, 1997b:22)

## **2.7 Stigmatisation of learners**

Whilst educationalists have been quick to realise the need for access or extended curriculum courses, this has not necessarily been appreciated by the learners who have been identified as needing additional academic interventions. But while many learners feel stigmatised by being forced into augmented and add-on courses that deal with potentially poor performers, where the intervention is embedded into the traditional curriculum the feelings of stigmatisation are minimised (McKenna, 2003). De Klerk *et al* (2005:9) state that “few learners raised the issue of stigmatisation”. Interestingly, De Klerk *et al*, (2005) noted that some of their respondents felt that others who might benefit from academic intervention did not join the extended curriculum

programme as they felt that they would be stigmatised by their participation therein. However, this is only a reported observation and should, at this stage, be treated as such.

Stigmatisation of learners was investigated in this research study and the results obtained will be evaluated against those of McKenna (2003) and De Kerk *et al* (2005) in Chapter Four.

The discussion now turns to the structure of the EFYP and its alignment to Higher Education policy. This discussion relates primarily to question three of the *Key Research Questions* (see section 1.9, page 13).

## **2.8 Academic Development (AD) and foundational programmes at DUT**

There has been a paradigm shift in AD from supplementary forms of teaching into the mainstream of South African higher education (Bulman, 1996; Scott cited in Bitzer, 1995; NEPI, 1992). The shift occurred as a result of “not only the historical deficiencies of black schooling, but also because of the “inappropriateness of key aspects of current higher education provision for meeting the needs of equity and national development” (Bitzer, 1995:187). Bitzer (1995) further suggests that the change from supplementary, augmented or add-on interventions to offering AD as part of the traditional curriculum (known as mainstreaming AD) is natural as access to higher education is widened. Supplementary approaches are those that are offered to learners in addition to their normal curriculum (e.g. an extra course in English). ‘Mainstreaming’ refers to incorporating and thus integrating AD within, or part of, designated subjects. Slammert and Baijnath (1994) suggest that this change is mandatory if the equity and academic development needs of a changing learner body are to be addressed.

Although no official definition (other than the definition of the Higher Education Quality Committee (HEQC) below) of academic development exists, Scott (2001) explains AD as referring to a wide range of intercessions designed to improve academic performance over a broad range of academic interventions in higher education. However, he maintains that in the context of South African higher education the use of AD can have a more definite meaning. In

South Africa, he sees AD as a mechanism for promoting equity in education. Certainly, the use of AD by the DOE in national policy documents is understood in this context.

The HEQC defines AD as:

A field of research and practice that aims to enhance the quality and effectiveness of teaching and learning in higher education, and to enable institutions and the higher education system to meet key educational goals, particularly in relation to equity of access and outcomes. Academic development encompasses four interlinked areas of work: student development (particularly foundational and skills-orientated provision), staff development, curriculum development and institutional development.

(HEQC, 2004: 23)

This definition clearly links AD with foundation provision and thus AD initiatives should be included in foundation provision in order to address redress in higher education.

Bulman (1996:138) defines AD as “a process of innovation, stimulated by calls for equity, that points to a new line of equity in education”. She then qualifies the definition by explaining that higher education is the new line of enquiry which needs to be addressed by adapting the curriculum to meet the needs of the new educational environment rather than by adopting ‘quick-fix’ solutions. Bulman explains innovation as being “context specific with factors relating to history, governance, management and the ethos of the institution shaping the pace, form and direction of the change” (Bulman, 1996:138).

Scott’s definition is similar in that he defines AD as:

the design and implementation of educational processes and initiatives that are intended to promote equity and to redress historical inequalities (particularly racial inequalities arising from apartheid practices) in student access to and success in higher education

(Scott, 2001:3).

As this study is concerned with evaluating a programme designed to address past inequalities arising from inferior schooling systems implemented in the apartheid years, Scott's definition will be taken as the definition of AD.

The National Education Policy Investigation (NEPI, 1992) and the *White Paper on Higher Education* (South Africa, 1997b) note an articulation gap between what schools offer the learner and what is expected of the learner at an institution of higher education. Moreover, the *White Paper* recognises and commits the Government to provide funding for AD programmes including extended curricula programmes. This was a fundamental shift in Government thinking as stated in the NEPI report of 1992:

A major problem facing ASP programmes is that the Government does not fund their activities since it believes that remedial work must be done at school and not at university

(NEPI, 1992:30).

Academic Support Programmes (ASP) began as remedial initiatives to assist learners with primarily, *English, Mathematics* and study skills. Interventions were additions to the normal curriculum. Thus, mainstream teaching and learning remained unchanged and learners who were in need of added interventions received remedial teaching in addition to their normal workload (NEPI, 1992).

AD in South Africa has evolved through a number of conceptual changes as it strives to accomplish its objective of achieving success for learners in higher education (McKenna, 2003; Scott, 2001; Warren, 1998; Bulman 1996).

Initially, it was thought that merely lightening the workload of learners in higher education would encourage success for disadvantaged learners. This was usually achieved by halving the number of first year subjects required by a particular programme. No further academic interventions were offered. However, very often learners were offered voluntary study skills and language skills tutorials by institutional AD and Counselling units of the time (McKenna, 2007a). The Dental Technology foundation provision was originally conceived in a similar train of thought when it was first offered in 1995. This type of

model became known as the *Reduced Curriculum* or *Slow-stream model* (Scott, 2001). There were two distinct disadvantages to this model. They were:

1. learner under preparedness was not addressed as no additional provisions for improvements were offered.
2. learners often floundered in their third year (i.e. the official second year of the programme) when they were required to take a full compliment of subjects (Scott, 2001).

Technikon Natal followed similar patters of change in AD provision.

In apartheid South Africa, Technikon Natal was established as an institution catering for the needs of a predominantly white student body. As the institution in the 1990s began accepting learners from other, and often disadvantaged communities, it became apparent that interventions should be implemented to address the needs of learners who were not coping with their studies. AD offered at Technikon Natal and later at the DUT progressed from “remedial, voluntary tutorials to integrated academic literacy projects” (McKenna, 2003:60). Initially, AD at Technikon Natal was no different to other historically white universities (HWU) or technikons. AD at HWUs was offered only to black learners as they were seen to be in need of this type of intervention (Bulman, 1996; Masenya, 1995). The language or academic skills offered were mainly designed to improve a learner’s academic writing skills. Boughey and Goodman (1994) stress that speaking a language does not imply appropriate writing practices. Learners need to be taught “how to acquire and apply” appropriate language practices, especially those learners coming from the DET school system (Mabizela, 1995:180; Wickham, 1995). Furthermore, learners coming from these schools are ill prepared for;

lectures (involving structuring ideas in process), for tutorials (involving analysis, criticism and discussion), for independent research, for group collaboration, for assignment writing, or for developing arguments in essay-type test and examinations

(Wickham, 1995:109).

Consequently, many institutions turned to tutorial type systems in order to empower learners (McKenna, 2003; Warren, 1998; Mabizela, 1995).

In order to deal with learners that were not coping, an English Second Language (ESL) unit was established at Technikon Natal. Catering almost exclusively for black learners, the ESL unit offered voluntary tutorials (McKenna, 2003). Earlier, in the 1980s, similar interventions were offered at other institutions of higher education. Again, these were offered to the minority black student groups on campus (Warren, 1998; Israel, 1995). By the mid 1990s this model fell out of favour at both Technikon Natal and the University of Cape Town (UCT) for similar reasons;

1. Attendance was erratic. This can be attributed to the fact that the AD tutorials were non credit-bearing.
2. Learners felt stigmatised by attending these tutorials.
3. The model was designed to accommodate small groups of students but, as the demographic profile of the institutions changed, the need was for AD to address majority needs.
4. Only limited improvement was seen in learners completing these AD programmes as learners were unable to transfer skills from the tutorial interventions into their specific disciplines

(McKenna 2003; Warren, 1998; Bulman 1996; Israel, 1995).

In addition, the ESL model fell out of favour as AD service providers rejected the notion that they were seen as “doing something to assist students who had been disadvantaged” but rather saw themselves as facilitators “helping students to help themselves” (Bulman, 1996:128). In order to achieve this, an element of problem-solving needed to be included in the teaching (Bulman, 1996) and the impact of such provisions had to be felt at the level of the traditional curriculum.

The need for different AD initiatives required an acceptance of change by all parties; AD staff, general academic staff and learners. Institutionally,

resistance was experienced by academic staff who were anxious not to discard that with which they were familiar and comfortable (Bulman, 1996). However, the role of the lecturer in the change process must be that of “the chief arbitrator of change – either as an agent or as a source of resistance” (Slammert and Baijnath, 1994:149). Consequently, tension developed between AD providers and academic staff resulting from differing opinions over expectations of academics and the provisions of AD (McKenna, 2003). Thus, the interaction between all the parties affecting change remains critical and change cannot be achieved without it (Slammert and Baijnath, 1994).

Nevertheless, in 1997 *English for Academic Purposes* (EAP) was offered for the first time in the Dental Technology EFYP. EAP was offered as a “fully-fledged annual academic course” by the ESL unit (McKenna, 2003). Although compulsory, the subject was not credit-bearing and learners did not have to pass it in order to enter the remainder of the traditional first year programme after their foundation year. This was quickly remedied when it became apparent that rules were needed to ensure learner participation in the subject.

EAP as a concept became widely accepted in South African higher education institutions as a means of providing AD to disadvantaged learners. The fundamental shift in offering EAP as a separate subject was that “skills are integrated with relevant content” and that the model “provides the time and space necessary for developing students’ cognitive and linguistic abilities” (Warren, 1998:79). However, in practice EAP was not universally accepted by the academic literacy teaching staff, traditional programme staff or the learners themselves. Consequently, institutions changed direction by integrating EAP into traditional subjects. Technikon Natal's decision to integrate EAP was strongly supported by the learners in the EAP programme. McKenna (2003:63) quotes a learner; “When my lecturer says do the essay I don’t know what to do. I come here and then I know. If only this lecturer can teach my diploma subject and make it clear to me what I must do”.

In 2001, as a result of the problems perceived by AD staff in respect of academic literacy, a shift away from offering EAP as a separate subject at Technikon Natal occurred. This was the consequence of a consultative

process between academic literacy and traditional programme lecturers. The focus of the shift was “from underdeveloped students requiring increased input to the need for systemic changes in mainstream curriculum” (McKenna, 2003:64). Specifically, academic literacy was seen to be a critical part of a specific traditional curriculated subject that every learner would be required to complete. It was designed to “induct students into the literacy norms of each discipline” (McKenna, 2003:64). Moreover, this shift better supported the academic literacy aspect of AD as foundational for the learner in knowledge acquisition and dissemination (McKenna, 2003). Warren (1998:79) refers to this model as the “Separate ‘introductory’ courses in Disciplines” model. The model, as described above, was successfully instituted at other South African institutions of higher learning (Warren, 1998).

The strengths of this model are summarised as:

- it is credit-bearing;
- the course is geared to the learning needs of less prepared students;
- the accent is on promoting analytical, reading and writing practices and conceptual understanding, around real tasks in the discipline;
- it provides an alternative access route

(Warren, 1998:79).

Warren (1998) contends that this model has produced better academic results and is therefore more effective.

In the current Dental Technology EFYP curriculum academic literacy is offered according this model. The discussion now turns to how learners are selected and placed in the Dental Technology EFYP.



## **2.9 Learner selection and placement**

In order to practice the profession of Dental Technology, two distinct attributes are needed:

1. manual dexterity and
2. the requisite cognitive base in order to guide the manufacturing processes.

The above two qualities may be better understood with reference to other professionals who require similar attributes, namely, a medical surgeon and a dentist. It is recognised that individuals do not always possess both characteristics (Jansen, 2007a).

Learner selection for access into all types of programmes needs careful consideration. In South Africa there is a shortage of black learners who qualify for entry into either the Universities or the Universities of Technology (Scott, 2001; Dawes, Yeld & Smith, 1999; Zaaiman, van der Flier & Thijs, 1998). In order to address representivity in higher education, institutions of higher learning must look to “non-traditional, especially disadvantaged, learners who do not meet standard entry requirements” (Scott, 2001:14). It is thus important that this should not be achieved at the expense of lowering standards. The challenge is for institutions to devise a means of measuring potential rather than simply looking at matriculation output (Scott, 2001; Zaaiman, van der Flier & Thijs, 2001). The notion of testing for academic potential is well recognised. It is argued that prospective learners should be tested so that, given an opportunity, they will have a better chance of succeeding in higher education (Miller, Bradbury & Acutt, 2001; Zaaiman, van der Flier & Thijs, 2001; Griesel & Bradbury, 1993; Miller, 1992).

The problem that educators face when determining selection policy is the “discrepancies in levels of preparedness of school-leaving students, together with the associated difficulty with using the Senior Certificate results as a selection tool” (Grussendorf, Liebenberg & Houston, 2004:266; Dawes, Yeld & Smith, 1999; Miller, 1992). Dawes, Yeld & Smith (1999:99) confirm the opinion

of Miller (1992) when they further suggest that “the validity of the school-leaving examination conducted by the former Department of Education and Training (DET) as a reliable predictor for success at universities, and the artificial, although routine, inflation of these scores” makes the examination an unreliable predictor of student success in higher education. Whilst noting changes in the school-leaving examination system since the advent of the DOE, conditions have largely remained as they were in apartheid South Africa (Mabila *et al*, 2006; Dawes, Yeld & Smith, 1999:97; Miller & Bradbury, 1999). Consequently, vast numbers of black learners, especially those being schooled in rural areas, continue to be disadvantaged because of inequalities in schooling (Jansen, 2006; Blaine, 2005). Requirements for entry into the traditional Universities in South Africa remain a matriculation exemption whilst a Senior Certificate is usually sufficient for entry into a University of Technology. The extent of the problem of not having an acceptable pool to choose from is starkly illustrated by the fact that for every 60 white learners who obtain a matriculation exemption with *Mathematics* and *Physical Science* as subjects, only one black learner does (DACST, cited in Zaaiman, Van der Flier & Thijs, 2000).

Developing admission instruments that are fair and equitable to all is expensive and instruments of proven validity still need to be developed (Maree, 2002). For instruments to be effective, fair and efficient they need to generate data that can be used in appropriate empirical and qualitative analysis (Zaaiman, Van der Flier & Thijs, 1998). In addition, the challenge in South Africa is to develop instruments that are effective, fair and efficient in “the ideal of equality of rights” of disadvantaged learners in that all citizens may receive equal and appropriate education irrespective of their backgrounds (Maree, 2002:144).

Zaaiman (cited in Zaaiman, Van der Flier & Thijs, 1998:98) identified the main issues in the selection of learners to higher education as including:

increasing numbers of applicants for post-secondary study; more heterogeneous student populations with respect to educational opportunity; problems with the identification of students with the

potential to succeed despite previous educational disadvantage; the lack of students in science, engineering and technology programmes; under representation of female students from disadvantaged backgrounds in higher education; high failure and low retention rates; lack of transparency in selection practices; lack of validated selection instruments and policies; and a lack of published research results on which to base new admission policies and practices.

However, selection policy decisions usually reflect “the group for which the programme is intended” and should “serve the aims of the programme for which the selection is done” (Zaaiman, Van der Flier & Thijs, 1998:97). Moreover, “a simple selection mechanism will enhance selection efficiency” not forgetting that the selection test must be defensible (Zaaiman, Van der Flier & Thijs, 1998:100). This is especially true in a South African context which is to broaden access with selection procedures that are fair to all. The Dental Technology selection process has attempted to achieve this objective.

In designing the Dental Technology placement test, the department has attempted to design an instrument that is effective, fair and efficient. Furthermore, it attempts to identify learners capable of success in the programme but at the same time it allows for equity of access from disadvantaged groups. This is achieved by selecting learners from disadvantaged groups in the first instance. However, if insufficient suitable disadvantaged learners cannot be identified then places are allocated to learners of other races. In addition, the test needs to divide learner selection into a traditional three-year and an extended year group. Currently, an overwhelming number of applicants for Dental Technology are black Africans. Selection procedures in place have resulted in a learner body that represents the demographic profile of KwaZulu-Natal. However, throughput rates remain problematic showing only a slight improvement in latter years. The problem of throughput experienced in the Dental Technology programme mirrors that happening nationally in many programmes (Cooper & Subotsky, 2001). These statistics will be expanded upon later in this study.

Learners are required to complete a placement test in order to be accepted into the Dental Technology programme. In order to be invited to a placement test a learner must satisfy the following criteria:

1. A learner must have an *M-score* of 24. The M-score is an indication of performance at school. The score is calculated with reference to the performance of learners in respect of their matriculation subjects. Performance is converted into a score and totalled to give a total score for subjects taken. Learners can enter matriculation on two levels, higher grade and standard grade. Greater value is weighted to subjects taken on higher grade. Learners who have not completed their matriculation examinations use their latest grade 12 test marks to calculate their M-score. Points are allocated according to **Table 1** below:

<b>M-score Points Table</b>		
<b>Symbol</b>	<b>Higher Grade</b>	<b>Standard Grade</b>
<b>A (80 – 100%)</b>	8	6
<b>B (70 – 79%)</b>	7	5
<b>C (60 – 69%)</b>	6	4
<b>D (50 – 59%)</b>	5	3
<b>E (40 – 49%)</b>	4	2
<b>F (30 – 39%)</b>	3	1
<b>Below F</b>	0	0

**Table 1**

<b>M-score Points Table (Continued)</b>		
<b>Passing a 7<sup>th</sup> subject with minimum D on Standard Grade or E on Higher Grade</b>	2	2
<b>Registered for the IEB matriculation examination, add 2 extra points</b>	2	2

**Table 1**

Twenty-four (24) points is considered the minimum score to be accepted directly into the traditional three-year programme. Learners with less than 24 points are then considered for the EFYP, after taking into account the placement test results.

2. Learners must have passed or be currently completing *Mathematics* and/or *Physical Science* at a minimum level of *Standard Grade E*. Current benchmarking practices used by the department will need to change in 2008 when the National School-leaving Certificate is introduced to replace the present matriculation examination system. Learners who are repeating these subjects to improve their matriculation marks are invited to placement tests if their *M-scores* are lower than 24.
3. They must demonstrate the potential to succeed.

When using *M-scores* as an access indicator, the actual performance of the learner is being examined. However, the schooling system that the learner was exposed to will affect this points score (Mabila *et al*, 2006; Grussendorf, Liebenberg & Houston, 2004; Ebersöhn & Maree, 2003; Maree, 2002; Scott, 2001). However flawed, because of the circumstances in which the learning has taken place, using *M-scores* does offer a pragmatic tool by which subjective performance decisions can be made.

The following is an example of how the Department of Dental Services chooses whom to invite for placement testing. Applications to all universities in KwaZulu-Natal are made via the Central Applications Organisation (CAO), which is a consortium established to deal with first time applications to all universities in KwaZulu-Natal. Thus, a learner can apply to one office for access to a number of different programmes and institutions.

One of the requirements on the application form is the learner's position (if he/she is still at school) in their class. For example, a learner may list a mark for *Physical Science* as 40%. However, the learner's position in class may be recorded as 2 out of 40 learners. Clearly, it may be deduced that this learner is performing above average in an underperforming class. This may be attributed to many reasons, but it could indicate that the learner, given better stimuli, is potentially capable of performing better. Thus, this learner would be invited to the placement test as it would appear that s/he has the potential for academic success. Whilst this method of selection is not completely objective, it enables the department to look beyond a simple points score. This practice has been suggested as a better indicator of learner success in higher education by Dawes, Yeld and Smith (1999:100) who suggest that "it is clearly worthwhile to pursue rank in class as a selection mechanism".

It is important to realise that selection of learners into programmes is a contract with the learner stating that the programme recognises a potential to complete the programme and qualify. This undertaking becomes even more apparent when selecting disadvantaged learners. Programmes must ensure "adequate support for such students to succeed" (Zaaiman, Van der Flier & Thijs, 2000:18). Whilst the record of South African service providers in this regard is not good, it is reported by Zaaiman, Van der Flier & Thijs, (2000) that similar problems are experienced internationally. Accepting under prepared learners into higher education and then not adequately supporting them is considered by this writer to be unethical.

In designing a selection tool, it is important to note that "selection tests that do not require much subject content but assess programme related skills can be expected to be a fair and effective selection tool" (Zaaiman, Van der Flier &

Thijs, 2000:19). The Dental Technology test is constructed along these lines. The test comprises of three parts, each designed to convey different information. Final selection and placement is then made, taking into account a combination of entry criteria. The three tests are:

1. Manual dexterity test. As Dental Technology is ultimately a profession which entails the manufacture of oral and facial prostheses, a dental technician must possess manual dexterity skills. To test for manual dexterity, learners are given four practical tasks to complete. One of the tests consists of a teach/test exercise. In this test applicants are required to manufacture a simple dental appliance. They are first shown the completed appliance and then the construction of the appliance is demonstrated. Applicants are then required to make the appliance themselves. This task not only tests manual dexterity but also whether the applicant can translate observation and instruction into the production of an appliance.

Two of the tests for manual dexterity require mechanical skills and the other two tests need a degree of artistic flair for completion.

2. TESOL Inc. (Teachers of English to Speakers of Other Languages) English test. TESOL is an organisation dedicated to providing access to quality English language education. The test used measures the level of English proficiency of those being tested. As the current medium of tuition is English, English proficiency is important. Learners need to score above 40% to be considered for entry into the traditional three-year programme. Learners scoring below 40% are only considered for placement on the extended programme but only if they indicate motivation for success. It is noted that tests, such as the TESOL test, have elicited criticism. Other tests available, namely the SATAP (Standardised Assessment Test and Placement) test are more readily acceptable. However, the department began using the TESOL test before the SATAP was available to departments and the test has, to date, delivered the required information on the English proficiency of learners applying for the Dental Technology programme. With the

introduction of the National School-leaving Certificate in 2008, national benchmarking tests will be available and, when this occurs, the department will begin to use these tests to test for English proficiency.

3. Interview. Proficiency in spoken English and motivation for the Dental Technology profession is gauged. Although the interview process is subjective, there has been over time, consistency with long-serving personnel conducting the interviews. Moreover, the panel is made up of the critical role players in Dental Technology first year education. In addition, the panel is demographically representative and includes representatives of all demographic groups in KwaZulu-Natal, except the Coloured group. Thus potential checks and balances are in place in an attempt to establish fairness. Having a racially diverse panel allows for different points of view to be expressed.

In summary, the placement test attempts to measure manual dexterity, English comprehension (TESOL test), motivation to study Dental Technology and spoken English (interview). Thereafter, the results of these tests are combined with the M-scores (seen as an indication of academic potential) and final selection of learners into either the traditional or extended programme is made.

There are additional factors which will affect a learner being offered a place in the extended programme. Some of these are:

1. Equity considerations.
2. Academic potential. Usually a low mark in *Physical Science* and/or *Mathematics*, but good marks for other school subjects combined with good manual dexterity skills.
3. Poor English skills, i.e. less than 40% on the TESOL test combined with poor spoken English scores.

In considering offering a place on the extended programme, motivation is considered important. In the interview process questions are asked of the learner in order to gauge motivation. For example, learners may be asked to



describe the nature of the profession or to describe a visit to a dental laboratory. Applicants who have visited laboratories of their own volition are minimally considered to be sufficiently motivated to have learnt about the profession. Additionally, it is presumed that whilst learning about the profession they would be encouraged in their career choice and thus more motivated to succeed academically to obtain their desired outcome.

Interviews are conducted in English. As discussed, the department wishes to measure spoken English skills. Maree (2001:141) notes that in most countries in the world “entrance into the fields of study at university level is regulated by students’ achievements in the language of instruction”. However, in South Africa, not conducting interviews in a learner’s first/home language is perceived to be unfair and discriminatory (Maree, 2001). This is a challenge that the Department of Dental Services needs to investigate. However, with eleven official languages in South Africa, interviews may present difficulties and seriously undermine current selection practices. Currently the medium of instruction at DUT is in English. Conducting interviews in English will identify those learners who understand and speak acceptable English and will need minimal English interventions during their studies.

Thus clearly, the Department of Dental Services has used a battery of different tests in order to select learners and the benefit of this practice is well reported (see, for example, Ebersöhn & Maree, 2003; McKenzie & Schweitzer, 2001; Miller & Bradbury, 1999; Koch, Foxcroft & Watson, 2001).

Notwithstanding the use of a battery of tests, Miller and Bradbury (1999) warn that different tests yield different results and the choice of selection criteria needs to reflect institutional admissions policies. The Department of Dental Services is satisfied that its tests are meeting the required objective of selecting learners who have the potential for success in higher education. Moreover, the tests comply with institutional policy.

Koch, Foxcroft and Watson (2001) report on placement tests comprising of six different tests at the University of Port Elizabeth. The tests, like the Dental Technology test, focus on testing for competencies. In common with Dental

Technology, their test comprises of testing for language use, academic literacy, English proficiency, and motivation combined with school performance.

McKenzie and Schweitzer (2001) find a strong correlation between previous academic performance and achievement at university. Nevertheless, they believe it is preferable to test for a broad range of variables. These include “academic, psychosocial cognitive and demographic” variables that better indicate future academic performance (McKenzie & Schweitzer, 2001:32).

Eberson and Maree (2003) researched selection criteria for dentistry learners in South Africa. As reported earlier, the skills required for Dental Technology and Dentistry are similar. They recognise that using senior certificate results alone is an inaccurate indicator. They believe that recognition needs to be given to other factors such as personality and motivation. Thus, they recommend a test that comprises of 3 phases;

1. Biographical Questionnaires
2. Psychometric evaluation
3. Interviews and assessment of manual dexterity

Eberson and Maree (2003) also identify a fourth phase that of support for selected (disadvantaged) learners. While the notion of continued academic support has been discussed elsewhere in this study it is not considered to be a selection criterion. Nevertheless, it is important that analogies between two similar programmes are drawn so that validity for the Dental Technology test can be claimed.

This section has reviewed the Department of Dental Services’ selection procedures. Furthermore, the relevant local and international literature has been considered. Using a battery of tests that test for potential to succeed in higher education is considered a fairer and more effective method of learner selection, than simply relying on matriculation results. Because of the number of disadvantaged learners applying for entry into higher education, tests employed should not have the potential for ultimately lowering throughput by

using inappropriate tests that allow unsuitable learners into the programme. Selection procedures must be capable of identifying those learners with the potential for success. The practices of the department are consistent with those of other institutions of higher learning in South Africa. However, the validity of the selection test used by the department still needs to be established.

As a significant factor of poor school performance amongst disadvantaged learners is the low matriculation scores obtained for *Mathematics* and *Physical Science*. As these two subjects are an entry qualification for the Dental Technology programme, these two subjects are now discussed.

## **2.10 Dental Technology and the ‘Gateway subjects’**

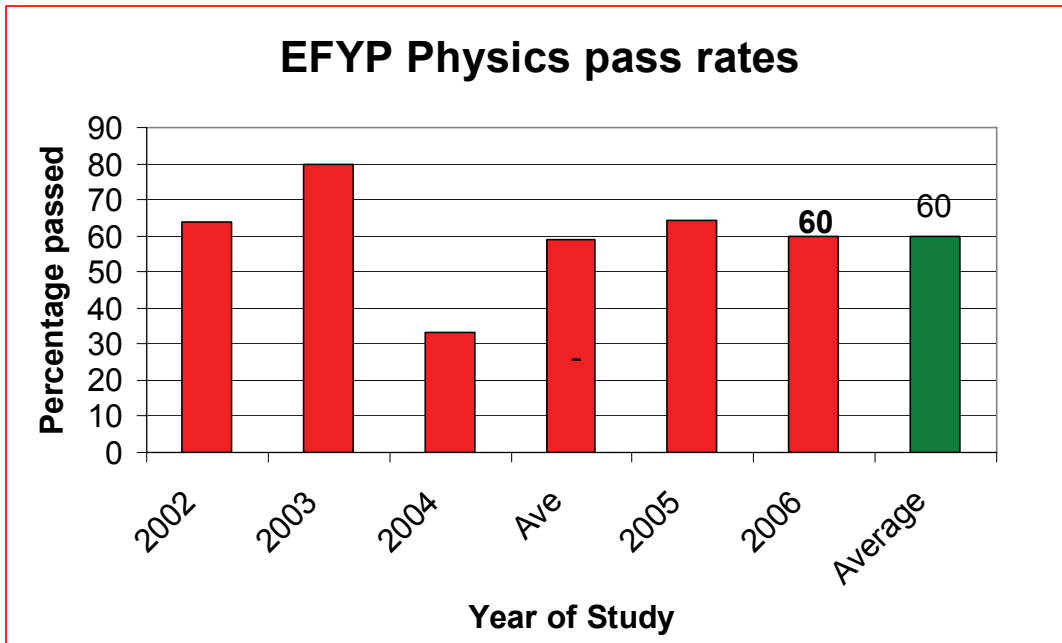
In order to be considered for inclusion in the Dental Technology programme a learner must have a matriculation pass in *Physical Science* and/or *Mathematics*. These subjects have been referred to as the “gateway subjects” (Nair, 2002:98) because they are the entry requirements of many programmes including the ‘glamour’ medical, engineering and science professions. Currently, a learner applying for Dental Technology must minimally achieve an E on Standard Grade in the matriculation examination to be considered for selection (DUT, 2006).

This subject requirement for entry into Dental Technology presents additional challenges to the Department of Dental Services in terms of learner selection as these subjects remain problematic for many school-leaving learners (Mabida, 2006, Grussendorf, Liebenberg & Houston, 2004; Ebersohn & Maree, 2003; Zaaiman, Van der Flier & Thijs, 2001 & 2000; Miller & Bradbury, 1999; *et al*). In general, applicants applying for Dental Technology have poor passes in these subjects. One reason postulated for the large number of learners applying for Dental Technology with poor matriculation passes in *Mathematics* and *Physical Science* is that Dental Technology has similar entry requirements as other medical programmes, for example, medicine and dentistry. A poor matriculation pass in *Mathematics* and *Physical Science* often diminishes a learner’s chance of being considered for the Dental

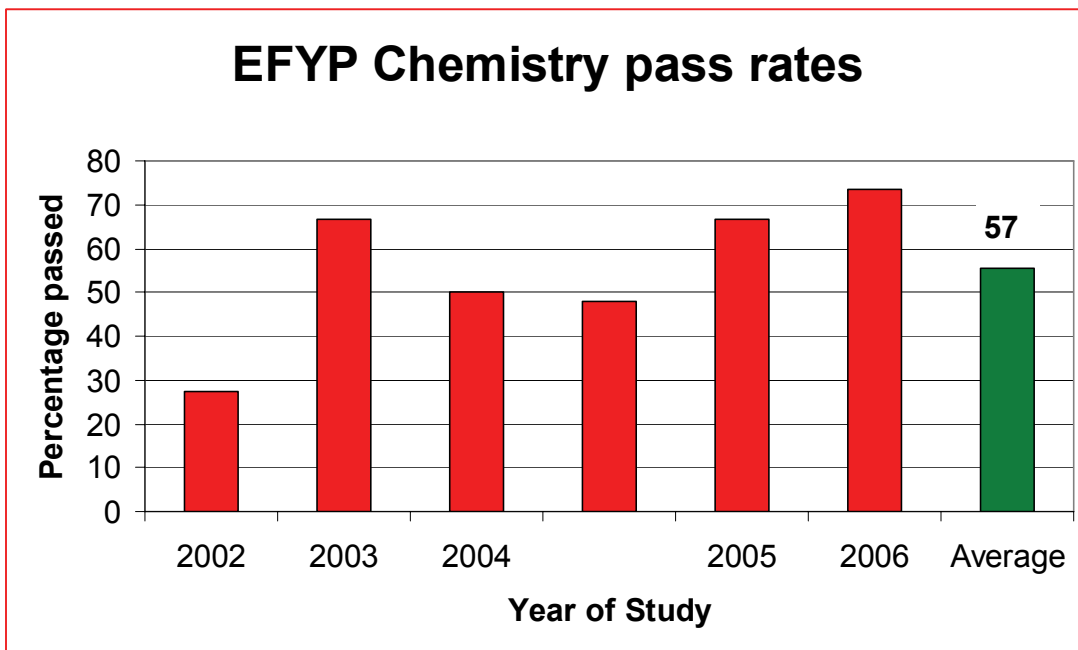
Technology traditional three-year programme or the EFYP programme. During its placement testing the Department of Dental Services looks for 'potential to succeed' in learners with lower 'gateway' marks. Thus those learners, who are identified with the necessary potential, are then considered for the EFYP.

As has been reported nationally, poor performance in the 'gateway subjects' is especially true of learners entering tertiary education from previously disadvantaged schools (Hay & Marais, 2004; Grussendorf, Liebenberg & Houston, 2004; Koch & Snyders, 2001; Webb & Erwee, 1990). The EFYP is therefore seen as an opportunity to address transformation and redress.

The Dental Technology programme requires that, like other medically related programmes, a learner completes courses in *Chemistry* and *Physics* in the undergraduate years. This is necessary as the construction of dental appliances requires a use and understanding of the chemical, physical and mechanical properties of many different dental materials. In addition, the department offers research-based Masters and Doctoral qualifications in Dental Technology. Much of the research conducted in the Dental Technology field is in the domain of *Chemistry* and *Physics*. Consequently, a matriculation pass in the 'gateway' subjects is considered essential for entry into Dental Technology. Because learners accepted into the Dental Technology programme have scored poorly in the 'gateway' subjects, since 2003 the department has offered compulsory *Chemistry* and *Physics* tutorials to EFYP learners. These tutorials have shown some success as indicated in *Figures 1 and 2* below. Results for these subjects over the last five years for EFYP learners are also indicated below:



**Figure 1**



**Figure 2**

As can be seen in Figures 1 and 2, good pass rates of 80% for *Physics* and 67% for *Chemistry* were achieved in 2003. However, learner numbers were low in this particular year (5 *Physics* and 6 *Chemistry* learners respectively) and thus, these results could be statistically skewed. Noticeably, since

compulsory tutorials were introduced in 2005, pass rates improved slightly and were more consistent. This can be observed by reference to **Table 2** below, where *Physics* pass rates improved 3% and *Chemistry* by 22%. Note that EFYP numbers have increased since 2005.

<b>Comparative average pass rates</b>			
	<b>2002 - 2004</b>	<b>2005 - 2006</b>	<b>%age improvement</b>
<b><i>Physics</i></b>	59	62	3
<b><i>Chemistry</i></b>	48	70	22
<b>Table 2</b>			

Foundation provision, as discussed above, can be seen as an intervention to improve throughput in addition to broadening access for transformation and redress.

The Dental Technology EFYP is based on a conceptual framework defined by Scott (2001). The EFYP is offered in order to address redress and transformation and consists of disadvantaged learners chosen for their potential to succeed. In order to succeed, “disadvantaged students require educational provision, at HE level, that is additional to what is provided in the standard HE curricula” (Scott, 2001:2). Clearly the Dental Technology EFYP is providing learners with supplementary educational provision. In addition to the credit-bearing subjects, learners need to complete subjects designed to supplement their curriculum by providing extra provision, thus empowering them for future studies. These additional provisions are:

1. Dental Drawings and Carvings
2. Computer Literacy
3. Introduction to applied Dental Technology (which includes academic literacy).
4. Tutorials for the credit-bearing subjects, specifically for *Chemistry* and *Physics*.

The notion of including extra provision for students of educationally disadvantaged backgrounds is widely postulated. Ebersohn and Maree (2003:65) state that disadvantaged candidates who

do not have the required subject knowledge and/or have not attained high academic achievement, but have the necessary potential to achieve this, could follow supplementary courses at university level in order to reach the required knowledge and achievement level.

When comparing the performance of the University of the North's Science Foundation Year Programme (UNIFY) learners with those learners accepted directly into traditional programmes, it was determined that UNIFY learners performed better in the long term. Thus, Mabila *et al.* (2006) argue strongly for foundation provision that includes additional subject provision.

Hay and Marais (2004) state a contrary view. They reported poor throughput of learners registered in traditional university programmes after they had attended the Career Preparation Programme (CPP) offered jointly by the Central University of Technology and the University of the Free State. Since its inception in 1993 they reported an unsatisfactory 26 percent success rate for learners obtaining a qualification after having successfully passed the CPP. However, they point out that "without the CPP, these 610 [learners] would not have obtained their degrees" (Hay & Marais, 2004:72).

In summary, the Dental Technology EFYP identifies learners with potential for success. Recognition of the problems associated with *Mathematics* and *Physical Science* as school subjects has resulted in

1. a refinement of selection procedures in order to seek out those learners with the potential for success, and
2. the need to provide learners with the necessary support provision to enable them to successfully complete the *Chemistry* and *Physics* modules in their first year of study.

This chapter has argued that having identified disadvantaged learners, they need to be provided with the (extra) provision for success. However, the

rationale for the Department of Dental Services offering an EFYP needs to be analysed in greater detail in order to position the department within the context of national debate.

### **2.11 Equity of access or merely broadening access?**

Since South Africa became a democracy in 1994, institutions of higher education have faced two specific challenges;

1. improving throughput rates, and
2. improving equity of access.

Improving equity of access is a problem stemming from South Africa's apartheid past when institutions were only permitted to enrol learners from specific racial groups (Bunting, 2002). If institutions wished to enrol learners of other races they had to first obtain permits from the education department. At the time, the state declared that "any public higher education institution in the RSA [Republic of South Africa] was essentially a legal entity, a creature of the state" Bunting (2002:61). Therefore, the state had the right to dictate policy, which it did. As a consequence, institutions were limited to "serving the interests of one and only one race group" (Bunting, 2002:61).

Hence, to reflect that state policy, institutions were known as 'historically white institutions' (HWI) or 'historically black institutions' (HBI). With the advent of a democratic South Africa, HWIs were challenged to change the racial demographics of their learner body. The change in demographics necessitated that HWIs include previously disadvantaged South Africans into their institutions. As previously discussed, serious deficiencies were identified in their schooling and success was limited. Therefore, foundational provisions were mooted as a means of improving 'equity of access', and at the same time, providing remedial or additional provision to improve success rates.

Today, former HWIs have normalised equity access issues and in general, learner demographics are more reflective of the demographics of South Africa. However, not all programmes in institutions have adequately



addressed this problem and some still remain with questionable demographic profiles.

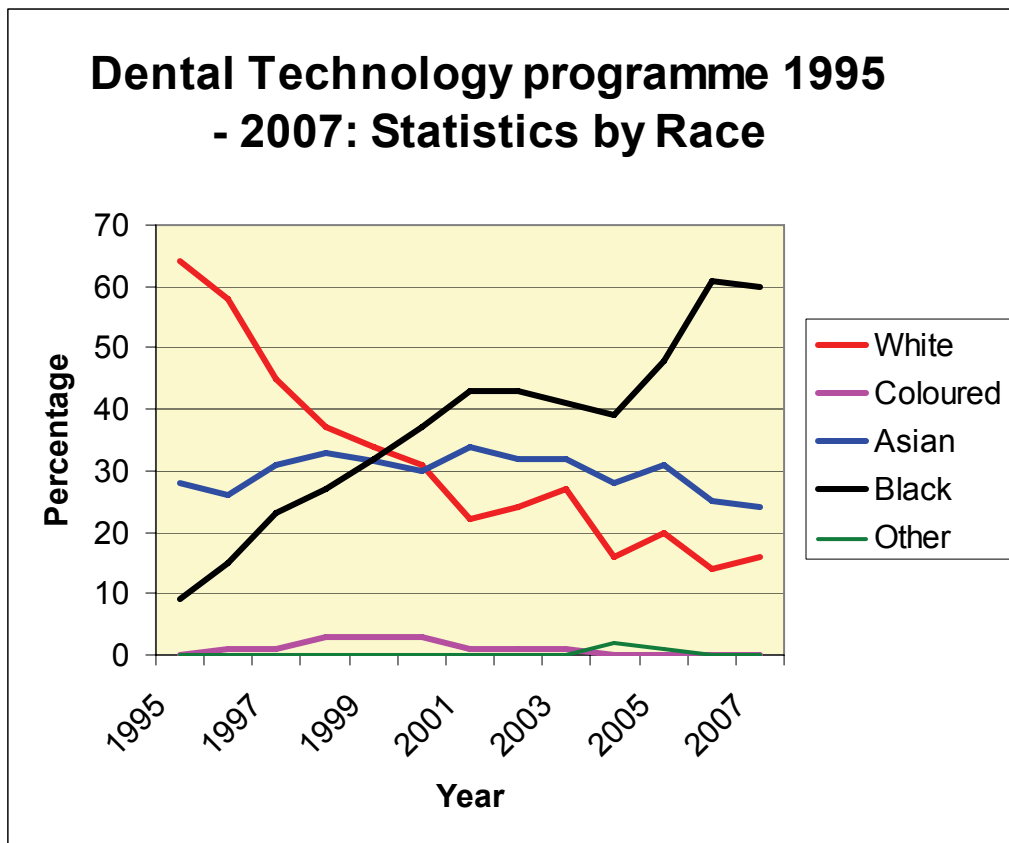
Specifically, in respect of the Dental Technology programme, it can be seen in **Figure 3** that in 1995 the programme consisted of 64% white learners. This number has steadily decreased and currently in 2007, white learners make up only 16% of all learners. Conversely, in 1995 there were 9% black learners registered in the department. This number has consistently increased until in 2007, the programme consists of 60% black learners. Indian (Asian<sup>5</sup>) learner numbers have remained relatively constant showing a slight decline since 2005. Very few coloured learners are attracted to Dental Technology in KwaZulu-Natal.

Thus the issue of racial transformation is not significant in respect of the Dental Technology programme and therefore the need for programme transformation will not be discussed further. However, the introduction of the EFYP in 1995 was an intervention to improve the racial demographics of the programme. The fact that the racial demographics of the department has steadily improved since 1995 appears to have benefited from the introduction of the EFYP. The racial profile of learners in the Dental Technology

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<sup>5</sup> In South Africa, those persons of Indian decent are sometimes referred to as *Asians*. Officially the DUT reporting systems refer to Indians as *Asians*. Therefore, the nomenclature *Asian* is used in places in this thesis and is taken to mean those persons of Indian decent.

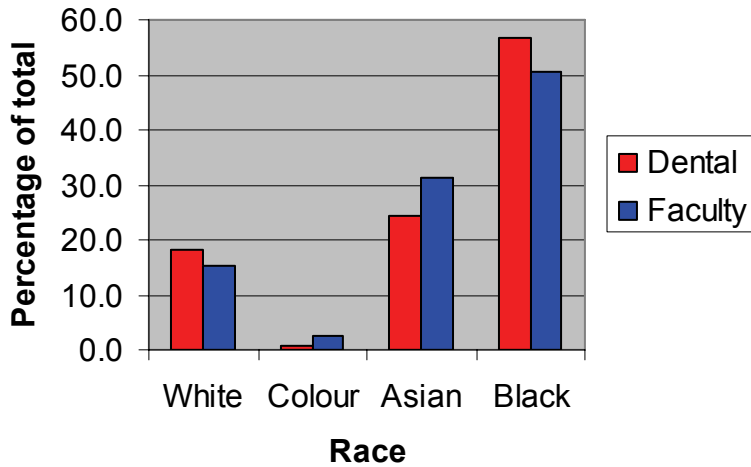
programme from 1995 to 2007 is illustrated in **Figure 3** below:



**Figure 3**

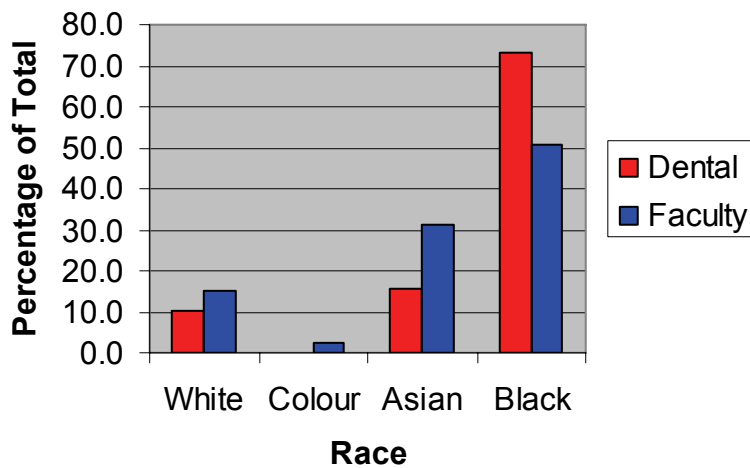
Comparing the racial profile of the Department of Dental Services (Dental Technology and Dental Assisting) with those of the Faculty of Health Sciences over the past 5 years, will show that the department is performing well in achieving transformation of the learner body when compared with the other departments of the Faculty of Health Sciences. The comparative performance of the department is shown in Figures 4 and 5 below:

**Racial Profile: Department of Dental Services c.f. Faculty of Health Sciences, 2003**



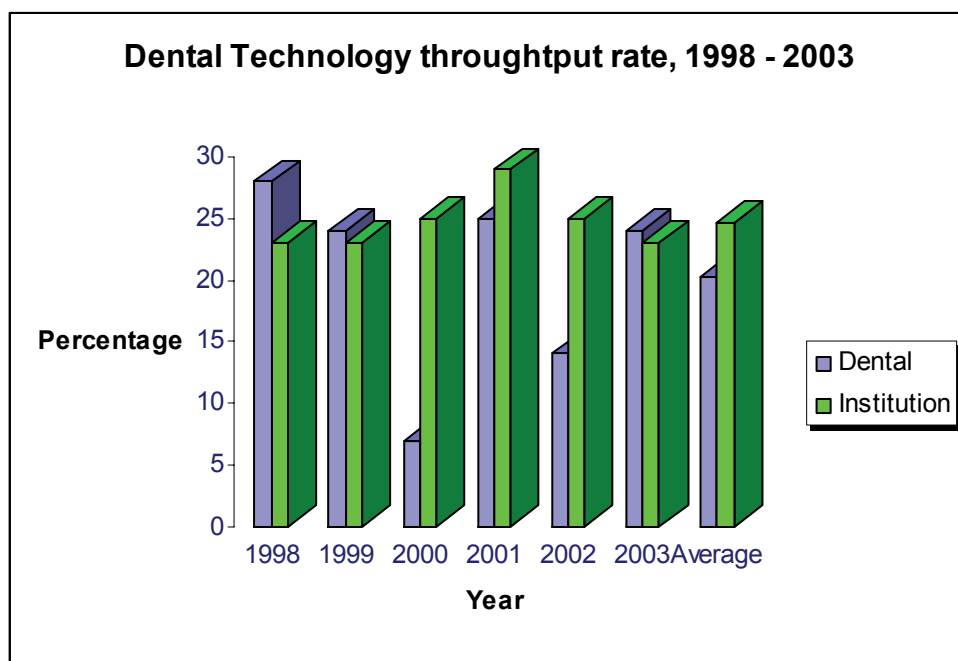
*Figure 4*

**Racial Profile: Department of Dental Services c.f. Faculty of Health Sciences, 2007**



*Figure 5*

The improving of throughput rates remains a concern for the Dental Technology programme. The programme has been identified by DUT Management as having a low throughput rate and thus the EFYP is seen as a mechanism to improve throughput rates. Throughput tracks the performance of a cohort of learners registered for the first time and completing the qualification in the minimum time (Management Information Services - DUT, 2007). The throughput in the Dental Technology programme for the period 1998 to 2003 is illustrated below in **Figure 6**:



**Figure 6**

As is clearly illustrated in **Figure 6** above, Dental Technology throughput rates are very poor however, as illustrated above they remain above the national average which in 2005 was 15% (2005 HEMIS Database, 2006). Cohort throughput rates range from a high of 28% to a low of 7%. The average cohort throughput rate, significantly negatively affected by the 2000 cohort of learners, for the six year period is 20.3%. The institutional average for the same period is 24.7%. In 2005 the national average cohort throughput rate was 15% and the projected national cohort throughput rate for 2007 remains at 16% (DUT, 2007).

These throughput rates are reproduced from information supplied by the Management Information Services department at DUT. Nevertheless, the accuracy of these figures is questioned. The Department of Dental Services began its EFYP in 1995. Any learner graduating through the programme will immediately affect the programme throughput as he/she cannot, by definition, graduate in the minimum time of three years as the minimum time for obtaining a qualification with an extended curriculum is four years. However, notwithstanding the alleged inaccuracy of the statistics, it is clear that the programme has poor throughput.

In summary, the EFYP originally began as a vehicle to improve equity of access. This has proved to be successful as since 1995 the number of black learners has steadily increased while, conversely, the number of white learners has decreased. However, throughput rates for the programme have been compromised. The challenge for the Department of Dental Services therefore, has moved from one of broadening access to one of improving throughput.

The discussion will now turn to mentoring as an attempt to address poor throughput and academic performance. The social well being of a learner is significant in learner performance. The Dental Technology programme has a sound mentoring programme which actively contributes to the establishing of a comfortable environment in which productive learning can take place. The programme is discussed in more detail below.

## **2.12 Mentoring**

### **2.12.1. Introduction**

Mentoring plays an important role in the Department of Dental Services' efforts to integrate EFYP learners into the programme and into the tertiary environment. Peer mentoring was introduced into the department in 1998 and the programme has developed to where it is considered vital to the integration of learners. Mentors are selected from amongst senior students and six mentees are allocated to each mentor. Mentors meet officially once a week

with their mentees in order to determine their well being. However, mentees are at liberty to interact with mentors at any time they wish.

In addition to the integration benefits to individual learners, the department views the mentorship programme as a vital link between the learners and the academic staff. In this way many potential problems are avoided through the liaising of the mentor with staff on behalf of, or in conjunction with, the mentee.

As the effects of mentorship on the EFYP learners forms a part of the data analysis of this study, the concepts surrounding mentorship will be discussed in detail.

### **2.12.2 Mentoring conceptual framework**

One of the indicators of poor performance of learners in tertiary education can be attributed to the fact that they have “no experience in the milieu of tertiary education” (Martin, cited in Martin, Blanc & Arendale, 1994/95). Mentoring is a mechanism providing “psychological guidance and support,” influence and inspiration to a protégé (Charoux, cited in Blunt & Conolly, 2006:199). The benefits of mentoring are significant and should be considered, within the context of higher education, as a vehicle to improve learner performance. Personal caring and interest shown towards learners has proved to be effective (Seymour & Hewitt, 1997 cited in Blunt & Conolly, 2006). Every learner entering higher education has the academic potential for success. Mentoring aims to discover and unleash the inherent potential in learners (van Wyk & Daniels, 2004), especially for those learners with compromised matriculation passes.

In order for a mentoring relationship to be effective it is important that all parties, especially mentees, accept the process voluntarily (Blunt & Conolly, 2006). The value of the mentoring process rests in the relationships formed between the parties. Learners react well within the relationship because they accept and want the benefits that accrue rather than have them forced upon them.

It is important to build support systems for new learners from the time that the learner joins the institution. For a learner to be able to fully commit to his/her studies he/she must be contented in the learning environment. A contented learner desires to feel supported. The perceived support enables learner performance (Wood & Lithauer, 2005). Furlong and Maynard (1995) succinctly summarise the objective of mentoring as a mechanism to achieve the growth of professional knowledge. This is achieved through the interaction of a mentor with a mentee.

Finding a universally acceptable definition of mentoring is difficult. However, Kerry and Mayes (1995:7) conclude that mentoring definitions have common elements such as “teaching and support”. Anderson and Shannon, cited in Kerry and Mayes (1995), list five essential elements to mentoring. These include:

- nurturing
- role modelling
- functioning (as teacher, sponsor, encourager, counsellor and friend)
- focussing on the professional development of the mentee
- sustaining a caring relationship over time.

Bleach (1999) states that mentoring takes place within a constructivist context. Thus, learning occurs by the construction of knowledge through first hand experience. Thomas and Hari-Augstein, cited in Malderez and Bodóczy (1999:11) see the constructivist view of learning as “being concerned with how learners self-organise their own behaviour and experience to produce changes which they themselves value”. Thus mentoring can be seen as allowing an inexperienced individual (mentee) to obtain self-realisation and learning through the interaction and guidance of a more experienced guide (mentor) who himself has obtained knowledge through a learned experience. The learner, therefore, constructs his learned experience on the knowledge and guidance of others.

Pascarelli (1998:235) explains mentoring relationships as “dynamic, episodic and non-linear. It is intended to provide an understanding of a complex phenomenon and not a prescribed, closed developmental path”. Pascarelli

(1998:236) describes a conceptual model of mentoring that includes four stages, namely, “initiation, cultivation, transformation, and separation”.

The initiation stage is one in which mentee and mentor gets to know each other by mutual interaction. The cultivation stage “is marked by opportunities for the mentor to encourage, affirm and accept the views of the protégé” (Pascarelli, 1998:238). The transformation stage occurs when the mentee translates concepts into action and accepts responsibility for his/her actions. Moreover, this stage sees the mentee begin to engage in reflection with the mentor in respect of the actions taken. The final stage of the mentoring relationship is marked by an empowered mentee with the mentor withdrawing and becoming more of an equal colleague than mentor. This stage is seen as

the most critical stage of the schema – a time for reflecting, acknowledging, making learning explicit, and projecting. Three important skills and competencies identified are: embracing, integrating and empowering

(Pascarelli, 1998:241).

Central to the mentorship relationship is the need for the mentee to develop an understanding of the concept of reflective practice (Wood & Lithauer, 2005; Goodlad, 1998; Pascarelli, 1998; Tomlinson, 1995). Therefore, a mentorship programme that encourages reflective practices will enable and empower mentees (learners). Bleach (1999:67) understands reflective practice to be “a practical enquiry undertaken for the purpose of understanding and improving one’s professional practice”. Thus to grow professionally, the mentee must analyse and discuss the acts that form his core functions. John Dewey, writing in the early 1930’s, first introduced the notion of the reflective practitioner. Dewey believed that reflective habits and skills must be nurtured and he stressed the importance of ‘continuous formation’. By this Dewey meant that people are forever participants in the process of professional development and therefore, forever growing and reconstructing their professional experiences (Bleach, 1999:67). It is therefore evident that mentors are helpful to mentees “by assisting them to develop a sense of ‘self’ in relation to their actions” (Bleach, 1999:68).



Donald Schön (1983) who expanded on John Dewey's writings believes that knowledge is gained by action, namely observation and reflection. Schön (1983:69) describes this as "reflection-in-action". He believes that "an epistemology of practice which places technical problem-solving within a broader context of reflective enquiry, shows how 'reflection-in-action' may be rigorous in its own right" (Schön 1983:69). Tickle (1989:282) contends that Schön's theories are based on the notion "that when a professional person reflects in action s/he becomes a researcher in a specific and particular practical situation". Furthermore, he points out that the mentee must use what s/he has learnt in order to improve his/her situation. Tickle (1989:282) continues to state that "according to Schön, this constant activity of appreciation, action, and reappreciation, further action (sic), leads to the development of a repertoire of experiences of unique cases, which are then able to be drawn upon in unfamiliar situations".

Mentoring relationships are usually between two individuals, one of whom is often older than the other (Clulow & Brennan, 1998). This relationship is known as a peer mentoring relationship as opposed to a simple peer relationship. The difference between the two relationships is that the peer mentor is more experienced than the mentee, whilst in a peer relationship both parties are equal. In the Dental Technology programme where peer mentorship is practiced, the learner mentors are senior learners and thus only a few years older than the mentees. However, as these senior learners have recently gained experience in the milieu of tertiary education they are ideally placed to assist new learners as they integrate into a new and foreign environment. Clulow and Brennan (1998:21) state that "the benefits of developing peer relationships as a student support system should be encouraged due to the accessibility to other students as opposed to faculty and staff". They further explain, with reference to the work of Clulow (1993), that a "peer relationship involves greater reciprocity and mutuality than a mentor relationship, for students, gains in relation to progress with study are mutual". *At-risk* learners often find it easier to relate to their peers rather than

to the traditional university systems (McKavanagh, cited in Clulow & Brennan, 1998).

Rutherford and Matlou (1998) provide insight into learners entering higher education in South Africa. They indicate that the majority of these learners can be classified as *at-risk* learners. Many come from rural areas and have difficulty in adjusting to city life. Moreover, the institutions that they attend are large and they can become alienated in the system. In addition, they very often have financial difficulties. Also, they come from

highly regimented schools and have succeeded by following instructions frequently given in poor English. Their spoken English is usually adequate but their written academic language is poor. They may spend the first few weeks of term in a fog, trying to adjust to a very alien environment

(Rutherford & Matlou, 1998:153-154).

It is to these learners that peer mentoring is of advantage.

Different models, other than the model suggested above, to achieve contented learners have been postulated. These include peer mentorship as well as staff/learner mentoring. The difference between the models is that the relationship in peer mentoring is equal, whilst the staff learner model is an unequal one in which a larger social age and experience gap exists between mentor (staff) and mentee (learner).

The Foundation Programme at NMMU offers a slight variation to the traditional mentoring practice. They include a compulsory life skills module that is backed by the mentoring of learners (Wood & Lithauer, 2005). Wood and Lithauer (2005:1016) have “recommended that other foundation programmes explore the possibility of integrating social and emotional learning into their learning”. Moreover, “such a model should encompass the development of intra- and interpersonal skills, an internal locus of control and the habit of frequent self-reflection” (Wood & Lithauer, 2005:1016).

### **2.12.3 The Dental Technology mentorship programme**

The Dental Technology EFYP programme makes use of a peer mentorship programme. The vision of a peer mentoring programme can be seen as assisting entry level learners in order to experience a smooth transition under the informative guidance of senior learners who have already been exposed to learner life (Office of the Dean for Student Life and Activities [Howard University, Washington D C], 2003).

Mentors are recruited from senior (third and fourth year) learners. Mentoring positions are advertised within the Dental Technology programme and mentors are interviewed and then selected. They are paid a nominal fee for their services. Although paid this is not the reason mentors apply for the position. When potential mentors are interviewed they are told that payment is dependent on the department receiving funding. All mentors agree to act even if they are not get paid as they see their role as being of developmental benefit to them. The benefits accruing to a mentor are summed up as:

- a means to enhance leadership skills by using diverse approaches to dealing with challenging situations
- the ability to demonstrate community service on the mentor's curriculum vitae.
- developing counselling skills
- developing strong interpersonal skills

(Office of the Dean for Student Life and Activities, 2003).

In the Dental Technology EFYP, six mentees are allocated to a mentor. The mentor meets formally with his/her mentees, as a group, once a week. Informal meetings occur between formal meetings, as and when necessary. Mentors also meet once a week with a departmental mentor coordinator, who is an academic staff member. The coordinator has no mentoring contact with mentees and only liaises with mentors. Mentors are trained in mentoring skills prior to being allocated mentees and, if necessary, further training is provided.

A perception of the success or failure of the Dental Technology mentoring programme forms part of the research data generated by this study and thus will be further discussed in Chapter Four.

Having completed my discussion on learner related issues it is now necessary to discuss the developments that have occurred nationally in higher education. In doing so it will help clarify the need for redress and transformation as well as foundation provision. Moreover, it will align the discussion thus far with national imperatives as well as understanding Government's educational initiatives and policies promulgated in order to achieve national objectives.

## **2.13 Developments in Higher Education**

### **2.13.1 Introduction**

The progress in achieving a democratic South Africa are succinctly summarised by Cloete (2007:64) who refers to the progress thus far as “a complex mixture of remarkable achievements and unexpected disappointments”. The process of transforming higher education in South Africa since democracy has followed a similar path. The transformation movement began in the 1990's but gained significant momentum with the election of the first democratic government in 1994. The objective of reform was to create a system that was equitable and at the same time capable of producing good quality graduates.

Jansen (2004) argues that there have been many changes that have transformed higher education in post-apartheid South Africa. The question to be asked is what type of educational system did the first democratic Government inherit? Morrow (2007:1) states that “relativism was the root of apartheid”. Relativism is the “belief that the truth is subject to the influence of human beings, that the truth is personal and subjective” (Collins & O'Brien, 2003:301). Thus, what was decided by the State was taken as true and little debate was entertained. For example, the Nationalist Government decreed that education would be offered in terms of the principles of *Christian National Education*. No debate was entertained and their policies were entrenched.

Consequently a very narrow interpretation of education was offered to learners. Morrow (2007:1) argues that even now relativism “continues to lead an insidious life in thinking of education in South Africa”. Nevertheless, since democracy, education has been reformed. The reform process is not without its challenges. Whether the present reform initiatives are successful will be determined by history, but it is the duty of educators and the wider community to embrace the reform process.

Post apartheid educational policy is informed by “a sequence of commissions, white papers and legislation” that has shaped current practices (Reddy, 2006:26). Its roots can be traced back to 1992 when the National Education Policy Investigation (NEPI) was published. The period after 1994 saw unprecedented changes to South African higher education (Cloete, 2007). This time was noted for the drive for new policies and practices. A consequence of the re-organisation of education “during the 1994-98 period resulted in the creation of one national and nine provincial departments of education” (Reddy, 2006:26). A brief introduction to the commissions, reports and legislation relating to higher education follows. Thereafter they are discussed in greater detail.

A significant landmark in the drive for a new relevant policy was the National Commission on Higher Education (NCHE) report published in 1996. Cloete (2007:59) notes that “the central proposal of the NCHE was that education should be massified”. The call for massification was in response to the desire “to resolve the equity-development tension” (Cloete, 2007:59) and would have bearing on the establishment and funding of foundational provision in higher education. The NCHE proposals were generally very well received. However, the implementation of the proposals became problematic and the key proposal, that of massification, was not accepted (Cloete, 2007). The reason massification was rejected was that institutions were already struggling with large numbers of under prepared learners and thus, increasing learner numbers in tertiary education would exacerbate the problems associated with under prepared learners. The lack of acceptance of massification was addressed in the *White Paper 3, 1997*.

Thereafter, Cloete, (2007:53) states that “the next phase converted the Commission’s report into a White Paper (Department of Education, 1997) and a new Higher Education Act, promulgated in 1997”. Furthermore, “during 1997 the newly constituted higher education division within the new unified Department of Education started the implementation process”. Cloete (2007:53), citing the DOE (2000), indicates that the period 1994 to 1999 “was mainly about putting a new policy and legislative framework in place” and that the period thereafter until the present can be referred to as a period of implementation.

Other legislation (not directly affecting higher education) to emerge at that time was the National Education Act and the South African Schools Act. In order to ensure proper implementation and to ensure control, standards and quality, a number of regulatory bodies were established and recognised. These included “the South African Qualifications Authority (SAQA), the Council on Higher Education (CHE), the Higher Education Quality Committee (HEQC), the South African Council for Educators (SACE), and the Further Education and Training (FET) Act (1998)” (Reddy, 2006:27).

In 2000 the CHE produced a report entitled *Towards a Higher Education Landscape*. This report was significant for two reasons. Firstly it addressed ‘size and shape’ into the future in respect of existing institutions. Secondly, it proposed the mergers that have subsequently been implemented. In February 2001 the National Plan for Higher Education was published. This plan was mooted as a working document to realise the policy goals of the White Paper and was also a response to the 2000 CHE report (Cloete, 2007).

The reports, policies and Acts as listed above will now be discussed in greater detail.

### **2.13.2 National Education Policy Report (NEPI)**

As the policies and structures of the apartheid regime started to crumble in the 1990’s, an initiative was set up and tasked to look into a national education policy. The result of this initiative was the production of the NEPI report published in 1992. This was the first major policy document to address the

new political dispensation that was then in its embryonic stages. This report was to form the basis of further education policies during the 1990's (Cloete, 2007). Cloete (2007:57) succinctly sums up the NEPI initiative as a

'peoples education' project put together [by] education activists and trainee policy experts in a participatory, consultative and argumentative process. The project understood that this was just the first stab at policy-making and therefore focussed more on frameworks and options than actual policy proposals.

'Peoples education' can be understood as encompassing a wide range of participants, not necessarily only educationalists. The NEPI initiative involved over 300 participants including political leaders, academics and practitioners (Gerwel, 1992). Thus, a broad range of views and opinions were considered and allowed greater opportunity for the voice of the general population to be heard.

The objective of the report was an investigation "to interrogate policy options in all areas of education within a value framework derived from the ideals of the broad democratic movement" (Gerwel, 1992:vii). NEPI attempted to provide for three principle functions:

1. the provision of information and a lens to focus on the values which underpin specific policies;
2. the stimulation of public debate on education policy in all spheres of society;
3. the development of capacity for policy analysis

(Gerwel, 1992:vii).

Of significance to this study, the NEPI report concluded that

a correct balance must be achieved between the demands of access, quality, and development. Any further PSE [Post-secondary Education] system must be one in which access is equitable, the education offered and research undertaken is of an adequate standard, and the demands of national development are satisfied

(NEPI, 1992:119).

The NEPI report suggested that interventions would be needed in order to achieve the above outcomes. Foundational programmes would certainly fit within this objective.

The NEPI report should be seen as a significant antecedent to more important policy documents that currently inform higher education (Cloete, 2007; Kraak, 2001; Scott, 2001). The report was to point the way to the educational reform that subsequently occurred.

### **2.13.3 National Commission on Higher Education (NCHE)**

The next important milestone in the development of a new educational climate was the National Commission on Higher Education (NCHE) report released in 1996. Cloete (2007:53) states that the post 1994 democratic era

saw unprecedented changes in South African higher education. The first two years were dominated by a massive, participatory drive towards policy formulation that culminated in a report from the National Commission on Higher Education (NCHE) in 1996.

Kraak (2001:14) states that “the most influential policy formulation exercise in HET [Higher Education and Training] arena in the 1990’s was undoubtedly NCHE”. NCHE proposed key elements to higher education and these were partly included in the 1997 Higher Education Act (Kraak, 2001). Kraak (2001) identified three critical areas to be addressed by higher education. Higher education would need to

1. become more considerate of socio-economic priorities
2. promote and act within a total system based on co-ordinated planning, and
3. be co-ordinated within a single regulatory system.

The NCHE report identified five pillars of a new South African higher education policy framework. These were that



1. higher education operate as a single co-ordinated system
2. the state will control “the system via a regulatory framework of financial incentives, reporting and monitoring requirements (particularly with regard to key performance indicators) and a system of programme approval”
3. as a response to the apartheid past, access would be increased particularly for the black ethnic group
4. the higher education system “interacts more with its societal environment”, and finally
5. institutions of higher education learning should retain their “institutional diversity and flexibility regarding boundaries”

(Kraak, 2001:14-17).

Cloete (2007:59) noted that “the central proposal of the NCHE report was that education should be massified”. Massification was seen as a driver for redress and efficiency (Cloete:2007). Although this call was subsequently rejected, it did have the effect of highlighting the need for redress and would later have direct bearing on the establishment of foundational provision in higher education. The rejection of the notion of massification was addressed in the *Education White Paper 3 - A Programme for Higher Education Transformation* which implied that

efficiency gains would have to be achieved through the implementation of a number of policy instruments such as a planning dialogue with institutions, a new funding formula, a reliable information system and a national plan that would provide benchmarks for planning and funding

(Cloete, 2007:61).

Jansen (2004) indicated that the NCHE report was tasked to advise the Minister on ‘size and shape’ of educational institutions. However, even though the report addressed the issue of ‘size and shape’, very little progress on this

specific issue was made until the National Plan for Higher Education was released on 5 March 2001 (Jansen, 2004).

NEPI and NCHE laid the foundation for the development of specific national policies to govern higher education (Reddy; 2006, Cloete 2007; Kraak, 2001; Scott,2001). A path forward had been forged and it led to the *Education Green Paper* and subsequently the *Education White Paper 3 - A Programme for Higher Education Transformation*.

#### **2.13.4 Education White Paper 3 - A Programme for Higher Education Transformation**

Presently, higher education policy is informed by the *White Paper 3*. The *White Paper* was published on 15 August 1997. The then Minister of Education, Prof S M E Bengu noted that “the higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities” (South Africa, 1997b:3). Furthermore, the *White Paper* aimed to “create a learning society which releases the creative and intellectual energies of all our people towards meeting the goals of reconstruction and development” (South Africa, 1997b:3).

The South African higher education system was characterised by a number of deficiencies. It was these deficiencies that the *White Paper* aimed to address. It was alleged that the higher education system was deficient in that

1. an inequitable distribution of access and opportunity for students and staff along lines of race, gender, class and geography [existed].
2. [in general, it] observed teaching and research policies which favoured academic insularity and closed-system disciplinary programmes.
3. the governance of higher education at a system-level was characterised by fragmentation, inefficiency and ineffectiveness, with too little co-ordination, few common goals and negligible systemic planning. (Cloete, 2007:60)

The national objectives for education in South Africa are clearly articulated in the vision of the Ministry and contained in the *White Paper*. These are, to

- promote equity of access and fair chances of success to all who are seeking to realise their potential through higher education, while eradicating all forms of unfair discrimination and advancing redress for past inequalities
- meet, through well-planned and co-ordinated teaching, learning and research programmes, national development needs, including the high-skilled employment needs presented by a growing economy operating in a global environment
- support a democratic ethos and a culture of human rights by educational programmes and practices conducive to critical discourse and creative thinking, cultural tolerance, and a common commitment to a humane, non-racist and non-sexist social order
- contribute to the advancement of all forms of knowledge and scholarship, and in particular address the diverse problems and demands of the local, national, southern African and African contexts, and uphold rigorous standards of academic quality.

(South Africa, 1997b:10).

Reddy (2006) summarised the transformation issues as contained in the *White Paper* as:

- Increased and broadened participation.
- Responsiveness to societal interest and needs.
- Cooperation and partnership in governance.

(Reddy, 2006:27).

A central theme running through the *White Paper* is that a better quality of life for all is demanded. However, the *White Paper* makes it clear that this should not be at the expense of dropping standards. In addition, South Africa must

continue to play its part in the global community. The paper states that “higher education must provide education and training to develop the skills and innovations necessary for national development and successful participation in the global economy” (DOE, 1997:9). The implication is that standards of education must not drop if South Africa is to play a meaningful role on the world stage. This notion of maintaining standards is clearly set out in section 1.21 of the *White Paper* leaving little doubt as to what is expected of educators in providing education in a democratic South Africa. Section 1.21 reads:

The pursuit of the principle of quality means maintaining and applying academic and educational standards, both in the sense of specific expectations and requirements that should be complied with, and in the sense of ideals of excellence that should be aimed at. These expectations and ideals may differ from context to context, partly depending on the specific purpose pursued. Applying the principle of quality entails evaluating services and products against set standards with a view to improvement, renewal or progress.

(South Africa, 1997b:12)

### **2.13.5 The *White Paper* and foundational provision**

The notion of Foundation/Access/Bridging/Extended Curriculum programmes is clearly advocated in the *White Paper* as a means of redressing the past and preparing learners for success in tertiary education. In section 2.32 these types of programmes are recognised as a means of achieving national education objectives.

In the short to medium term, in order to improve equity of outcomes, the higher education system is required to respond comprehensively to the articulation gap between learners’ school attainment and the intellectual demands of higher education programmed [sic]. It will be necessary to accelerate the provision of bridging and access programmed [sic] with further education, but the learning deficits are so

widespread that systemic changes in higher education programmed [sic] (pedagogy, curriculum and the structure of degrees and diplomas) will continue to be needed.

(South Africa, 1997b:22)

In addition, the necessary commitment of government to provide funding for these types of programmes is given in Chapter Two, *Structure and Growth*, and point 2.34;

the Ministry will ensure that the new funding formula for higher education responds to such needs for academic development programmed [sic], including, where necessary, extended curricula. Such programmed [sic] will be given due weight and status as integral elements of a higher education system committed to redress and to improving the quality of learning and teaching.

(South Africa, 1997b:23)

Thus the notion was beginning to be clarified that such provision could no longer be add-on or ad hoc but would need to be integrally planned and funded.

Again, in point 4.28 in Chapter Four – *Funding of the White Paper*, a similar commitment to government funding was made:

The Ministry recognises the considerable cost differentials involved in teaching learners from inadequate educational backgrounds and teaching learners from advantaged backgrounds. The Ministry accepts that academic development, foundation and extended programmes should be incorporated in the funding formula

(South Africa, 1997b:49).

Notwithstanding the stated objectives in the *White Paper*, the intended foundational provision funding by the DOE was slow in delivery. It was seven years later, in June 2004, when the first allocations were made. Allocations were made for a three year cycle. That funding cycle concluded at the end of May 2007.

### 2.13.6 The Higher Education Quality Committee (HEQC)

In order to ensure standards and be in line with a directive contained in the *White Paper* and the Higher Education Act of 1997, provision was made for the Council on Higher Education (CHE), which was established in May 1998, to “establish a permanent sub-committee, the Higher Education Quality Committee (HEQC), with the mandate to:

- Promote quality assurance in higher education
- Audit the quality assurance mechanisms of higher education institutions
- Accredite programmes of higher education”.

(Higher Education Quality Committee, 2004:1)

The HEQC developed a quality assurance framework based on the following criteria:

- Fitness of purpose based on national goals, priorities and targets.
- Fitness for purpose in relation to specified mission within a national framework that encompasses differentiation and diversity.
- Value for money judged in relation to the full range of higher education purposes set out in the White Paper.
- Transformation in the sense of enhancing the capabilities of individual learners for personal development, as well as the requirements of social development, and economic and employment growth.

(Higher Education Quality Committee, 2004:1)

The HEQC assesses institutions in respect of a number of criteria which are determined from the provisions of the Act. Criteria 3(vi) expects institutions to provide

mechanisms which promote access to students from previously disadvantaged groups, for example, through the provision of academic development programmes.

(Higher Education Quality Committee, 2004:8)

There is thus strong national impetus for institutions to provide foundation provision.

### **2.13.7 Higher Education Act 101 of 1997**

The White Paper informed the Higher Education Act 101 of 1997 which became effective on the 19 December 1997. The Act has been amended three times since its enactment; in 1999, 2000 and 2001.

The aim of the act was:

to regulate higher education; to provide for the establishment, composition and functions of a Council on Higher Education; to provide for the establishment, governance and funding of public higher education institutions; to provide for the appointment and functions of an independent assessor; to provide for the registration of private higher education institutions; to provide for quality assurance and quality promotion in higher education; to provide for transitional arrangements and the repeal of certain laws; and to provide for matters connected therewith

(South Africa, Higher Education Act 101 of 1997a).

Moreover, the Act states those imperatives that the legislation addresses. The following extracts from the preamble to the Act are of interest to this study:

- Establish a single co-ordinated higher education system which promotes co-operative governance and provides for programme-based higher education;
- Restructure and transform programmes and institutions to respond better to the human resource, economic and development needs of the Republic;
- Redress past discrimination and ensure representivity and equal access;

- Provide optimal opportunities for learning and the creation of knowledge;
- Pursue excellence, promote the full realisation of the potential of every student and employee, tolerance and ideas and appreciation of diversity.

(South Africa, Higher Education Act 101 of 1997a).

### **2.13.8. National Plan for Higher Education, 2001**

Notwithstanding the introduction of the new Act, the Minister of Education, in 1998/99, asked the CHE to review the higher education institutional environment. The environment was established by the apartheid regime and its structures were still largely in operation. The CHE report of 2000 caused much discussion by both academia and government, mainly because it sought to remove the offering of post-graduate qualifications from some institutions at the expense of others. In addition, the report mooted the suggestion of mergers between institutions (Cloete, 2007).

Arising from the CHE report of 2000, the DOE published the *National Plan for Higher Education, 2001*. The goals and objectives of the plan are summarised by Reddy (2006:27);

- Increase enrolment in career-orientated programmes and in business, commerce and science, engineering and technology.
- Strengthening the provision of the Technikon programmes.
- Maintain the binary divide in the short to medium term.
- Invert the qualification pyramid – the majority of programmes should be three year undergraduate diplomas and professional undergraduate bachelor degrees.

In the National Plan for Higher Education, 2001, mergers became a reality and the suggested restructured education landscape comprised of:

- 11 universities,



- 4 technikons, now termed universities of technology,
- 5 comprehensive institutions, 3 from a merger of a university and a technikon, two by refocusing their programmes,
- 1 dedicated distance learning institution, and
- 2 national institutes for higher education

(Reddy, 2006:27-28).

Following the mergers and the reduction in the number of technical colleges from 150 to 50 and colleges of education from 120 to two, the higher education landscape was dramatically altered (Jansen, 2004). Jansen (2004:296) describes this as “the single most important change in higher education”. Thus the educational landscape was to be forever changed and an environment was created in which the need for foundation provision would be accentuated.

### **2.13.9 Foundation provision.**

The *White Paper* commits the Government to provide funding for foundational provision at institutions of higher learning (Scott, 2001; South Africa, 1997b). Unfortunately, this funding only became a reality in 2004, some seven years later. The intention to make money available for foundation provision grants was conveyed to stakeholders via a letter, dated 16 February 2004, from the Deputy Director-General: Higher Education, Ms N Badsha. This letter entitled *Foundation Programme Grants: 2004/05 to 2006/07*, invited institutions to apply for funding via formal applications which were to be assessed by the DOE. These proposals needed to address the statement that the “primary purpose is that of improving the success and graduation rates of students from disadvantaged backgrounds” (Badsha, 2004:1). No other stipulations were made other than reference to the fact that a small expert group would evaluate the proposals and thereafter make recommendations to the Minister on the awarding of foundation grants. The Dental Technology EFYP submitted a proposal and was awarded a grant in this round of institutional funding. Not

all DUT programmes applying for funding were successful. The first three-year foundational provision funding cycle was concluded at the end of May 2007.

On 22 May 2006, institutions were again invited to apply for a further 3 year cycle for foundational funding provision (Pandor, 2006). Different in this particular round of funding, was that a framework for the awarding of grants was attached to the invitation. The framework clearly set out the terms of reference by which the grants would be allocated. In essence, the document stated that only those programmes comprising of extended curricula would be funded.

The DOE required that programmes applying for grants must comply with the following criteria:

- The primary purpose must be to provide a set of learning activities which are designed to enable students from disadvantaged educational backgrounds to perform successfully in their chosen field of study.
- The components of the foundational provision must be intrinsic parts of the curriculum of the extended programme.
- The components into which the foundational provision is divided must be formal courses, i.e. courses which count as credits towards the award of the formal qualification. Each of these courses must include specific and identifiable foundational provisions which are relevant to the overall curriculum of the programme.
- The foundational provision must be additional to the coursework prescribed for the relevant regular curriculum. The credit total of foundation courses in the extended programme must be at least 0.5 and not more than 1.

(DOE, 2006:4-5)

Once again, the Dental Technology EFYP programme submitted a proposal to the DOE and this proposal was accepted.

The 2006 DOE framework was greatly informed and influenced by Scott's 2001 submission to the Ministry of Education entitled: *Public Funding for Academic Development: Analysis and Proposals*. This submission was in response to the 2001 discussion document, *Funding of Public Higher Education: A New framework*. In the discussion document the Government "confirmed its intention to fund foundation provision" (Scott, 2001:2). The need became a reality as a result of reduced private funding for such initiatives since 1994 (Scott, 2001).

Scott (2001:14) not only argued for the funding of extended curricula but also noted that foundational provision had a major role to play in the "success rates of students who meet formal minimum admission requirements but are nevertheless seriously under prepared for traditional HE programmes". Scott's paper offered the DOE a practical means of implementing policy initiatives which they accepted into practice in 2004.

### **2.13.10 Conclusion**

The transition to democracy in 1994 started an educational reform and transformation process that has changed the face of South African education in general and specifically, higher education. At best it may be concluded that reform in the higher education sector has been placed on a corrective path that is adequately addressing transformation issues and the redress of higher education. Alternatively, one may adopt the view that policy development was merely "a basket of 'best practices' culled from different parts of the world" (Cloete, 2007:64). This view postulated that the new policies did not make for greater efficiency and thus, that the transformation policy and implementation was not adequately theorised (Cloete, 2007).

Moreover, mergers between higher education institutions have introduced significant destabilisation of the institutions. The Durban University of Technology became the first merged institution in 2002. Whether a truly stable institution has been created is open to debate. Since and because of the merger, DUT has seen in office, four Vice-Chancellors, four Deputy Vice-Chancellors: Academic, three Deputy Vice-Chancellors: Finance and three

Deputy Vice-Chancellors: Administration including a two year period when a Deputy Vice-Chancellor: Administration was not deemed necessary. Added to this unstable situation was the disbanding of the Council of DUT in 2006 and the appointment of an Administrator by the Minister of Education. Thus, it may be argued that the merger process was at best, poorly planned and at worst, ill conceived.

Whatever the view held, it is clear that the higher education scene has been radically and irrevocably changed. Institutions have embraced the notion of widening access and making education more equitable. As has been demonstrated in this chapter, this has been the central theme running through all major reports, policies and Acts of the democratic era. Clearly, the offering of foundation programmes fits within what policy makers envisage for the new South Africa.

The discussion now turns to an understanding of a university of technology in the higher education sector and positions the Dental Technology programme within the conceptual framework of a university of technology.

## **2.14 Positioning the Dental Technology EFYP in a University of Technology**

### **2.14.1 What is a University of Technology?**

Traditionally, the Technikon movement offered career-focused tertiary education. The Technikon movement was identifiably different from the University movement. Technikons differed in the following ways:

1. The types of qualifications offered. Practical, career-focused qualifications were offered at technikons. For example; both the Technikons (and now UOT's) and the Universities offer qualifications in Civil Engineering. The difference between the two qualifications can be explained as a difference in approach. A university graduate has a more scientific and analytical knowledge base, whilst UOT graduates have a more practical, problem solving approach. UOT learners are taught what tools can be used for which jobs and how to use them.

Universities go further in that they teach learners to improve on or design new tools to solve engineering problems. University graduates can eventually register with the professional board, the Engineering Council of South Africa (ECSA), as professional engineers whilst UOT graduates can only register with ECSA as professional technicians if they are in possession of a diploma and as a professional technologist if they have a Bachelor's of Technology degree (McKune, 2007).

2. A matriculation exemption was not required for entry into the technikons. Consequently a different type of learner was attracted to the institution and thus different technikons catered for a different learner target market.
3. Prior to 1993, technikons were not permitted to offer post-graduate programmes.
4. Staff at technikons were less qualified with fewer Master's and Doctorate qualifications.
5. Universities were better resourced.
6. Research output at the technikons was limited.
7. Universities catered for specific research niche areas (Powell, 2007).

In 2003, acting on a proposal of the Committee of Technikon Principles (CTP), the Minister of Education Prof. Kader Asmal, announced that he had agreed that some technikons in future, would become known as Universities of Technology (du Pré, 2006). In 2005 the necessary permission was granted in order that the name change could be implemented (Powell, 2007; du Pré, 2006). All existing technikons (other than those which merged with universities to become known as *Comprehensive Universities*) effected the name change except for Mangosuthu Technikon which until today still retains its original name. At this time (2005) DUT was known as the Durban Institute of Technology (DIT). The name of the institution was changed to the Durban

University of Technology (DUT) and it aligned itself as a UOT in 2006 following a resolution by the Council of the institution.

The reasons why technikons motivated for a name change to that of universities of technology is debatable. Some have postulated that it was simply a name change and a UOT is just another name for a technikon (see discussion in Powell, 2007). Others believe that a new philosophical direction has accompanied the name change (Slammert, 2007; du Prè, 2006). Du Prè (2006:3) believes that UOT's have a "different focus and ethos" and this enables them to "contribute meaningfully to greater technology transfer and international competitiveness".

Traditional university academics have been less than enthusiastic when reacting to the new nomenclature (Reddy, 2006). Reddy (2006) cites Dr A Holiday, School of Government, University of the Western Cape as arguing that the Minister of Education made an ill informed decision to allow Technikons to rename themselves UOT's. Among the many reasons he offers is that the essence of a university is fundamentally different to that of a technikon. He sees a university as "a place of learning where subjects of cosmic significance are studied and loved for their own sake" (Reddy, 2006:25). Clearly, Holiday does not believe this happens at a UOT.

Prof. J Jansen, former Dean of the Faculty of Education, University of Pretoria and recent administrator of the DUT, is scathing in an attack on Technikons. He refers to them as "nothing more than glorified high schools" and he describes calling technikons universities of technology as a "farce" (Jansen, cited in Reddy, 2006:25). However, when interviewed in 2007, he qualified his remarks by stating that at the time of the name change there was little conceptual thinking in respect of the philosophical principles underlying a UOT. Institutions wished to be known as universities for the sake of it, and had no clear cut philosophical vision. However, he noted that currently a few UOT's, including DUT, have developed clearer philosophical frameworks that if successfully implemented, would place them on a similar footing as recognised universities of technology such as the Michigan Institute of Technology (MIT) in Boston, USA (Jansen, 2007b).

Powell (2007) reports that there were, however, specific reasons for the Minister of Education agreeing to the CTP proposal. These reasons ranged from a new and different philosophical conception to those relating to the need to position the technikon movement locally and internationally within a universally understood brand (Powell, 2007). However, whether the CTP philosophically believed in a new educational concept emerging from the UOT brand is open to speculation. Powell (2007) reports that the only apparent reasons for the CTP's name change proposal were:

1. that if one was awarding degrees then one should be called a university, and
2. the added status that would accrue if the technikons now became known as Universities of Technology
3. that there were concerns in respect of the DOE subsidy formula to institutions of higher education, in that universities received a greater subsidy than did the technikons.

An acceptable definition of a UOT is difficult to find (Reddy, 2006). Therefore, the characteristics that determine a UOT are listed.

du Prè (2006) states that UOT's are characterised by the following criteria, and it is these characteristics which serve as its *raison de etrè*:

- A strong corporate orientation;
- Service to industry and the community;
- Own characteristic roles and values;
- Relevance of programmes;
- Responsiveness to and fulfilment of the needs of industry, the community and society;
- Appointment of experts acknowledged by industry (not necessarily by academics);
- Strong attention to niche areas;

- Emphasis on scholarship, innovation and R & D (research and development);
- Transfer of knowledge; and
- Preparation of a new generation of knowledge workers, (focusing for example on work ethics, ability to work in multicultural teams, being students-for-life, etc.).

(du Prè, 2006:6)

Slammert (2007:4) defines a UOT as “a special kind of university, one whose main and central academic focus is that of Technology”. The CTP (cited in Powell, 2007:16) in 2003, described a UOT as “an institution that has the capacity to create and apply knowledge and to conduct applied research within the context of innovation, entrepreneurship and the commercialisation of research results”.

du Prè (2006), similarly sees *technology* as a defining characteristic that makes UOT’s different from the traditional universities. However, du Prè (2006:6) qualifies technology as “rather the interweaving of technology with the typical pursuits of a university”. A programme at a UOT must therefore consist of practice and the teaching of managerial skills in order to empower the learner with an understanding that is complementary to practical skills (du Prè, 2006).

In attempting to define a UOT, Reddy (2006) believes the following distinguishes a UOT from other institutional types. He combines five characteristics from the Auckland University of Technology as identified by Brook (2000), and combines them with three identified by the CTP (2001). The completed list is as follows:

- Being research-informed rather than research-driven.
- Being focused on a curriculum that meets the needs of the related industry and professions.
- Being engaged in research that meets the needs of professions and industry.



- Providing high quality vocational education both at degree and sub-degree level.
- Offering degrees that are vocationally relevant and involve the acquisition of technological competence.

(Brook, cited in Reddy, 2006:36)

- Contributes to technology transfer and international competitiveness.
- Embraces recognition of prior learning (RPL), flexible entry requirements, and creative ways to identify latent skill and talent, and
- Cooperative education is one of its key strengths.

(CTP, cited in Reddy, 2006:41)

In discussing the educational approach of an UOT, Scott (2006:56) suggests that the focus should be “more outcomes-orientated than inputs-orientated”. He believes that the curriculum should concentrate on the specific needs of the profession. Moreover he believes that UOT’s should offer research – generated advice to Government. Interestingly, Scott (2006:57) states that a UOT should “focus on providing access to higher education”. His belief gives credence to the fact that foundational programmes are correctly placed in a UOT.

While scholars debate the definition of a UOT, they are currently establishing their identity within the educational framework. As with all dynamic organisations, the defining characteristics will develop over time. However, it does seem that deep underlying philosophical thought was lacking when the brand was promulgated.

Notwithstanding the lack of ‘top-down’ directional clarity, the brand is being branded with its focus on the philosophical meaning of term ‘technology’. Slammert (2007:4) explains that ‘technology’ refers to the study of

1. the application of knowledge (often theory) in the light of and together with practice;

2. technique, i.e. knowledge, ideas, paradigms, methods, gained in and from practice.

Slammert (2007:4) further states that “technology is knowledge in practice”. Moreover he qualifies ‘in’ as have three meanings, as;

- (1) knowledge applied in practice
- (2) knowledge generated in practice
- (3) and knowledge iteratively and cumulatively derived as in (1) and (2).

Using this conceptual understanding of a UOT, the Dental Technology programme and the EFYP can be positioned in the conceptual framework.

#### **2.14.2 Dental Technology, a programme existing at a UOT**

The Dental Technology programme was originally offered at Technikon Natal in 1980. In 2002, Technikon Natal and the M L Sultan Technikon merged to form the Durban Institute of Technology. Thereafter in 2006, the Durban Institute of Technology changed its name to the Durban University of Technology. The reason for the name change was twofold. Firstly, it wanted a name that reflected the nature of its programmes. Secondly, sectors within the institutional community wanted the institute to conform in name with other former technikons who had adopted ‘university of technology’ in their title. Another reason, little spoken about, was the desire to be part of a university as opposed to an ‘institute’. Few, including its learners, understood conceptually what an ‘institute’ stood for, nor could they relate to the framework which governed its practices. Consequently, the Student Representative Council exerted its influence with Council members and placed pressure on DIT Management to comply with its wishes for the institution to be called a university. Being enrolled in a university was widely understood. Therefore, they wanted to be part of what was known and not of what still needed to be established in this country.

du Prè suggests five core academic functions of universities of technology.

These are:

1. Shift in emphasis [sic. This is taken to mean that the focus is taken away from the programme and teaching becomes learner-centred]
2. Providing greater learning opportunities
3. Work-integrated learning
4. Continuous upgrading of knowledge and skill, and
5. Social responsibility.

(du Prè, 2006:3-5)

Dental Technology provides a practical, career focused qualification which equips the learner to be productive within the economy in general and specifically in the dental industry. It is a hands-on career which teaches learners hands-on skills at a diploma level. The programme is learner-centred at this level, but becomes more conceptual with an emphasis on problem solving at a post-graduate level.

Dental Technology education is a tripartite collaboration between the teaching institutions, the South African Dental Technicians Council (the industry's professional board) and employers. A local Dental Technology liaison committee at DUT meets twice a year. At these meetings professional educational matters are discussed and if necessary, acted upon. Further learning opportunities are provided for by the programme's post-graduate programmes.

The programme offers work-integrated learning in three different ways. Firstly, learners spend time working in the industry. This occurs in their second and third year of study. Secondly, a denture and maxillo-facial clinic at the institution offers a service to the indigent population of KwaZulu-Natal. All appliances manufactured in the clinic are constructed by learners. Thus, the learner is afforded the opportunity of hands-on training and at the same time being present at clinical sessions. Generally, in industry, qualified technicians are not present in a dental surgery during dentist-patient consultation

sessions. Finally, a unique form of work-integrated learning is practised as all practical class work is manufactured on *live* models. Class work models are constructed from actual patient cases and the effect is that every teaching session represents the manufacture of an appliance for a *living* patient.

du Prè, (2006:4) suggests that programmes at an UOT need to become “experts in providing a continuous upgrading of knowledge and skills”. The Dental Technology programme is continually re-evaluating its practices. This is achieved at weekly departmental meetings at which current education is continually discussed and assessed. Additionally, the EFYP has twice formally re-curriculated in recent years, (in 2004 and 2006) to ensure that relevant upgraded education is offered to its learners.

Furthermore, the programme offers its services to the indigent population of KwaZulu-Natal via its denture and maxillo-facial clinic. These services, especially maxillo-facial services, are not readily available from the state health systems. Thus, the programme offers its learners an understanding of service-learning.

The Dental Technology EFYP programme feeds into the traditional three-year programme. Clearly, the Dental Technology programme meets the criteria as set out by du Prè (2006) as a programme worthy of inclusion in a UOT. Thus, it may be concluded that the Dental Technology programme and its EFYP is correctly placed in a UOT as it conforms to Du Pre’s definition of a UOT.

## **Chapter Three - Research Methodology**

### **3.1 Introduction**

This study was conducted in an interpretive paradigm. Thus, this study primarily makes use of qualitative data. However, it also makes use of quantitative data in order to ensure a complete analysis of the research question. The qualitative data was generated from conducting semi-structured interviews with both the lecturing staff in the Dental Technology programme as well as learners who have graduated from the EFYP. The learners interviewed are currently registered in the Dental Technology programme. Interviews with staff and learners were conducted in 2007. The reasons for only interviewing currently registered learners are discussed later in this chapter.

In addition, the quantitative data was obtained from records contained in the DUT Integrated Tertiary Software (ITS) system. This data is accessible via the Management Information Systems (MIS) Department of DUT as well as from the Faculty Office, Faculty of Health Sciences, the Academic Records Department and the records held by the Department of Dental Services.

The research paradigm under which this study was conducted will be discussed in detail later in this chapter. The method of data collection and the ethical considerations taken into account will also be discussed. I am currently the Head of the Department in which this study was conducted. Thus, it is vital that I reflect on my positionality as it potentially impacts on the objectivity of the data generated from the interviews as learners and staff may be influenced by my position as head of department. Sampling is a central consideration in this study and a detailed explanation is offered for the sample choice.

Finally, this chapter concludes with a discussion about the limitations and validity of the study. Validity of responses is an important consideration when conducting qualitative research as the quest for objectivity can inadvertently elicit overly subjective responses from respondents.

### 3.2 The research paradigm: a theoretical framework

Lincoln and Guba (1994) state that research, in general, is conducted according to three core assumptions:

1. whether there is a single reality or absolute truth.
2. whether the research is completely objective or whether the reporting contains the subjectivity of the researcher.
3. the appropriate way or methodology used to discover the truth.

The above assumptions can better be understood as positioning the research with respect to “reality, truth, objectivity, [and] method” (Toma, 1996:3). Consequently, researchers working in different paradigms “view the purpose of their work differently, they apply different evaluative standards, rely on different methods and frameworks, accept different types of values, etc.” (Toma, 1996:3). Research paradigms, with particular reference to the social sciences, occur within the four broad frameworks, these include the positivist, post-positivist, critical and constructivist paradigms (Lincoln & Guba, 1994). However, to position oneself dogmatically can be unwise in that “a particular research approach should be selected because it is most appropriate for answering a particular research question” (Wildewuth, 1993:466). The researcher, therefore, will need to guard against and be cognisant of not being trapped in inappropriate paradigms (Wildewuth, 1993; Usher & Bryant, 1989).

Broadly speaking, it may be argued that research paradigms fall into two general paradigms. These can be identified as positivist and post-positivist (Onweugbuzie, 2002). Most commentators (Guba 1990, Toma 1996, Neuman, 2000, Onweugbuzie 2002) agree that the traditional, basic or conservative paradigm is the *positivist* paradigm. Positivism is home to the natural sciences (Neuman 2000). Guba (1990:3) sees positivism as “rooted in a realist ontology”. A ‘realist ontology’ is only concerned with what can be said to exist. The positivist collects the facts and reports the results and is thereby able to “predict and control natural phenomenon” (Guba, 1990:3). The positivists “argue that reality exists and that they can predict and control it as

objective researchers through testing and verifying questions and hypotheses” (Toma, 1997:683).

Simply stated, any research that differs from a positivist paradigm will fall under the broad category of *post-positivism*. Wildewuth (1993) sees post-positivism as accepting that there is not only one correct scientific paradigm. This is contrary to the positivist position which believes that there is only one objective truth, that which can be scientifically verified. Wildemuth (1993) argues that the method chosen for a particular study is selected on the basis of the research question to be answered. Post-positivism can be understood as a “modified dualism” (Onweugbuzie, 2002:520). Guba (1990) sees this paradigm as *critical realism* but at the same time recognises that there are other paradigms that fall under the post-positive paradigm. A post-positivist believes that reality is constructed and that research is influenced by the values of the investigators. Some post-positivists, most commonly the critical realists (McKenna 2007b), believe that there is a “single reality but simply accept that science cannot ever fully understand it [and] they view objectivity in the same manner” (Toma, 1997:683).

The difference between the positive and post-positive paradigms is summed up by Cohen and Manion (1989:38) in their explanation of positivism as “normative” and post-positivism as “interpretive”. Cohen, Manion and Morrison (2005) further explain that the normative researcher concentrates on behaviour whilst interpretive research concentrates on action. Thus, it may be concluded that positivism is primarily concerned with quantitative data whilst post-positivism is primarily concerned with qualitative data. However, mixed methods studies are common especially in the post-positive paradigm where the use of qualitative and quantitative data is not uncommon. This is less true of positivist research but studies in the fields of psychology and economics have made use of both types of data (McKenna, 2007b).

Different researchers use different terms for the various sub-groupings of post-positivist research. Habermas (1972) divided them into practical and emancipatory interests whilst Lather (1991) suggests interpretive, critical and post-structural as sub-groupings of the post-positive paradigm.

Onweugbuzie (2002:520), on the other hand, suggests that post-positivism “gave birth” to other paradigms, namely, *constructivism*, *interpretism* and *naturalism*. These paradigms are called, by Onweugbuzie (2002:520) as the “iconoclastic paradigms”. Alternatively, these paradigms can be understood as those paradigms that “attack cherished beliefs” (The Concise Oxford Dictionary, 1999:704). Onweugbuzie (2002) lists these as, amongst others, constructivism, interpretivism, naturalism, post–modernism, post structuralism and relativism. For the purposes of this study, further discussion will be limited to interpretivism or the interpretive paradigm. Neuman (2000) offers the following explanation of interpretivism:

In contrast to positivism’s instrumental orientation, the interpretive approach adopts a practical orientation. It is concerned with how ordinary people manage their practical affairs in everyday life, or how they get things done. Interpretive social science is concerned with how people interact and get along with each other

(Neuman 2000: 71).

The researcher, in the interpretive paradigm, looks for meaning through systematic examination in order to find understanding and interpretation for occurrences (Neuman, 2000). Wildemuth (1993: 450) clarifies ‘understanding’ by stating that “interpretive approaches assume that reality is subjective and socially constructed”. Wardekker (2000) states that “the theory implicit in the interpretive paradigm is of human beings as interpreters and constructors of a meaningful world”. To summarise, interpretive researchers “base their work on understanding multiple realities and believe that the scholar creates, rather than discovers, findings” using a number of methodologies to achieve understanding (Toma, 1996:10).



### **3.3 Positioning this study in a research paradigm**

The research in this dissertation was conducted within an interpretive paradigm. The epistemology of the interpretive paradigm enables us to make sense “of people’s experiences by interacting with them and listening carefully to what they tell us” (Terre Blanche, Kelly & Durrheim, 2006:274). Thus, it is appreciated that in an interpretive paradigm one is “not isolating and controlling variables” but rather “harnessing and extending the power of ordinary language and expression to help us understand the social world in which we live” (Terre Blanche, Kelly & Durrheim, 2006:274).

Cohen, Manion and Morrison (2005:22) state that the interpretive paradigm “is characterised by a concern for the individual”. As has been discussed earlier, this paradigm is concerned with the perceptions of the individual. Whilst it can be argued that an individual’s perceptions are subjective the researcher engaged in the interpretive paradigm tries to “get inside the person and to understand from within” (Cohen, Manion & Morrison, 2005:22). This study is concerned with the perceptions of staff and learners in respect of the EFYP and thus fits comfortably within an interpretive paradigm.

This research combines both qualitative and quantitative data. By combining qualitative and quantitative data the researcher is allowed a deeper understanding of and insight into the research questions (Terre Blanche & Durrheim, 1999; Wildemuth, 1993). However, the quantitative data used in this study has not been statistically analysed and used on a descriptive level to better contextualise the qualitative data generated.

As this study is primarily concerned with generating and analysing qualitative data it is necessary to more deeply engage in an understanding of qualitative research.

Qualitative research methods can be understood as “methods that try to describe and interpret people’s feelings and experiences in human terms rather than through quantification and measurement” (Terre Blanche, Kelly & Durrheim, 2006:272).

Qualitative research can therefore be defined as a

generic term for investigative methodologies described as ethnographic, naturalistic, anthropological, field, or participant observer research. It emphasises the importance of looking at variables in the natural setting in which they are found. Interaction between the variables is important. Detailed data is gathered through open ended questions that provide direct quotations. The interviewer is part of the investigation

(Key, 1997:1).

Quantitative research differs from qualitative research in that it attempts to be objective by using objective methods to gather data. Moreover, objectivity is assured in quantitative research by removing the “investigator from the investigation” (Key, 1997:1). Thus, it can be accepted that the researcher may, during qualitative research, introduce an element of subjective bias during the research. However, in conducting interpretive research “subjectivity is not considered the enemy of truth, but the very thing that makes it possible for us to understand personal and social realities empathically” (Terre Blanche, Kelly & Durrheim, 2006:277).

Researchers making use of qualitative research methods need to be cognisant of the advantages and disadvantages of this type of research. Reference to the advantages explains why qualitative research methodology is appropriate to this study. The advantages can be listed thus:

- Produces more in-depth, comprehensive information.
- Uses subjective information and participant observation to describe the context, or natural setting, of the variables under consideration, as well as the interactions of the different variables in the context. It seeks a wide understanding of the entire situation.

(Key, 2000:2)

Perhaps, more importantly, the disadvantages of qualitative research methods need to be considered. The disadvantages are important when considering the validity of the data generated. The disadvantages are:

- The very subjectivity of the inquiry leads to difficulties in establishing the reliability and validity of the approaches and information.
- It is very difficult to prevent or detect researcher induced bias.
- Its scope is limited due to the in-depth, comprehensive data gathering approaches required.

(Key, 2000:2).

Having determined that this research is a post-positive study conducted in an interpretist paradigm primarily generating qualitative data it is prudent to draw attention, once again to the key research questions which this research investigated.

### **3.4 Key research questions**

It is apposite here to recount the key research questions outlined in Chapter One as a reminder of the focus of the research:

1. Having completed the EFYP, what factors are perceived by learners, as indicators of success or failure of the extended programme?
2. What factors are perceived by staff as indicators of success or failure of the extended programme?
3. What are the national objectives of the Department of Education (DOE) in respect of extended programmes?
4. Do perceptions of learners and staff correlate with national objectives as stated by the DOE in respect of extended programmes?

The collection of data is critical in any study and therefore it will, now, be discussed.

### **3.5 Collection of data**

#### **3.5.1 Collection of qualitative data**

Qualitative data was collected by means of conducting individual *semi-structured* interviews (Terre Blanche & Kelly, 1999) with both learners who have successfully completed the EFYP and the Dental Technology teaching staff of the Department of Dental Services. This interviewing technique is also known as a *non-directed informal* interview method (Robinson, 1998) or the *General Interview Guide Approach* (McNamara, 1999). The *semi-structured* interview procedure was chosen as it is a data collection process that is “flexible and dynamic” (Robinson, 1998:21). Thus, it is recognised that the qualitative data obtained from these types of interviews are “multi-dimensional and unstructured in its content” (Robinson, 1998:21). Semi-structured interviews are widely used in interpretive research to generate qualitative data. In semi-structured interviews, the interview itself guides the process and, depending on the responses given, the interviewer will adapt his approach accordingly. In this way the required data is generated resulting in no two interviews, in the same research project, being the same in content. However, as the attempt is made to “understand how they [the respondents] think and feel” (Terre Blanche & Kelly, 1999:128), it is less important that interviews are exactly the same as in rigidly structured interviews. Structured interviews are usually used to generate quantitative data which is not the intention of this research project.

Notwithstanding this, a number of pre-determined questions formed the basis on which the interviews were conducted. This approach was designed “to ensure that the same general areas of information are collected from each interviewee” (McNamara, 1999:2). However, the interview format was designed so that it followed on from the responses of the interviewees and, as much as possible, would stimulate further discussion. This approach provided for a focus during the interviews but allowed the interviewer a measure of freedom and adaptability during the interview process (McNamara, 1999; Robinson, 1998).

Essentially the same questions were asked of both staff and learners (see later this chapter). The interviews conducted with the learners, however, tended to be more structured than those with staff. Learners tended to answer the questions without introducing further discussion or offering new direction. In addition, the duration of the interviews with learners took, on average, half the time when compared to the length of the staff interviews (See Annexure A). An explanation offered for the differing interview lengths would suggest that learners felt less comfortable in individual interviews than did staff and thus tended to answer questions without elaborating. This could be attributed to nervousness or the fact that they were being interviewed for research purposes for the first time. Interestingly, the two longest learner interviews were conducted with learners who had more contact with me prior to the research interviews due to the fact that they were class representatives during the course of their studies. Consequently, it may be assumed that these learners felt more relaxed in my company. Conversely, I might have been more comfortable in the company of learners where a more developed relationship had been established.

### **3.5.2 Sampling to generate qualitative data**

A total of 16 interviews were conducted. The persons interviewed comprised of two groups, staff and learners. Seven staff members and nine learners were interviewed. With reference to the literature “experience has shown that 6-8 data sources or sampling units will often suffice for a homogeneous sample” (Kelly, 1999:381). The Dental Technology lecturing staff of the Department of Dental Services consists of seven lecturers. All seven were interviewed.

Learners chosen to be interviewed were registered in the programme either in their second, third, fourth or fifth years of study. All learners interviewed passed through the extended year at their first attempt. For example, a learner having completed a year in the EFYP was now currently registered for remaining part of the first year curriculum not covered in the first year of foundation provision. Three first year (second year registered for the Dental Technology qualification), three second year (third year registered for the

Dental Technology qualification), two third year learners (fourth year registered for the Dental Technology qualification) and one fourth year learner (B.Tech registered) were interviewed. The reason for interviewing a greater number of first and second year learners was that they had passed through the EFYP following the 2005 EFYP curriculum change. This curriculum change was a response to the departmental application to DOE for the foundational provision which effectively saw learners entering a newly revised programme in 2005.

All EFYP learners were invited to be part of the research process. Learners were handed letters containing details of the research project. If they indicated their willingness to be part of the research project they were asked to sign an acknowledgement to the effect. The notice also contained a sample of the learner consent form that would be completed if they were chosen to be interviewed (Annexure B). The more senior the learner, the more willing they were to be interviewed. All of the third and fourth year students indicated their willingness to be part of the study. This would seem to indicate that the longer a learner was a registered in the Dental Technology programme the more comfortable they were with the notion of being individually interviewed. Learners that agreed to be interviewed were then randomly selected. Eight participants were black and one was white. This is representative of the racial demographics of the EFYP provision. The racial demographics of the Dental Technology programme were discussed in Chapter Two.

Participation in the study is summarised in *Tables 3 and 4* below:

<b>Staff - Interviewing sample</b>								
			<b>White</b>		<b>Indian</b>		<b>Black</b>	
	Staff in programme	Number interviewed	Males	Female	Male	Female	Male	Female
<b>Total</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>

**Table 3**

<b>Learner- Interviewing sample</b>								
			<b>White</b>		<b>Indian</b>		<b>Black</b>	
	Potential to be interviewed	Number interviewed (Randomly selected)	Males	Female	Male	Female	Male	Female
1 <sup>st</sup> year	11	3	0	0	0	0	1	2
2 <sup>nd</sup> year	6	3	0	0	0	0	1	2
3 <sup>rd</sup> year	7	2	0	1	0	0	1	0
4 <sup>th</sup> year	5	1	0	0	0	0	0	1
<b>Total</b>	<b>29</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>5</b>

**Table 4**

All chosen participants completed and signed consent forms (see Annexure C – Learner; Annexure - D Staff). Each interview was recorded electronically and then transcribed. The question of confidentiality of responses was addressed with each interviewee. An explanation as to the purpose of the interview and who would have access to their responses was given. Participants were informed that direct responses may be used in reporting and the signed *informed consent* noted this. All participants in the study accepted this provision. It was explained to respondents that there would be no direct reference to their names in the reporting procedures and that anonymity would be ensured. However, it was explained to respondents that complete anonymity is hard to guarantee (McNamara, 1999). Any direct quotes that could be attributed to individuals were to be omitted. Staff and learners did not seem not concerned about guarding their anonymity and were happy to participate in the study. No staff member or learner participant has, to date, asked to be excluded from the study.

As previously discussed semi-structured interviews were conducted with the interviewees. However, I listed a number of questions for my own use to guide to interview process. The questions that formed the basis of the learner

interviews are included as Annexure E. The questions that formed the basis of the staff interviews are included as Annexure F.

### **3.5.3 Analysis of qualitative data.**

Interviews were recorded using a *Panasonic* digital recorder. Thereafter the recordings were transcribed. Robinson (1998:20) states that interpretive analysis of qualitative data deals “with meanings and distinctions”. Tesch, cited in Creswell (1994) states that qualitative research data analysis is eclectic. Thus, the data analysis is “drawn from a wide range of theoretical orientations, rather than from a single, unified theory” (Collins & O’Brien, 2003:116). There are many “analytic traditions that come under the umbrella of interpretive analysis” (Terre Blanche, Durrheim & Kelly, 2006:322). The method of interpretive analysis used in this study is *thematic content analysis*. This involves “identifying patterns and themes which emerged from the data (McMillian & Schmacher, cited in Wood & Lithauer, 2005:1005). Kelly (2006:359) explains that “themes and discourses are both ways of apprehending aspects of a situation which connect it to other situations by virtue of inherent commonalities that bind them together, in spite of the contextual distinctiveness”. Thus, the collection of data and organising it in themes can be understood as the organisation of the said data around unifying topics (Collins & O’Brien, 2003).

Thus, this research will look, in the next chapter, to the general themes that emerged from the interviews in order to draw conclusions around the learner and staff responses.

### **3.5.4 Collection of quantitative data**

Descriptive quantitative data in respect of learners having passed through the EFYP was examined.

The quantitative data was obtained from records contained in the DUT Integrated Tertiary Software (ITS) system. The ITS is a database which contains all relevant electronic information held by DUT. Data is entered onto the ITS system by authorised staff only. This occurs during registration and is



done by trained personnel in the faculty offices. Additionally, examination data is entered into the system by administration clerks working in the DUT Examination Department. Various systems checks are provided that verify data on an ongoing basis. Access to the ITS system is restricted and only authorised staff may alter or change data. Academic departments may view but cannot change data. The exception to this rule is that authorised academic departmental representatives may enter test marks in the ITS database and calculate year marks for learners. Year marks permit learners to write examinations and are used (by applying a predetermined formula) to determine the final mark for a learner for a specific subject. Changes to captured marks can be made. However, various control checks exist and these need to be authorised via the relevant departments. For academic departments, the closest link to the ITS is maintained through the relevant Faculty office. The Department of Dental Services liaises with the Faculty Office of the Faculty of Health Sciences when it needs to access data from the ITS system.

The data can also be accessed via the *Management Information Systems (MIS) Department* as well as from the *Academic Records Department* and the records held by the Department of Dental Services. Specifically, data from the ITS database obtained for this study include:

1. Student records.
2. Pass rates.
3. Throughput rates.
4. Demographic profiles of learners.
5. Performance in credit-bearing subjects.
6. Performance in non credit-bearing subjects specifically academic literacy.
7. Subsequent learner performance after having passed through the EFYP.

### **3.6 Ethical clearance**

The necessary ethical clearance for the study was obtained from the ethics committee of the University of KwaZulu-Natal<sup>6</sup>. This committee required that, as the study was being conducted at DUT, permission to conduct the study at DUT be sought. The necessary clearance was obtained from the Executive Dean of the Faculty of Health Sciences, Prof. N Gwele on 13 February 2006. A copy of the letter of approval is attached<sup>7</sup>.

### **3.7 Limitations**

The following design limitations were noted. I am currently the head of the Department of Dental Services. Consequently, I have direct responsibility for both learners and staff in the Dental Technology and EFYP programme. Therefore, both staff and learners could have been affected by my position in the department. This could affect responses for various reasons. These include:

1. Fear of being victimised for negative responses.
2. Being intimidated by my position as head of department and thus shy of the personal interaction arising out of the interview process.
3. Out of respect for my position respondents might give answers that they perceive that I might want to hear rather than what they personally believe.

All learners were addressed collectively in order to address any potential resistance to being interviewed as well as to give respondents an explanation of the research process. Thereafter, learners were given a copy of a handout explaining the research process and were asked to complete it<sup>8</sup>. They were then invited to ask questions. None were asked. Hence, learners were fully

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<sup>6</sup> Annexure G – Letter from UKZN, Ethical Clearance Approval Number HSS/0036/08M

<sup>7</sup> Annexure H – Letter of approval from Executive Dean: Faculty of Health Sciences, DUT.

<sup>8</sup> The description of the research process was to ensure that learners were fully informed before volunteering to participate in this study. But it also had the advantage of raising learners' awareness as to some aspects of the research process. As the department is trying to grow a research culture (with staff members, such as myself, undertaking further studies) we use every opportunity to develop student interest in research.

informed of the research process. Moreover, as the sample size was small, no difficulty in obtaining respondents was anticipated. In fact more than the required number of respondents indicated their willingness to be interviewed.

Likewise, it was anticipated that there might be some initial resistance of staff to cooperate with me, especially those staff, if any, who were ideologically opposed to the EFYP. As I am Head of Department I considered that staff might be reticent to provide negative responses for fear of retribution. However, all staff willingly agreed to be interviewed. Prior to each interview, staff, again, were encouraged to be honest in their responses and reassured that I wanted to hear all positions and opinions in regards to the EFYP.

At each interview it was emphasised that responses would be used for research purposes only. Thus, it is concluded that responses received during interviews from both learners and staff were as full a representation of the learner's and staff's views as possible.

Another potential limitation is that only learners passing the EFYP at their first attempt were interviewed. Without exception, every learner interviewed viewed the EFYP as a positive experience. It must be considered that learners who failed to complete the EFYP would have a different perspective. However, the study excluded such persons as these persons had left the institution and were very difficult to trace. Learners successfully completing the EFYP are discussed later in Chapter Four, *section 4.3 – 'Analysis of data - Quantitative data'*.

There was a possibility that records in the Department of Dental Services had not been kept up to date. Additionally, academic data records, as a result of the merger between Technikon Natal and the M L Sultan Technikon, may have been lost as a result of the merger process. These fears were unfounded and quantitative data was readily obtained for this research and can be considered sufficiently reliable and accurate.

Whilst the limitations affecting the validity of this study have been noted, it is accepted that no piece of work can ever claim to be completely free from threats of validity and reliability claims (Cohen, Manion & Morrison, 2005).

## **3.8 Validity**

### **3.8.1 Understanding validity**

Data generated by the research process must be trustworthy and its validity established. Van der Riet and Durrheim (2006:90) state that “in its broadest sense, validity refers to the degree to which the research conclusions are sound”. Hence, in a research study the “validity represents claims to the trustworthiness or credibility of qualitative or quantitative data gathered for the purposes of making decisions or drawing inferences” (Collins & O’Brien, 2003:371; Erlandson et al, cited in Creswell, 1994). Thus, data generated needs to be scrutinised in an attempt to determine whether the “meaning and interpretation of an event is sound or whether a particular measure is an accurate reflection on what you intend to find out” (Vithal & Jansen, 2004:32).

No piece of work can ever claim to be perfect and thus purport to be completely valid and reliable. However, being continually mindful of the need to generate sound, trustworthy data and arguments will minimise the chance of an unsound and thus invalid study. Validity is a consideration to both qualitative and quantitative research (Cohen, Manion & Morrison, 2005).

In quantitative research, validity is improved “through careful sampling, appropriate instrumentation and appropriate statistical treatment of the data” (Cohen, Manion & Morrison, 2005:105). Qualitative research accepts a degree of bias in the reporting of data (Krefting, 1991). This is due to the subjectivity of the respondents. Krefting (1991:214) states that the “subjective meanings and perceptions of the subject are critical in qualitative research, and it is the researcher’s responsibility to access these”. Thus, qualitative data can never be perfectly valid. Validity should be rather seen as “a matter of degree rather than an absolute state” (Cohen, Manion & Morrison, 2005:105).

The researcher must make careful consideration at the reporting stage that the data is not invalid. Cohen, Manion and Morrison (2005) suggest that the following must be noted and minimised at the reporting stage if the data is to be valid:

1. Data must not be used selectively and unrepresentatively.
2. The degree of confidence which can be placed on the results should be indicated.
3. Data presented must not be misrepresented.
4. Claims must be sustainable with reference to the data.
5. Inaccurate or wrongly reporting data must be avoided.
6. The researcher must ensure that the research questions are indeed answered.

Guba (cited in Krefting, 1991) developed a model for the trustworthiness of qualitative research. Guba's model is relevant to this research study as it has been extensively used by qualitative researchers, especially educators (Krefting, 1991). Guba's model identifies four relevant aspects of trustworthiness. These are: "(a) truth value (b) applicability (c) consistency, and (d) neutrality" (Krefting, 1991:215).

The confidence of the researcher in the truth of the data generated is referred to as 'truth value'. This takes into account the "research design, informants, and context". 'Applicability' refers to the "ability to generalize from the findings to larger populations". Thus, can the data be used in other similar situations and still be valid? If the study can be of use to understanding similar situations then the research can be said to be 'consistent' (Krefting, 1991:215). Finally, any bias, noting that perceptions are by definition subjective, needs to be considered in the study. If the bias is controlled, it is said to be acceptable. Thus "the findings are a function solely of the informants and conditions of the research and not of other biases, motivations, and perspectives" (Guba, cited in Krefting, 1991:215).

### **3.8.2 Validity of data generated by this study**

In order to ensure trustworthiness of data, Guba's model, as explained above, was employed.

The data was checked for validity by careful examination for accuracy of the transcription process of the individual interviews. This was achieved by listening to the recordings again in order to check the transcripts. All responses were thoroughly examined. Recording was of a high quality and those parts of the transcriptions that the transcriber had difficulty understanding were easily corrected by me by re-listening to the recordings. This was done during the coding procedure.

In addition, validity of data is improved if the bias of the researcher, the respondent and substantive content of the questions can be minimised (Cohen, Marion & Morrison, 2005). I was apprehensive about bias during the interview process. Again, it is noted that that I am currently the Head of the Department of Dental Services and was concerned that this might influence responses. However, at the beginning of every interview I stressed that honest responses from participants would be valued. Participants were informed that there would be no consequences to their responses, even if the responses were negative. Participants interviewed appeared to be honest and genuine in their responses. No responses were received or internal contradictions within interviews occurred that would suggest otherwise. Participants spoke their minds and expressed criticism where they felt it was appropriate. Reliability was achieved by attention to the following:

1. careful formulation of questions
2. interviewer training. A pilot interview was conducted and the results analysed. This analysis was conducted as part of the course work section of this Masters in Education qualification
3. greater control of the physical elements of the interview, such as putting participants at ease and attempting to make participants as comfortable as possible. However, it is noted that too great a

control runs the risk of reducing the validity of responses when the interview becomes too rigid during delivery

(Cohen, Marion & Morrison, 2005).

### **3.9 Conclusion**

In this chapter the paradigm by which this study was conducted has been identified. In addition, the difference between qualitative and quantitative research is discussed. I have argued that this study is primarily a post-positivist qualitative research study conducted in an interpretist paradigm. Where appropriate, descriptive quantitative data has been generated in support of the study.

The primary data source in this study consists of *semi-structured* individual interviews. In total, 16 interviews were conducted. The determination of the sample size and the method by which participants were selected was discussed and explained. In addition, the source of the quantitative data was described.

In discussing possible limitations to the study, I concluded that I was cognisant of the problems associated with conducting this type of research. To the extent that it is possible (given the problems associated with conducting interviews to generate data), I concluded that the results of this study are reliable.

The necessary permission to conduct the study was obtained by both the University of KwaZulu-Natal as well as the Durban University of Technology. Ethical considerations in respect of the study were discussed. It can be concluded that the study is ethically acceptable. The necessary signed informed consent forms were obtained by all participants in the study.

Finally, research validity was theoretically explained and the research results were defended as valid. I will now move on to discuss the findings that arose from the data collection and analysis process described in this chapter.

## **Chapter Four - Findings and analysis**

### **4.1 Introduction**

Analysis of the data generated from the qualitative research resulted in the following themes and sub-themes being identified. These are listed in **Table 5** below. Thereafter, I will discuss each theme and sub-theme in detail.

The identification of themes is always a subjective activity and is ultimately determined by the researcher. I have attempted to be rigorous in such identification by considering issues raised in the literature and looking for parallels or disjunctures in my own data, and by discussing the themes with my supervisor and colleagues. To further augment my discussion of the themes below, I have where appropriate, used relevant quotations from the data in order to illustrate and support the findings and where applicable, I have used relevant literature to support the identified theme. The names attached to quotations have been changed to ensure anonymity. However, interviews have been transcribed verbatim.

The data generated and discussed in this chapter answers questions one, two and four of the research questions (see page 13, section 1.9). Question three, namely, “What are the national objectives of the Department of Education (DOE) in respect of extended programmes?” is answered through the general discussion in Chapter Two on national policy and its relevance to foundation provision.



**Themes and sub-themes:**

Theme	Sub-theme
<p>1. The EFYP was unanimously accepted by both staff and learners as contributing positively to academic development.</p>	<p>1.1 Learners recognised the true value in hindsight.</p> <p>1.2 Learners recognised the EFYP as contributing to their academic development.</p> <p>1.3 Staff recognised that the EFYP was contributing positively and was bridging the perceived gap between the schooling system and tertiary education.</p>
<p>2. The EFYP prepared learners holistically for tertiary education.</p>	<p>2.1 Learners gained skills from non credit-bearing generating subjects.</p> <p>2.2 Learners perceived a reduced workload as a contributing factor in preparing them for their tertiary educational life.</p> <p>2.3 Learners and staff were positive about course content.</p> <p>2.4 Relevant factors for improving course content were identified.</p>
<p>3. Learners were ambiguous as to whether they were financially compromised by attending the EFYP.</p>	<p>3.1 Affording the EFYP.</p> <p>3.2 Financial advantages of the EFYP.</p>

**Table 5**

Theme	Sub-theme
4. Learners were well integrated in the Dental Technology programme.	4.1 Learner integration into the Dental Technology programme.  4.1.1. Integration during the EFYP.  4.1.2. Integration during the subsequent year.  4.1.3. Staff perceptions on the integration of EFYP learners into the Dental Technology programme.  4.2 The departmental mentorship programme contributed to integration.
5. Staff were generally unaware of the National objectives for higher education.	

**Table 5**

#### **4.2 Analysis of findings – Qualitative data**

**Theme 1: The EFYP was unanimously accepted by both staff and learners as contributing positively to academic development.**

Both staff and learners perceived that the EFYP was of significant benefit to those learners who had attended the programme. However learners only appreciated the true value of the programme in hindsight. This finding is consistent with those of Wood and Lithauer (2005:1008) who reported: “Although some of the students did not realise the value of the programme when they were doing it, in hindsight they did acknowledge that it did help them”.

Generally, learners understood the reasons for their placement on the EFYP.

*Personally at matric what I thought was the reason was probably because of my Physics marks, particularly that made me to be placed in that programme* [Learner R ]

*I think I was put in the extended course because of the results I applied with.* [Learner W]

*Because I'm academically weak, theory subjects I'm weak at.*

[Learner T]

Learners were generally not pleased to be placed in the EFYP but, with time, accepted it. However, acceptance did not necessarily mean that they were happy to be placed on the EFYP. One learner had this to say:

*I thought it wasn't a good thing but I always felt I would have made it in first year.* [Learner X]

Nevertheless, all learners, without exception, appreciated being placed on the EFYP, albeit it in hindsight. Further discussion is elaborated upon below.

### **Theme 1.1: Learners recognised the true value of the EFYP in hindsight**

All learners interviewed, upon reflection, came to the conclusion that their participation in the EFYP had benefited them personally. This became apparent in time with some learners appreciating their placement on the programme sooner than others. *Learner Z* found difficulty in accepting her placement on the EFYP. However, she soon realised the benefits of her inclusion.

*I didn't understand at all. I said, okay, I didn't perform well, it means that's why they put me here. But as time goes on now I realise, I say no, it's not like that.* [Learner Z]

Others, such as *Learner V* took a little longer to appreciate any true value of being placed on the EFYP. She had this to say:

*Like last year, I don't think it was a very good idea for me to enter the extended course but, eventually, now I see that it really helped because I wouldn't be – I wouldn't have been able to pass this – the mainstream course if I hadn't entered the extended course.*

*[Learner V]*

This sentiment is confirmed by other learners.

*Yes, overall it was a positive experience, because in the end now I see it is very effective.*

*[Learner X]*

*At first I was like, okay, so it was like extended first year but my knowledge was I'm doing a foundation course and that was not good but then when I came to the programme in the system it kind of like clicked that I'm not really doing a foundation course where I'm just going to do it now, that I can just change my mind later, it was kind of like a stepping stone for me in dental skills, dental technology skills, so at first I was a bit hesitant but then....*

*[Learner Y]*

*Learner Y's* comment confirms the findings of previous research that found that the benefits of foundation provision is far greater when the course content is immediate and directly related and thus relevant to the qualification that they have registered for (McKenna, 2004a; Warren, 1998). Finally, *Learner U's* words sum up my findings showing that the EFYP was valued in hindsight.

*Yes it was, and I actually saw that when I actually did my first year mainstream.*

*[Learner U]*

From the above we may conclude that learners initially were not happy to be placed on the EFYP. However, in time they began to value the opportunity, and, as will be seen below, view the time spent in the programme as a very positive experience. It is suggested that the value of participating in the EFYP was readily appreciated because of the way the EFYP is structured. The programme is specific to Dental Technology and the course content is integrated in such a manner that the learner is immediately introduced to the

nature of the profession. Thus, learning becomes immediately relevant due to a curriculum that is discipline orientated.

**Theme 1.2: Learners recognised the EFYP as contributing to their academic development**

Notwithstanding the fact that learners recognised the value of the EFYP in hindsight, they also acknowledged the generally positive contribution that the programme made towards their academic development. Some felt that without the introduction to academic life that the EFYP provided, they would not have performed successfully academically in subsequent years.

The programme helped to better understand their chosen profession as they admitted that they had little real understanding when they registered for the programme. The EFYP motivated them and provided them with a detailed knowledge of the Dental Technology profession. The learners also felt that by being introduced to the different facets of Dental Technology, they were being empowered for the remainder of the Dental Technology qualification by being in possession of prior knowledge of the profession. This finding is consistent with that of Warren (1998:77, cited in McKenna 2004a) who, when commenting upon the remedial intervention in respect of English, stated that “reading and writing are not merely ‘skills’, which can be dealt with in a remedial fashion; they constitute the very means through which academic learning and knowledge construction occur”. Thus, remedial learning is advanced when the specific practices required for success in a learner’s chosen diploma are integrated into learning (McKenna 2004a).

*[The programme] helped me a lot because now you know at least you’ve been introduced to these materials, you know, now you know a little bit of what’s coming to you in the next few years. [Learner Z]*

In addition, some learners believed that the time spent in the EFYP gave them confidence and helped them to develop the kind of identity that so many first generation, first year students battle with (McKenna, 2004b; De Kadt & Mathonsi, 2003).

*I think, because when you come from the foundation course you already know what's happening, you already know what's wanted of you and you understand the course much better and you have that confidence.* [Learner V]

One learner expressed surprise at how much he had benefited from the EFYP and had no regrets for the time spent participating in the programme.

*I think it was a good experience, I mean it was great, okay. I mean it was a great course, I mean you learn so much!* [Learner R]

From the above it may be concluded that learners positively valued their time participating in the EFYP. No negative comments were received. What was pleasing was the extent to which students articulated that it was the development of discipline-specific awareness and discipline-specific practices that made the course so valuable. It must however be remembered that a limitation of this study is that only learners who passed the EFYP were interviewed. Learners who failed the course may well have a different understanding as to the contribution of the EFYP.

**Theme 1.3: Staff recognised that the EFYP was contributing positively and was bridging the perceived gap between the schooling system and tertiary education**

Staff were unanimous in their belief that the EFYP was contributing to the improvement of the academic standards of the department. This was true of all staff involved in the teaching of the EFYP as well as those not directly involved in the EFYP. Staff attributed improved pass rates in the Dental Technology programme directly to the influence of the EFYP.

*We are getting a far greater success by having the bridging course. Looking at the pass rates – I mean our pass rates last year were phenomenal – and one of the reasons, one of them is I think that we're having a far more successful foundation course.* [Lecturer B]

The perceptions of staff mirrored the positive views of learners. The following comment was made by a staff member not involved with the EFYP.

*No – I don't know – honestly I don't know much about it - the workings of it, but everything that I do know of it is positive. I haven't seen one negative thing come out of there or a student saying, you know, 'why the hell did we do that?', so – I've never heard a negative comment on it.*  
[Lecturer A]

Staff were concerned about the quality of the matriculants coming into the tertiary environment. Views on matriculation standards, and therefore the need for a foundation provision, were summarised by two members of staff:

*Well, I think that the standard, the quality of students coming out of matric has definitely dropped, and there needs to be some sort of step-up – not for everyone – so, um there's a purpose for students who need that little bit of grounding. I think it gives students a better idea and a more comfortable platform to find out what Dental Technology is about.*  
[Lecturer A]

*The other challenge that I – the other problem that I'm greatly concerned with is the results of what they attained in matric. Um, what's on paper and the potential of the student is quite different – they do not speak the same language if you may say that. And that for me is the greatest challenge. The students come in with this false sense of security that they are actually competent people, competent learners, um, the challenge for me is making them competent in terms of being responsible and accountable.*  
[Lecturer D]

In addition, staff were concerned that learners, especially disadvantaged learners, were not prepared for the tertiary environment. This can be attributed to the way learners from disadvantaged backgrounds are taught. This is confirmed in the literature (Jansen, 2006; Gussendorf, Liebenberg & Houston, 2004; Hay & Marais, 2004; Van Wyk, 2003; Nair, 2002; Koch & Synders, 2001; Futter, 1999). The views of a staff member with a good

knowledge of the black schooling system, echoes the beliefs of all staff in the department.

*[With] the so-called black students – you don't get to do assignments and projects as much as you do in your Model C schools<sup>9</sup> and so with the Model C schools they expose you to different types of thinking and not just doing, they want you to go out there and find the research and apply it to your studies, whereas with the black schools is more like they give you, they spoon feed you what you should know – not that you go out there and find out and resource different materials for your studies.*

*[Lecturer F]*

The above sentiment is reiterated by another staff member who believes that disadvantaged learners are often less prepared for the independent nature of higher education tasks:

*What I often find is students walk into Dental Technology extended first year, they don't really have an idea about how to approach – let's say a practical task – the steps that they should be taking.*

*[Lecturer E]*

### **Conclusion – Theme 1**

Thus, it may be concluded from the data obtained from the staff and learner interviews that all respondents viewed the EFYP as a positive contribution to individual academic success as well as contributing positively to the academic integrity and standing of the programme. Whilst it is true that most learners only truly appreciated their participation on the EFYP in hindsight, there was not one dissenting voice in respect of the positive contribution that the EFYP made to their academic success. Likewise, the staff were unanimous in their approval of the EFYP. While one would expect that staff directly involved with the EFYP would be positive, it is significant that all staff not directly involved in

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<sup>9</sup> For a brief time before the first democratic election in South Africa in 1994, government schools that chose to open their doors to all race groups were termed 'Model C' schools. Although all schools are now open to all races, the term has entered the South African vernacular and come to mean government subsidised schools that were previously designated 'whites-only'.



the programme also appreciated the role of the EFYP in contributing to better pass rates.

## **Theme 2: The EFYP prepared learners holistically for tertiary education**

Both staff and learners believed that participants on the EFYP were, better prepared for the demands of the tertiary environment. One staff member described the EFYP as an ‘*advantage*’.

*Once they've been through that advantage, in other words they've done some subjects, they done some literacy or they've done some Dental Technology practical and they've done some theoretical subjects that's related to Dental Technology, by the time they get into second year, they actually have an advantage already, um, or by the time they get into first year they've got an advantage and then with the first year obviously by the time they get into second year they've had a double kind of reinforcement in Dental Technology. [Lecturer G]*

A learner expressed similar sentiments and commented that the year spent in the EFYP helped equip him with time management and study skills that ultimately would give him an advantage over those learners accepted directly into the Dental Technology programme.

*Okay when we, the extended first year, okay we used to attend a lot of the academic literacy and other subjects which actually gave – taught us how to – method of studies and how to write [dental] assignments and all that, so when I came to first year I was well exposed to these things and actually know how to manage your time and study and those things, so it sort of gave me a step ahead compared to the other students who didn't go to the extended first year programme.*

*[Learner X]*

Learners and staff indicated that the non credit-bearing subjects were a significant contributing factor in preparing learners to successfully cope with subsequent years of study. These subjects include *Computer Literacy, Dental Drawings and Carvings* and *Introduction to Dental Technology. Academic*

*Literacy* was curriculated in the earlier years of the EFYP as a ‘stand alone’ subject, but since 2005 has been incorporated into *Introduction to Dental Technology*. This subject is a combination of Dental Technology theory and practical skills. The inclusion of academic literacy as part of *Introduction to Dental Technology* was discussed in Chapter Two. Data generated in respect of the contribution of the non credit-bearing bearing subjects is now discussed in greater detail.

### **Theme 2.1: Learners gained skills from non credit-bearing subjects**

Responses from learners indicated that they valued the skills gained by their participation in the compulsory non credit-bearing subjects as previously described. Learners especially appreciated the exposure to the use and functioning of computers that the subject *Computer Literacy* provided. Six learners noted that the schools that they had attended lacked any computer resources education. *Learner U* attended the EFYP before *Computer Literacy* was introduced as a subject. She recognised the value of its present inclusion in the current EFYP curriculum.

*Oh, we didn't have computer skills, we didn't have computer skills back then, so that's an added bonus now that they have it. [Learner U]*

*Learner W* was enthusiastic about the training in computers that she received.

*Oh, ja, and computers because in computers I got [a] distinction. But it was my first time doing the computer here in the tertiary side – I got [a] distinction – so it's very easy to – it made my life easy learning those subjects such as computer[s]. [Learner W]*

*Ja, because in my assignments I can search the Internet and take some pictures and put them in my assignments<sup>10</sup>. [Learner Q]*

The feelings of *learner Q* are confirmed by *learner Z* who states:

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<sup>10</sup> Learners are, however, warned of the dangers of plagiarism and receive specialised tuition on plagiarism and referencing as part of the EFYP from library staff.

*Really my lecturer helped me a lot because now I've – like say we're using them to write assignments, but it's work now I can do anything with the computer now, unlike when I was coming, wow it was bad.*

*[Learner Z]*

Computer literacy skills were not the only skills appreciated by learners. Dental Technology is a practical profession which requires manual dexterity in order to be able to carve and draw teeth and appliances. The subject *Dental Drawings and Carvings* is designed to give learners a general artistic skill that provides them with the necessary ability to construct dental appliances. Learners confirmed that this subject played an important role in their academic development.

*Well a lot of things, but mostly, it's the carvings, the tooth carvings and the drawings because at the beginning I couldn't even draw like a spider. Now, like after six months I could draw and I was comfortable drawing and I was able to carve the teeth.*

*[Learner V]*

*When I came to the institute I was not computer literate, I couldn't draw to save my life and being on the programme and having somebody to teach you, okay, this – when you look at an object don't just look at like from just what you see, look at it with an eye, like, I was kind of like given that artistic knowledge to know, to help me in a way that now when I do crown and bridge, like two years later, I still have that knowledge as to that. Whenever I'm carving or drawing I must just – those small details, they change everything, so it was the thought of like getting to know everything and you know. It was quite good.*

*[Learner Y]*

Contributing to the reported success of the non-credit bearing subjects is that these subjects are specific and thus relevant to the programme. For example, learners do not learn generic drawing skills but rather dental drawing skills. The generic skills are thus applied in a focused direction. Likewise academic literacy and computer skills are directed in a practical dental technology

direction and thus the learner sees direct integrated relevance to what is being taught.

As this learner indicates, the EFYP was a place for overt induction into the discipline specific practices required for success. All learners interviewed appreciated the value of academic literacy, albeit only in hindsight.

*...like academic literacy, we didn't understand why we had to go there initially at the beginning* [Learner V]

However, this learner was later able to understand the value of Academic Literacy. When asked what in the EFYP stood out for her she replied:

*Academic Literacy because in that course the lecturer gets to tell us how do our assignments, how to adjust, how to manage our time as foundation students and just, we talk about most of everything, like if we have [dental technology subjects] maybe that she can help us with* [Learner V]

All learners interviewed were positive in respect of the academic literacy component. This issue will be further discussed below as learners' reaction to academic literacy, in the past, has not always been positive. Other relevant positive comments in respect of the academic literacy component of the EFYP are included below.

*Um, like academic literacy it has, because I know towards [how to do] my assignments and communication, ja* [Learner Q]

*Yes, it helped me a lot, actually and literacy academic, because now they play a major role in our subjects that we are doing.* [Learner Z]

Learner Z's comment makes clear the importance of subjects like Academic Literacy having direct relevance to the practices expected of students in their other subjects. The issues of disciplinarity of academic practices and the transfer of skills were both discussed in Chapter Two. Learner Y's comment, below, further emphasises this point:

*Because that subject, you know, as a whole, put everything together for you. We were kind of like given that – the lecturer she's not with dental but she learnt from us, so from the little knowledge that we had from tooth morphology and stuff, we'll pitch it back to her so in a way, we kind of like, it's like helping us understand our work much better, because in academic literacy we worked as a class, as a group so we had presentations, we had communication skills, those kind of things, so it's kind of like stood out for me: academic literacy. [Learner Y]*

The norms of academic writing are foreign to most new students and are very rarely made overt by lecturers (Winberg cited in McKenna 2004a; Ballard & Clanchy 1988). *Learner R* explains the role that academic literacy played in making learners aware of these subtle expectations:

*...and academic literacy, yes, I think that once you first come to tertiary, lecturers don't just want assignments typed, they also want them written in certain ways, Preface, Table of Contents, etc, etc, and during this time I think that it's good that students are given those skills to be able to know how to do an assignment, how to go about referencing etc, etc, so all of that is basically was, is good and helped me a lot. Definitely helped me. [Learner R]*

In conclusion, learners viewed the foundation provision subjects very positively. The criticism that they had was directed at credit-bearing subjects (see section 2.4 below). This negative response will be further discussed in the discussion section on these findings.

**Theme 2.2: Learners perceived a reduced workload as a contributing factor in preparing them for their tertiary educational life**

A significant factor in the eyes of learners was the fact that the EFYP allowed them a reduced workload and thus they were under less pressure as opposed to the workload of the traditional first year learners. This confirms the findings of De Klerk et al (2005) who, in a study of the University of Stellenbosch's Extended Degree Programme noted that learners appreciated that they were afforded more time to deal with their academic workload as they had fewer

subjects. Learners had this to say with reference to their reduced workloads on the EFYP.

*No, it wasn't because I've learnt a lot of skills in dental technology in terms of prac in first year because the workload wasn't so much so we kind of like to know more materials and learnt to adapt so by the time I was in mainstream.* [Learner Z]

*Because I mean of the workload and stuff, because half the subjects you do them in the foundation course and you don't do them in the mainstream. So in a way it did decrease the workload and it did help me understand the course much better.* [Learner U]

*Well, it definitely made my first year a lot easier, the mainstream, because I had half the subjects done already and it was less stressful* [Learner T]

### **Theme 2.3: Learners and staff were positive about programme content**

Surprisingly, all learners and staff were satisfied with the content of the EFYP. Few suggestions were received to improve the programme, this despite in-depth probing of the staff and learners.

### **Theme 2.4: Relevant factors for improving course content**

As noted above, few suggestions were received in respect of improving the course content of the EFYP. Staff and learners were generally satisfied with the curriculum as revised in 2005. The changes made were viewed positively by a learner who completed the EFYP prior to 2005. During her interview she noted that computer literacy was absent from the curriculum in her foundation year. She commented thus:

*Yes, yes, I missed out. I mean coming from the school that I came from, it would have been an advantage for me to come here and do the computer skills at that time.* [Learner U]

The sentiments of this learner is confirmed by another learner who did not do computer literacy during the EFYP.

*I think it would have been better if we did computers.* [Learner X]

Learners who completed the EFYP with the current curriculum were unanimous in their agreement that the EFYP was fulfilling its mission. They had this to say:

*Mm, I wouldn't change much, I wouldn't change much, because even those minor subjects, Oral anatomy, Physics and Chemistry, they helped a lot, so but Physics is very hard but, ja, we have to learn them. I wouldn't change anything, basically.* [Learner W]

*No, I think that everything was fine.* [Learner Q]

*It has the package that is good.* [Learner Z]

Learners on the EFYP are required to complete a credit-bearing subject called *Communication*. *Communication* is a formal subject which is offered in a fairly generic nature across a number of programmes and concentrates on formal written business English, for example letter writing and report writing. This subject is usually offered in the third year of study in the Dental Technology programme. However, the value of *Communication* as a potential foundational subject was noted by the Department because of its extended focus on reading, writing and presentations, albeit for the workplace. It has been offered as a formal subject in the EFYP since the programme's inception. Some learners were of the opinion that this subject also contributed positively to their academic advancement.

*Yes, yes, especially Communication. It helps a lot, as like myself, like we're coming from the disadvantaged background, they tried to channel us, you know, how to communicate, how to write things, how to that and that and that, so it helps a lot. Even if you do not become 100% but then at least you shift a bit.* [Learner Z]

The above sentiment was not universally accepted by learners. Interestingly, when asked to comment on what they felt needed improvement in the EFYP, they pointed to this credit-bearing subject outside the direct control of the Department of Dental Services. Learners had this to say:

*...Communication. I mean it's a good subject that you need, basically when you get to third year then you will need, but I think that it sort of – the way it is structured, I mean the way it's taught, it's not very, it doesn't sort of – you have to have some sort of, okay, the dental industry is like this, you know, and then basically these are the kind of communication skills you need. With communication it's just taught the way communication is being taught to anybody, you know. We're not taught how to properly write a report in the sense that, okay, if you have a tooth morphology assignment and the lecturer will say okay, go out and write a report on what your findings were, they won't teach you how to properly write a report in the sense that it would relate to dental technology, it's just an island, you know, it's just an island that's placed around dental technology but does not link in any way, you know, to what you learn.* [Learner R]

*With Communication it's just taught the way Communication is being taught to anybody, you know* [Learner Y]

Where any improvements were suggested for other subjects, it was related to the content of the subject and not the subject per se. One learner believed that the academic literacy component of one of her Dental Technology subjects needed attention. In response to her comments regarding Academic Literacy, she was asked if she was implying that Academic Literacy needed to be more structured and that it should be focused towards specific assignments. She replied:

*Ja, I think.* [Learner V]

Academic Literacy in the EFYP is currently offered as part of another Dental Technology subject and is now addressing *Learner V's* suggestion noted above. However, critical reflection of the delivery of Academic Literacy and



any subsequent refinement will serve to improve what other learners, including *Learner V*, believed is already good (see section 2.1 above).

### **Conclusion – Theme 2**

In conclusion, learners had few suggesting for improving the 2005 curriculum. They conveyed that the curriculum structure currently in operation was providing for their learner needs by preparing them adequately for their continued studies in Dental Technology.

### **Theme 3: Learners were ambiguous as to whether they were financially compromised by attending the EFYP.**

No definite opinions were received as to whether learners perceived that attendance on the EFYP compromised them financially. Some learners did experience difficulties when applying for *National Student Financial Aid Scheme* (NSFAS) learner loans to finance their studies. However, this difficulty in securing loans was offset by them receiving free equipment and materials during the EFYP.

Other learners had no need of financial aid and therefore did not consider applying for loans. For these learners the financial aspects of being placed on the EFYP was of little consequence.

#### **Theme 3.1: Affording the EFYP.**

Learners on non credit-bearing foundation programmes (Bridging/Access programmes as per my definition in Chapter Two) do not qualify for NSFAS educational loans. The EFYP is a combination of foundation provision as well as subsidy generating subjects and learners are immediately registered for the Dental Technology qualification. As such these learners qualify for NSFAS loans. However learners reported an inconsistent application of the rules in respect of granting loans at DUT. They reported that confusion exists as to whether learners do or do not qualify for loans. It appears that some learners received loans whilst others did not.

The confusion in the allocation of NSFAS loans is illustrated by the following diametrically opposed comments from two learners. One learner received a loan and the other did not.

*I don't know, because they told us that when you apply for financial aid your father or that person – the next of kin – who is going to be responsible for you, he must have an annual salary which is less than, I think it's R100 000, so my father couldn't get more than R100 000 so I think that's why I qualified for the financial aid even though I was an extended first year.* [Learner W]

*Ja [I applied], but they didn't take me, then I applied again this year.* [Learner Q]

The lack of understanding of the difference between an add-on foundation programme (Bridging/Access) and an extended programme on behalf of those allocating NSFAS loans at DUT is illustrated by the following comment:

*Ja, for – when I did extended first year I did not, because the financial aid they said they don't sponsor like people who were on foundation programmes and we had to explain to them, this is not a foundation programme, this is an extended first year, so blah, blah, and that they didn't understand so for extended first year.* [Learner Y]

In conclusion, where learners applied for loans and were not given them for reasons unknown, they were disadvantaged by being placed on the EFYP. However, some learners were granted loans. The confusion in loan allocations will be discussed further in the analysis and recommendation sections.

### **Theme 3.2: Financial advantages of the EFYP**

An advantage of being placed on the EFYP is that since 2005, EFYP learners who succeed in the programme are given a certain amount of personal equipment which is theirs 'for life'. This has been made possible by the DOE grant to the Department of Dental Services in respect of foundation provision.

This expensive equipment represents a significant financial saving to those learners receiving this allocation.

*They get them to buy them (equipment). We got them for nothing, but they're buying their own.* [Learner Q]

*From extended first year for free, so that kind of like helped in a way, in terms of money.* [Learner Y]

*...but since I was selected for extended year so I benefited a lot because the equipment was for free, so I can say it helped me to be in the first year extended.* [Learner W]

Some learners suggested that EFYP learners were financially advantaged over learners who did not attend the EFYP and that those learners would have preferred to be on the EFYP for financial reasons.

*They wished that they were from the extended course, because they couldn't afford mainstream.* [Learner W]

### **Conclusion - Theme 3**

No clear conclusion can be drawn from the responses of learners to determine whether placement on the EFYP was perceived as compromising them financially. The study did show that confusion exists to whether foundation provision learners qualify for financial aid. However, the fact that some learners did not receive financial aid, for which they were entitled to as part of an extended curricula programme, was offset by receiving their personal equipment free. The added value of being placed on the EFYP was such that the grounding gained was appreciated later in their studies. The following quote suggests that the added cost of the extra year of study was money well spent.

*Dental technology is a dear [expensive] course so having to spend a year extra with extra fees that was kind of like a setback but regardless of that, in terms of my studies and everything I kind of like got to*

*understand dental technology in a more – no so advanced way – but in a more, in a more relaxing way really.* [Learner Y]

#### **Theme 4: Learners were well integrated in the Dental Technology programme**

The study data generated indicated that learners placed on the EFYP were initially unhappy to be placed on the programme. However, as time passed they were satisfied and contented with their placement on the EFYP. It has been reported by McKenna (2004a; 2003) that learners needing academic development interventions, and singled out from their classes to receive such interventions, feel stigmatised by being placed in these programmes. On the other hand De Klerk et al (2005) found that learners placed on the University of Stellenbosch's EDP did not feel stigmatised by their placement on this programme. However, McKenna was reporting on learners placed in traditional programmes who had been singled out as being in need of extra remedial tuition while De Kerk et al (2005) were reporting on learners placed on a specific foundation programme. Moreover, McKenna (2004a) reported that where academic literacy interventions were integrated into a traditional curriculum as part of a subject, learners felt no stigmatisation at all. This study confirmed the findings of De Klerk et al (2005) and McKenna (2004a); namely, that learners on the EFYP were well integrated into the Department of Dental Services and, especially since 2005 (see discussion in Theme 4.1.1 below), did not feel stigmatised by their placement on the programme. Various reasons for their contentment will be discussed. In addition, the reactions of staff to learners placed on the EFYP indicates that staff consider EFYP learners to be completely integrated into the Department of Dental Services.

#### **Theme 4.1: Learner integration into the Dental Technology programme**

##### **Theme 4.1.1: Integration during the EFYP**

This study investigated the social integration of EFYP learners during their year in the extended programme as well as their integration with other learners when they joined these learners in their second year of study. The investigation found little evidence to suggest that stigmatisation played any

role in the integration or performance of learners in the Dental Technology programme. Learners were content in the programme. Where EFYP learners did feel that they were being identified by other learners as being different, they were generally unconcerned.

In reporting the findings, a distinction is made between those learners completing the EFYP before and after 2005. The year 2005 is significant as this was the first year that the EFYP was offered under the DOE provision for foundation programmes. Subsidy provision provided for the employment of a dedicated staff member for the EFYP. This appointment was significant in contributing to overall learner contentment. Moreover, in 2006, a dedicated classroom was provided for the EFYP. This, too, was found to have a significant impact on learner satisfaction and integration.

*Learner Z* at no time felt stigmatised by being placed on the EFYP. When she was asked if she felt different or inferior by being placed on the EFYP she replied:

*For me, not at all, not at all.* *[Learner Z]*

She, and other learners, attributed this to the fact that the EFYP learners formed a group in which they interacted and gained support from each other. Thus, being comfortable in the group resulted in a general happiness with the programme.

*With my group I was comfortable, yes I was, and also I was watching them how they performed so I wanted to at least make the standard with my group, and we, I had a good relationship because we used to study in a group, and when – what I used to do – even this year I'm doing the same – when I don't understand something I pick two to three students that I know they're performing well, then they explain to me, as I'm doing even this year.* *[Learner Z]*

*I really liked working with like a smaller group of people so in the class I was – we were very comfortable in class, because we knew that we had our lecturer and he was always there for us and like we could*

*relate to one another, we could talk about our problems like in class because we were working with a smaller group, and others could look down on us so what we had to do, we had to prove them wrong. It doesn't mean that we are less, like intelligent, than they are.*

*[Learner V]*

The advantage of working in small groups and thus providing for learner satisfaction was reported by Wood and Lithauer (2005) as well as De Klerk et al (2005). Group size of the UFP study at Nelson Mandela Metropolitan University ranged between 20 and 35. The exact group size was not specified by De Klerk et al (2005:8) in their study of the EDP at Stellenbosch University but they reported “that smaller classes made them [learners] more confident”. The dental EFYP has a maximum of 15 learners in the group and thus, given the correct stimuli, it could be expected that a close bond would be formed.

The views of learners attending the EFYP from 2005 contrast with learners who completed the EFYP prior to 2005. When asked if they felt stigmatised by their participation on the EFYP they commented:

*At first, yes, before I understood what it was all about.* *[Learner U]*

*Sometimes, sometimes, because when I was doing extended first year, we used to use the first year lab and most of the time we didn't have chairs, we didn't have all those things, so whenever we were doing practicals, maybe we would come in then we struggle with the places and all that so somehow you do feel inferior.* *[Learner X]*

The allocation of a dedicated lecturer for the EFYP in 2005 played a significant role in learner integration. The importance of a learner-centred relationship between learner and lecturer was found to be important by Wood and Lithauer (2005). Their findings confirmed the beliefs of Johnson, Monk and Hodges, (cited in Wood & Lithauer 2005:1011) that a “learner-centred approach provides the basis for optimal life skills teaching and modelling”. The relationship of the EFYP learners with their dedicated lecturer is noted previously by *Learner V* and was confirmed by other learners. The following

quotations are by learners who, post 2005, had the benefit of completing the programme with a dedicated EFYP lecturer.

*If you've got a lecturer there who is dedicated, you know, who is specifically dedicated to that class, it helps with the learning process you know, and learning and teaching takes place properly. [Learner R]*

*Mr ..... helps us a lot because he encourages us to help one another, work in partners, you know, but it helps a lot, you know.*

*[Learner Z]*

Learners, prior to 2005, who did not have the benefit of a dedicated lecturer felt the vacuum that this created.

*Um, I would guess so because I mean like, like we also had a lot of time free on our hands, but we didn't really know exactly where to go most of the time, like to which teacher had to go to – we had like a different – we had Mr ..... for our prac teacher and we had other teachers for like English academic and those things so we kind of were like scattered around most of the time.*

*[Learner T]*

A dedicated classroom for the EFYP became operational in 2006. The advantage of this classroom and its contribution to learner integration was confirmed by all learners.

Learners completing the EFYP before the classroom allocation had this to say:

*Well, ja, because at that time this department didn't have a class allocated for us and we didn't have materials given to us and equipment for free or whatever it was, but at that time I mean like we battled to get a desk because when we do get a desk, we would get chased out by the mainstream students and we couldn't get our work done most of the time and it was just not fair most of the time.*

*[Learner T]*

*We didn't even have a place of our own, you know we didn't – we felt like somehow we were outcasts or something.* [Learner U]

*[We] just came to do a minor thing, and just tell you, okay, you move, you're in our place, and that didn't feel so good.* [Learner R]

A learner comments on the value of being in the EFYP in a dedicated venue.

*Yes, it is positive, because now they're in their own lab, its – the whole 15 students they're kind of like working together, so there's nobody on the side kind of giving them that look, oh, okay, they're extended first years, we're better than them and that sort of stuff.* [Learner Y]

The value of the dedicated classroom was noted by the 2006 EFYP learners.

*Ja that was positive, because I heard like the previous years students they said they were in the same class as the mainstream. I don't think that would have helped – that helped because you get distracted. We didn't even care that there were mainstream guys on the other corner, so it was just us and our work.* [Learner V]

In summary, learners completing the EFYP prior to 2005 felt more stigmatised than those post 2005. However any perceived stigmatisation had little effect on learner integration. Other contributing factors to successful integration into the Dental Technology programme include learners being able to identify with their own social group, the learner-centred approach achieved by the allocation of a dedicated EFYP lecturer as well as the provision of a dedicated venue for the EFYP.

#### **Theme 4.1.2: Integration during the subsequent year**

EFYP learners in their second year of study reported no problems integrating with learners accepted directly into the traditional programme. They were unanimous in reporting that they were fully integrated in their new enlarged class.



*We didn't get a negative response from the other students when we came from the course, because I don't remember any of the students saying, okay, now you know the course, you came through extended first year programme.* [Learner X]

Some learners reported that learners who did not have the benefit of attending the EFYP turned to the EFYP learners for help. Thus, they became respected members of the class. The EFYP learners had, through a year's experience, had adopted the identity of a higher education learner as a result of being part of the tertiary environment for a year whereas, the rest of the class were either straight out of school or new in higher education. Thus, new learners appreciated the EFYP learner's experience in the system and thus turned to EFYP learners for help.

*Actually they came up to me for help most of the time because I've done some of the practical work.* [Learner T]

Rather than being stigmatized for attending the EFYP one learner suggested that learners accepted directly into the Dental Technology programme were in fact envious of the perceived advantage that the EFYP learners gained from completing the EFYP.

*Not really, but some of them wish that they were [EFYP learners] – they think that it is unfair that were accepted as the mainstream whereas we have this background of EFY so they think it would have been better for them to enter the EFY first and then come to the mainstream.* [Learner V]

A different learner suggested that it was the pressure of failing a credit-bearing subject that might motivate a learner in wishing to be part of the EFYP. Learners accepted directly into the Dental Technology programme might see the reduced workload of an EFYP learner as a motivating factor in their desire to be part of the EFYP.

*First year and especially in Tooth Morphology there's a lot of work, so they really wished that maybe it would have been better if they did the*

*foundation course because now it's like you're wasting a year because if you fail Tooth Morphology then it means it's another year for you.*

*[Learner X]*

This claim of reverse discrimination is interesting and, if generally supported, would suggest that all learners should enrol for the EFYP.

It can thus be concluded that learners moving as a group into the traditional programme did not feel that they were any different to the other learners. They reported that they were, in fact, looked up to.

**Theme 4.1.3: Staff perceptions on the integration of EFYP learners into the Dental Technology programme.**

Significantly, staff not involved with the EFYP, had no idea of who had passed through the EFYP.

*Like I said, they come in so well camouflaged and that is socially as well as academically. They really come in camouflaged and when I say camouflaged I mean so well integrated in the class that I battle to pick them up.*

*[Lecturer B]*

This lecturer was not alone in his assessment of how well integrated graduated EFYP learners were in the Dental Technology programme. Another lecturer commented:

*I don't having anything to do with first year learners or extended first year learners, so by the time they get to me in second year, they are just a name. I don't know where they've come from or what [is] their history.*

*[Lecturer A]*

So well are some learners integrated academically into the Dental Technology programme that the same lecturer reacted with surprise when given the name of a successful EFYP learner.

*To be honest with you, it's interesting. If you'd asked me if... had come through foundation I would have said no way, she would have been a first year mainstream student.* [Lecturer A]

Having a dedicated lecturer allocated to the EFYP was perceived by staff to be of significant benefit to the integration of learners. The view of staff is adequately summed up by this staff member:

*Um, I think firstly having a dedicated lecturer for the foundation learners, that's very critical. Previously when we didn't have a dedicated person, students kind of fell outside the system, but now having this dedicated person who kind of breaks the ice, who kind of integrates with the other mainstream students, that is critical in terms of student progression, mentally as well as emotionally, and that difference makes an impact greatly on their progress, so that's where I say students become positive in the study of dental technology because this integration becomes apparent to them and having a dedicated person who's concerned about the students' well-being most definitely makes a difference to the students' studies, so yes, that for me, having this dedicated person who's always present, who's ever present and somebody who they can look up to, because students are always – being first year students, specially foundation – uh, it's kind of daunting to them initially because a new environment, a new discipline which they don't have an idea, they have some sort of idea but not quite, and having that one person and knowing that that person exists, um, makes a big difference. To me, it's having that dedicated lecturer.*

[Lecturer D]

Interestingly, having a dedicated classroom for the EFYP was not a factor contributing to learner integration that was raised by many staff. Significantly though, it was raised by a staff member who had, in the past, been involved with foundation provision.

*No definitely, definitely. Much better now when they've got their own venue than in the past. In the past I got the feeling that the main*

*course students, they don't want these foundation courses – part and parcel of their – what can I say, their work space. They mustn't intrude on their work space, and I – I think, listen this is just a perception, I've never come across that two people were fighting or the one was saying this and the other one was – but I read the attitude. [Lecturer C]*

In conclusion, the fact that staff were unable to identify learners who had passed through the EFYP would indicate that EFYP learners were well integrated into their studies and the Dental Technology programme and, at least, academically on par with learners who did not attend the EFYP. Another contributing factor raised by staff was the appointment of a dedicated lecturer. A few staff members believed the dedicated venue was promoting better integration while the majority of staff did not raise this issue.

#### **Theme 4.2: The Departmental mentorship programme contributed to integration**

A significant factor in the integration of EFYP learners into tertiary education and the Dental Technology programme identified by both staff and learners was the departmental mentorship programme.

The benefits that accrue from mentorship programmes are well documented (for example, see Blunt & Conolly, 2006; Wood & Lithauer, 2005; van Wyk & Daniels, 2004; Furlong & Maynard, 1995). As discussed in Chapter Two, the Dental Technology programme offers a well defined mentorship programme. The mentorship programme is perceived to be a contributing fact in the academic success of the EFYP.

Learners see the mentorship programme in a positive light. Significantly, they identified the role that the mentor played in bridging any communication gap between the mentee (learner) and the academic staff.

*When you're here in the institute it's all different, so having somebody appointed to you that they want to help you, it was quite great because in terms of talking to them, telling them everything, because some are*

*very scared of going to the lecturer and approaching the lecturer and telling okay, I have a problem with the way you teach, so you kind of like feel shy and at the end of day you're sitting there failing.*

*[Learner Y]*

*It's a very good concept. The mentorship, yes, I think it should be an ongoing programme because students do benefit from that. You need somebody, somebody who is on your level to speak to, if you're finding difficulties. Sometimes it's very hard to approach a lecturer, especially being new, in the new tertiary environment and stuff. You find it easier to talk to your peers rather than your lecturers, ja, somebody who can actually relate to what you're going through, who understands what you're going through, so I think it's a positive programme and it is good and should go on.*

*[Learner U]*

A learner highlighted the wisdom of appointing mentors specifically for the EFYP. She pointed out that when the mentor was mentoring both traditional and extended programme learners the effectiveness was limited.

*Yes, to a point, but at first it was a bit difficult, because when I was in extended first year, our mentor - we were mixed with the mainstream, so every time we were - the extended programme we were quite back from their work, from what they were doing, and you would find in a group there would be like two people from extended first year and six from mainstream, so when you're there and its time for mentorship, they would be talking about mainstream stuff and you'd kind of get left behind and we spoke about it and it was changed where the Extended First Year have their own mentor and mainstream have their own mentor, because you don't get left behind, you're all getting help at the same thing.*

*[Learner Y]*

Learners identified the role that mentors played in helping them in dealing with personal problems not necessarily connected to their studies but that which could ultimately affect their educational success.

*The mentorship programme. It is really helpful. There are some of the things that you could like tell your peer, somebody or a mentor and there is stuff that you can't really go to your lecturer and talk to.*

*[Learner Y]*

However, a learner noted that the relationship between a mentor and mentee needed to develop over time.

*Ja, it did help, although sometimes we don't feel comfortable enough to tell a person that you have personal problems. But eventually as the year goes on you see the need, because not all of us are outspoken, so, sometimes people just keep quiet, so we think they have problems where they are not coping but they won't speak it out.*

*[Learner V]*

A learner noted that mentors pushed mentees to achieve academically as they frequently asked mentees how they were performing academically. This learner was thus encouraged by her peers to perform and she personally found this challenging.

*Yes, I think this is a very good programme for me, because like they concentrate, they want to know how you're doing to work with your pracs and they do it every day, there's no way that you can tell them that no, I'm doing well.*

*[Learner Z]*

Finally, this study revealed that the effectiveness of the mentorship programme has improved over time. Recent learners, passing through the EFYP, commented positively on the mentorship programme. These views contrasted with those of a senior learner interviewed. When asked about her feelings on the contribution of the mentorship programme to integration of learners, she commented:

*Um, not really that good, well then, I don't know about now. I don't know how they do it now but then it wasn't so – like they'll come and have a meeting with us once a week and ask us what is our problems and stuff, and it was mostly on prac problems than theoretical problems, so it didn't really [help].*

*[Learner T]*

The positive sentiments of the majority of learners interviewed concerning the success of the mentorship programme were shared by the academic staff. Staff overwhelmingly believed that the programme was contributing positively to learner integration and academic success. The following comment summarises the views of staff.

*Listen I think it's a very good thing. I, uh, how can I put it – I've seen students who's got really big problems and by going to this mentor – listen no I can't remember the specific few students, if they were in the foundation or was it first year students, but there was – and the mentor sorted a lot of problems out for them – a lot, so I think it's a very good, well organised, mentorship that these students are going to.*

*[Lecturer C]*

Many of the issues raised by learners were acknowledged by the mentorship coordinator as contributing to the programme success. These were:

1. that a mentorship relationship is developed over time
2. the need for dedicated mentors mentoring only extended curriculum learners
3. mentors forming the link with the academic staff.

The coordinator's perceptions on the mentorship programme are detailed below:

*Initially it's, um, they seem to not understand what is the reason for having mentorship because they haven't quite, um, started the programme or gone into the core thing, but I would say by mid-June, mid-May mid-June, they finally realise, okay, this is what mentorship is all about, this is a programme for the students, um, and it helps them on all sorts of levels, not only academic, psycho-social problems, but the major difference that impacted on the student accepting mentorship was having a dedicated EFY foundation mentor and that seemed to help with the students, so yes I think for foundation it's proven to be a significant role there because they do use their mentors and mentors regularly approach me from – mentors regularly approach me as a co-*

*ordinator, uh, with their problems of what their mentees are experiencing, so just based on the type of documentation I receive from mentors on their mentees which are the foundation students, and the type of problems they have – which I must say is very little – um, so ja I do believe that the mentorship programme is helping the students.*

*[Lecturer D]*

#### **Conclusion – Theme 4**

In conclusion, the findings of this study support the findings of other research in respect of the effectiveness of mentorship programmes. The success of the EFYP mentorship programme can partly be attributed to adapting the programme to meet the needs of the learners.

#### **Theme 5: Staff were generally unaware of the national objectives for higher education**

This study investigated the national objectives for higher education. When asked if they were aware of these objectives, the typical answer from all staff was:

*No!*

*[Lecturer D]*

Another staff member commented:

*The government objectives? I don't, I can't say with a certainty I do know.*

*[Lecturer G]*

However, when pushed further and having had the national objectives explained, staff were able to correlate these objectives with the offering of the EFYP.

*I mean, the way – it's to broaden access to your diploma courses, it's to create opportunities from disadvantaged backgrounds, um, it's to – I would imagine, look and this kind of could be controversial – but I would imagine the Department of Education sees a problem in terms of*



*schooling and they're saying that what's happening in certain areas, and maybe the rural areas, maybe urban areas as well, that there is shortcomings in the schooling system, people are falling through the cracks in terms of people who have potential to go on to tertiary education, but just aren't performing at a school secondary level. There needs to be something done for these students to get access into diplomas and to get access into tertiary education because they have the capacity to get there but for some reason have fallen through the cracks.*

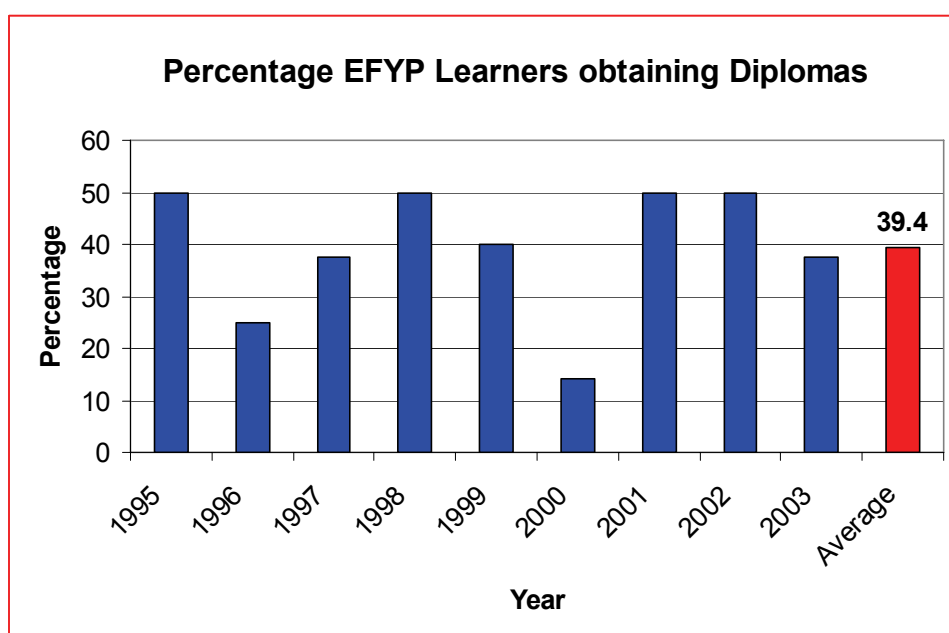
*[Lecturer E]*

The above lack of appreciation of the national objectives for higher education by staff is surprising although understandable as staff have never been formally exposed to these objectives by the institution. Further comment and recommendations will be elaborated on in discussion on the findings of this research study. The discussion will now turn to examining quantitative data that to support and value to the findings of the study.

### 4.3 Analysis of findings – Quantitative data

#### 4.3.1 Learner success after completing the EFYP

The performance of learners who completed the EFYP is now discussed. *Figure 7* below shows the percentage of successful EFYP learners who eventually obtained a qualification in Dental Technology. Some of these learners obtained their qualification in a further three years of study and some took a little longer. No distinction between the two groups is made in *Figure 7*.



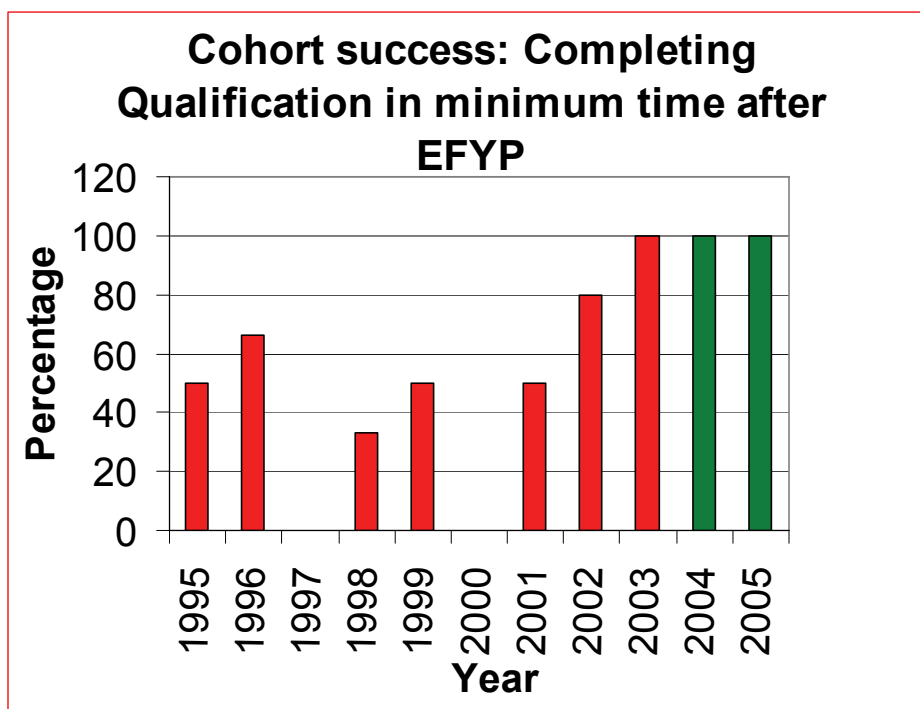
**Figure 7**

For the period 1995 to 2003 a average of 39.3% of learners who attended the EFYP have gone on to earn a Dental Technology qualification. The least successful learners were the 2000 cohort of learners of whom only 14.3% (one learner) eventually qualified while the highest successful years were 1995, 1998, 2001 and 2002 when 50% of the registered EFYP learners eventually went on to earn their qualifications. Learners from 2004 are excluded from *Figure 7* as these learners are currently in the undergraduate programme.

It may be argued that the number of learners graduating after having attended the EFYP is low. However, without the EFYP intervention these learners

would probably not have qualified. As discussed in Chapter Two, Hay and Marais (2004) reported a poor 26 percent success rate for learners graduating from the Career Preparation Programme (CPP) and eventually achieving their degrees. Similarly, they point out that “without the CPP, these 610 [learners] would not have obtained their degrees” (Hay & Marais, 2004:72).

In addition, the study tracked the cohorts of learners after they had successfully passed the EFYP at their first attempt. *Figure 8* below indicates the performance of learners who went on to complete their qualification in the minimum time after having spent a year in the EFYP. For example, the 2003 cohort of learners would, taking the minimum time, have graduated with a national diploma in December 2006. Reference to *Figure 8* shows that 100% of learners who successfully completed the 2003 EFYP qualified in a further three years, i.e. the minimum time. However, no learners who graduated from the 1997 and 2000 EFYP qualified in the minimum time after completing the EFYP. The 2004 and 2005 learners are still studying for their undergraduate diploma. All learners have successfully passed, without failing, into their present classes. The 2006 cohort of EFYP learners is excluded as they are currently in the first year of the traditional programme, i.e. the second year of their studies.



**Figure 8**

Reference to *Figure 8* indicates that the learner success after completing the EFYP year has improved gradually since 2001 and in later years has been excellent. This improvement tracks curriculum changes that have been introduced as necessary, culminating in the re-curriculation that occurred with the granting by the DOE of the foundation provision grant to the Dental Technology EFYP. Whilst *Figure 8* tracks learners after the extended year and indicates that there have been learners who have failed to graduate in the minimum time after the extended year, this research revealed that learners completing the EFYP did eventually obtain their qualifications.

#### **4.3.2 Learner performance in serviced subjects**

Three serviced subjects<sup>11</sup> form part of the EFYP. Some learners expressed dissatisfaction with these serviced subjects. Discussion of these subjects will be expanded upon in Chapter Five, section 5.2. The serviced subjects are:

1. *Communication*
2. *Physics*
3. *Chemistry*

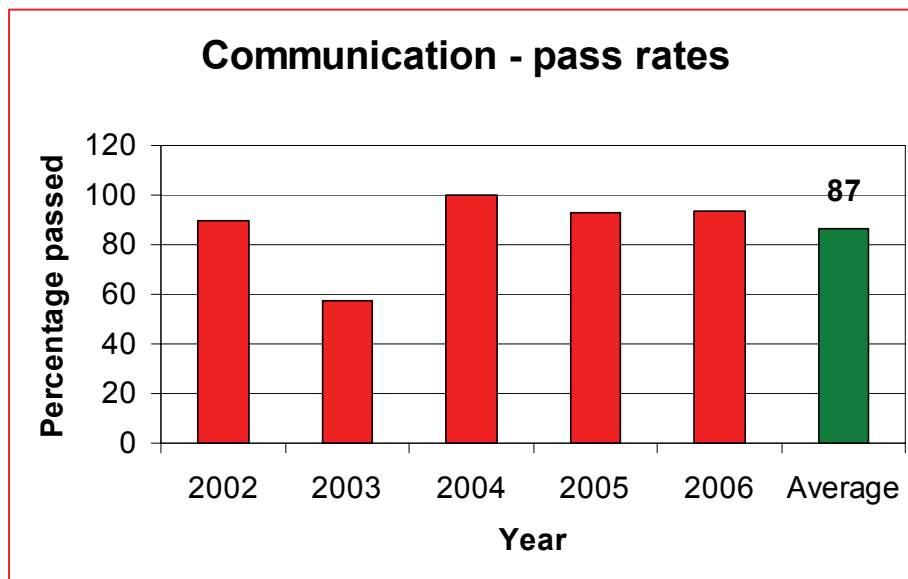
Quantitative data in respect of learner performance in these subjects is detailed below and is included for the purpose of widening the discussion on these serviced subjects.

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<sup>11</sup> Service subjects are those subjects not offered by the host programme department. They are offered by a different department to the programme department, i.e. by another department which supplies a service to the host department. Hence the name, 'service subjects'.

#### 4.3.2.1 Communication

*Communication* is one of the subjects identified by some learners in this study as needing attention. However, learner performance has been excellent. *Figure 9* below indicates a good 87% average EFYP learner pass rate in *Communication* over the last five years.

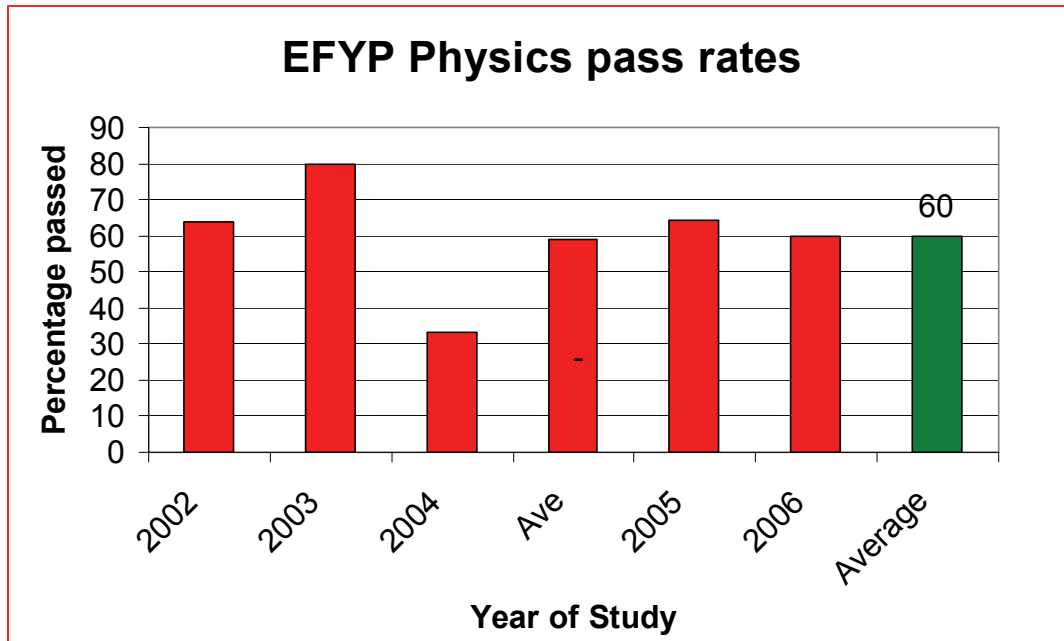


**Figure 9**

As seen in *Figure 9* pass rates this subject, *Communication*, are good. Notwithstanding that the results are good, further discussion in respect of this subject is expanded upon in Chapter Five, section 5.2.

### 4.3.2.2 Physics

Pass rates for the past five years in *Physics* is indicated below. (Note: *Figures 10 & 11* are reproductions of *Figures 1 & 2* from Chapter Two. They are reproduced again for ease of reference.)

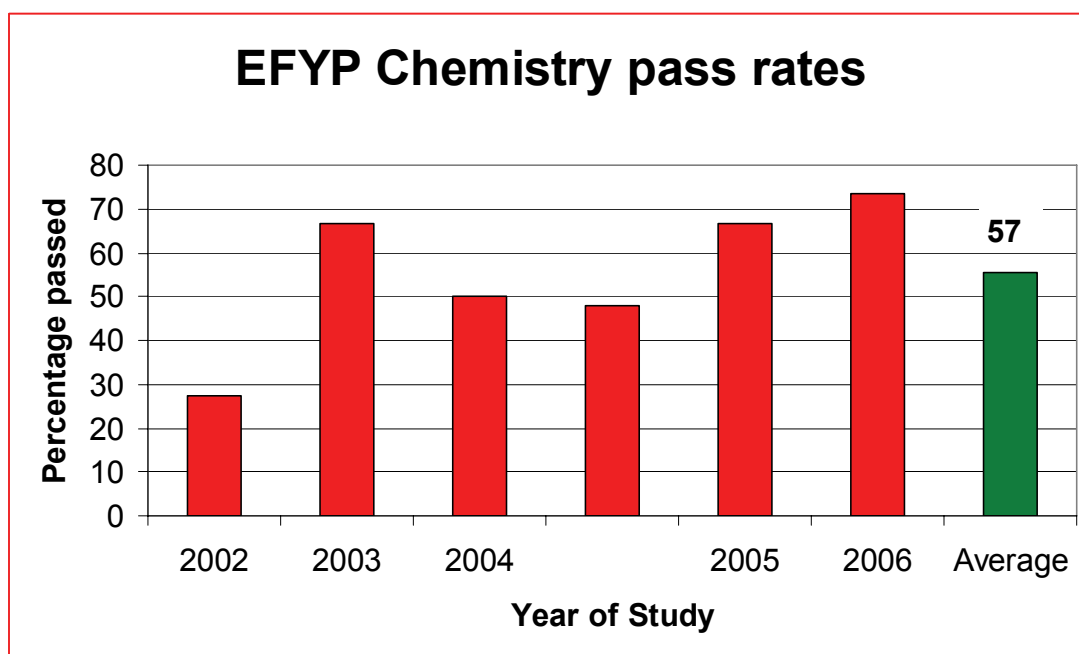


**Figure 10**

Generally, pass rates are not good. Various reasons were cited by learners for poorer performance and these centred on motivation and the subject relevance of these subjects to the programme and the fact that they were difficult subjects to comprehend.

### 4.3.2.3. Chemistry

Learner performance in *Chemistry* is poorer when compared to *Physics*. This can be observed below.



**Figure 11**

On average, *Chemistry* pass rates are marginally poorer when compared *Physics* pass rates. However they do show an improvement in later years. Further discussion in respect of *Chemistry* is expanded upon in Chapter Five, section 5.2.

### 4.4 Conclusion – Chapter Four

This chapter examined the qualitative and quantitative data used in analysis for this study. The qualitative data generated from the semi-structured interviews conducted with learners and staff of the Dental Technology programme was identified and reported on. Five main themes emerged and these were further divided into a number of sub-themes. The data was then analysed and comparisons, where possible, were made with relevant data generated by other studies. Thereafter, relevant quantitative data was analysed. This was done to give clarity to the research and allow for better understanding of the subject matter. Analysis of the serviced subjects which

form part of the EFYP is included so as to give insight into these subjects in the discussion that follows in Chapter Five.

This study now concludes with a discussion on the research findings.



# Chapter Five – Concluding Discussion

## 5.1 Introduction

This study investigated the perception of learners and staff in respect of the Dental Technology EFYP. Semi-structured interviews were conducted with nine learners and seven members of staff. The study also made use of quantitative data which was used to add perspective to the analysis that determined the success or failure of the EFYP. In addition, the study investigated the national objectives for higher education and enquired whether the EFYP was meeting these national objectives. It was determined that one initiative supporting the national objectives for higher education was that of foundation provision.

The study referred to four key research questions and provided evidence to answer these questions. The study investigated the factors perceived by learners having successfully completed the EFYP to be indicators of success or failure of the EFYP. In addition, the study determined the perceptions of Dental Technology programme staff and analysed their responses. The study detailed the national objectives for higher education as contained within the various policies and legislation presently in operation. An analysis of higher education policy was conducted. The analysis initially concentrated on the policy changes that occurred in South Africa immediately prior to democracy in 1994. Thereafter, the changes that occurred in higher education post democracy up until the present time were closely investigated.

The study traced the development of the philosophical concept of a university of technology in the higher education sector and positioned the Dental Technology programme within the identified conceptual framework particular to a university of technology.

In order to determine the success or failure of the EFYP, the investigation developed an understanding of disadvantaged and at-risk learners and placed the discussion on these matters within an historical context. In order to give greater insight into the research question, international foundation provision

was investigated. The success or failures of additional intervention and the impact on learning of these interventions were determined. Added interventions included a mentorship programme offered to first time entrants to the Dental Technology programme.

This study concludes with a discussion on the findings as generated by this research as well as formulating recommendations to those persons offering foundation provision or considering offering foundation provision.

## **5.2 Discussion of findings**

This study concluded that the true value of the EFYP was appreciated by the participants mainly in retrospect. The study concluded that although initially all the learners interviewed were not happy at being placed, or fully understood why they were placed on the EFYP, learners were, albeit with time, able to appreciate why they had been included in the programme. Wood and Lithauer (2005:1008), similarly, found that some learners “did not understand why they were not admitted directly to mainstream studies”. Nevertheless, more importantly, they all eventually positively accepted their placement on the EFYP. Not surprisingly, some learners took longer than others to see the value of being placed on the EFYP. Generally, EFYP learners were anxious to prove that they were just as good, if not better than the learners accepted directly into the Dental Technology programme. Some took pride in the fact that they out-performed these learners in common subjects that they were registered for whilst they were in the EFYP. *Learner Z*, and other EFYP learners, were motivated and became competitive as a result of being placed on the EFYP. She explains and expresses a sentiment shared by others:

*I must try and beat them. I was trying very hard and my marks show, and also my lecturers were impressed.* *[Learner Z]*

This competitiveness continued when the EFYP learners were themselves part of the traditional programme although *Learner R* explained that he felt that the EFYP learners performed better than those learners accepted directly into the programme as a result of having received a ‘head-start’ in the EFYP.

The fact that all staff perceived that the EFYP contributed positively to the Dental Technology programme is interesting as prior to being interviewed, few had shown interest in the EFYP. Staff spoke highly of the programme and all believed that the EFYP was contributing positively to the Dental Technology programme. The fact that staff not involved with the EFYP could not identify EFYP learners when they joined classes consisting of a mixture of traditional and EFYP learners is seen in a positive light. This indicates that, at worst, the EFYP learners were of a comparative educational standard when compared to other traditional learners and at best, were better prepared for the demands of the diploma. This observation confirms that the Dental Technology EFYP was fulfilling its mission and was preparing these under prepared learners for tertiary education.

All learners interviewed indicated that they were fully integrated into the programme. Any initial feeling of stigmatisation that some learners felt was offset by a feeling of comfort within their own EFYP group. In addition, other factors contributing to the general well-being of these learners included the commissioning of a dedicated classroom for the EFYP, the mentorship programme and the appointment of a dedicated lecturer with specific responsibilities for the EFYP learners. The advantage of a learner-centred approach has been reported (Johnson, Monk & Hodges, cited in Wood & Lithauer, 2005). The post 2005 EFYP learners appreciated the relationship formed with the dedicated lecturer whilst the other learners interviewed indicated the advantages of having a dedicated lecturer responsible for the EFYP.

Of interest is the comment by more than one EFYP learner that some traditional learners were envious of them. *Learner V* commented thus;

*Ja, even though they won't admit it but I think that some of them really wanted to be in the foundation course.* *[Learner V]*

Learners and staff expressed satisfaction with the current curriculum. The only criticism of the curriculum was in respect of serviced subjects, i.e. those subjects not within the direct control of the Department of Dental Services.

These criticisms will need to be discussed further with the relevant service departments. Learners who had completed the EFYP prior to 2005 commented that the curriculum changes that were introduced as a result of the 2005 re-curriculation were positive and that they would have benefited had they been exposed to these subjects. Subjects that contributed to the improvement of the EFYP were identified as *Computer Literacy* and *Dental Drawings and Carvings*.

The inclusion of academic literacy as a part of a programme related subject is supported by the fact that learners interviewed acknowledged the positive contribution that this intervention played in their educational development. This model is called the *Separate 'Introductory' Courses in Disciplines* (Warren, 1998). Thus, the decision to offer Academic Literacy as an integrated element of *Introduction to Dental Technology* rather than a stand alone subject is supported by the literature as discussed in Chapter Two (McKenna, 2003; Warren, 1998). All learners viewed the inclusion of academic literacy positively. This finding is interesting and is consistent with the findings of De Klerk et al (2005) and McKenna (2004a). Anecdotal evidence from the early years of the EFYP illustrates that learners were not pleased that they were required to attend academic literacy classes. Originally academic literacy attendance was not compulsory and it was only when attendance was made compulsory and became integrated in specific dental subjects that learners began to appreciate its worth.

The fact that some learners reported problems with the serviced subjects of the EFYP is not uncommon. Although DUT has an institutional policy to deal with the servicing of subjects provided by service departments, communication problems often exist between programme and service departments. Moreover, problems with service subjects are usually reported too late in the academic year for remedial action to be effective and in addition, there is often a reluctance to deal with these problems by either the service or programme department. The reasons for this reluctance vary and at times are a result of conflicting interests of responsibility for the subject. Consequently learner performance suffers as learners lose interest in subjects

that they perceive are not being suitably managed and which they often perceive to be irrelevant to the programme that they are registered for. Interestingly, although *Communication* is one of the subjects identified by some learners in this study as needing attention, learner performance has been good with an 87% average EFYP learner pass rate over the last five years. While the pass rates are consistent with DUT averages for this subject, and learners were pleased that they had passed, some questioned the value gained and felt that *Communication* should be more programme specific and less generic.

The above results should be compared with those of the other two serviced subjects in the EFYP. These are *Physics* and *Chemistry*. These pass rates are lower when compared with *Communication*. Various reasons were cited by learners for poorer performance. These centred on motivation, the subject relevance of these subjects to the programme and the fact that they are difficult subjects to comprehend. *Chemistry* pass rates are slightly poorer than *Physics* (57% compared with 60% over the past five years). A reason for this lower pass rate is suggested. *Chemistry* is offered in the first semester of the EFYP and *Physics* in the second semester. Thus, it possible that learners are still adjusting to the higher education environment in the first semester. Learner performance in an examination, six months after entering the university, is thus compromised. While it can be argued that past rates in these subject mirror institutional norms, nevertheless improvement plans are indicated. This will be noted below in section 5.3, *Recommendations for Foundation Provision*.

This study revealed that EFYP learners are well integrated into the Dental Technology programme and the institution. This finding suggests that various interventions in place are successfully contributing to the general integration of EFYP learners. Of significance is the appointment of the dedicated lecturer responsible for the EFYP. All learners and staff interviewed commented on firstly, the lack of a dedicated lecturer prior to 2005 and secondly, on the presence of the dedicated lecturer post 2005. This appointment has had a significant impact on integration and service delivery.

Although only three of the learners interviewed had completed the EFYP in the dedicated venue they all commented on the positive effects of the venue on their integration. Significantly, all learners completing the EFYP prior to the venue being commissioned, reported that not having their own venue did contribute to integration difficulties. Moreover, staff mirrored the views of learners when discussing the commissioning of the dedicated venue. Hence, it may be concluded that the dedicated venue contributes positively to learner integration.

The Department of Dental Services has adopted a multi-pronged strategy to ensure stability of learner integration. Central to this strategy has been the mentorship programme offered by the department. This programme has been refined over time. Older learners interviewed reported that EFYP learners should be mentored separately from other first year learners. This problem was addressed and currently EFYP learners are mentored separately. It is important to appreciate that this study argues that the integration of learners into tertiary education is multi-faceted. Successful integration is thus a combination of a number of factors.

Interestingly, some learners commented on reverse discrimination of the traditional learners in reporting that some traditional learners indicated that they would rather have been placed on the EFYP. A few reasons were postulated. Firstly, a reduction in workload allowed for better academic preparation. Secondly, the EFYP learners received free equipment and materials and some traditional learners were envious of these benefits. Thirdly, the EFYP learners were seen as better prepared for the demands of the programme. However, as these findings were only opinions of EFYP learners they will need to be validated with learners accepted directly into the traditional programme in future studies.

Staff were unaware of the national objectives for higher education. While surprising, this finding is understandable. While the transformation of higher education is practiced at the institution, its policies do not seem to filter down to lecturers. Since 2002, DUT has been preoccupied with the merger process. As pointed out previously in Chapter Two, management of the institution has

been unstable. Currently, DUT has its fourth Deputy Vice-Chancellor: Academic<sup>12</sup> since merger in 2002 and the difficulty in conveying national objectives to staff can be understood in this context.

Finally, it has been indicated that there is confusion as to the granting of NSFAS loans to extended programme learners. As a result, some extended programme learners are granted loans and some are refused. Learners could not offer any explanation for this practice. Consequently this matter will need to be referred to the NSFAS office for clarification.

### **5.3 Recommendations for foundation provision**

Resulting from this study the following recommendations are offered to educators planning and conducting extended programmes:

1. The programme must have a dedicated lecturer appointed as programme coordinator. This lecturer will also need to be responsible for the social well being of extended learners and be the link between the extended programme and those learners accepted directly into the traditional programme.
2. Academic success and programme integration is better achieved in small groups. Learners in smaller groups find it easier to integrate with each other. In addition, a dedicated lecturer will find it easier to pay individual attention to learners.
3. Peer mentorship programmes impact significantly on integration.
4. Attention must be given to the granting of NSFAS loans to extended learners. The correct policy needs to be established and implemented. Departments should form a liaison between the learners and the NSFAS office over the granting of loans.
5. Staff need to be made aware of the national objectives for higher education. These need to be conveyed to academic staff by

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<sup>12</sup> The Deputy Vice-Chancellor: Academic is responsible for academic delivery in the institution. Faculty Deans report directly to the DVC: Academic who in turn reports directly to the Vice-Chancellor.

institutional processes in order that the education offered is in line with national objectives and so that academics can understand and support the motivation behind national initiatives such as Foundation Provision. Strategies for implementation can then be implemented.

6. Academic literacy should be included as a compulsory component of at least one subject so that learners can be inducted into reading, writing and other practices expected of them in their particular discipline. This allows for a discipline-specific space in the curriculum where the expectations of the programme can be overtly developed.
7. A computer literacy course is essential for foundation provision.
8. Consideration must be given to offer subjects that empower learners with skills that are needed for their particular qualification. An example is *Dental Drawings and Carvings*, which is designed to improve manual dexterity skills in Dental Technology.
9. Greater liaison should exist between service and programme departments in respect of those serviced subjects offered to extended programme learners. The liaison needs to be coordinated in terms of curriculum content and learner progress in specific subjects. Service departments need to be alerted to the objectives of foundation provision.

#### **5.4 Final Conclusion**

This study has concluded that the current EFYP is an academically sound programme that is contributing the academic development of individual learners as well as to the overall success of the Dental Technology programme. Learners having attended the EFYP made note of the contribution that the EFYP made to their integration into higher education and their academic advancement. Staff, too, favourably viewed the EFYP as academically successful.



The Dental Technology EFYP was one of the first extended programmes offered in South African higher education and has evolved over a number of years. Few negative comments on the programme were received and very few suggestions for improvements were made by those interviewed.

Notwithstanding the perception that the programme is currently successful, continual reflection on the provision should occur. By engaging in such reflection, a dynamic and successful programme can be continued into the future.

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**Length of interviews of learners and staff.**

The average length of the interviews with staff was 40.4 minutes with the longest interview being 46.4 minutes and the shortest being 22.6 minutes. The average length of the interviews with learners was 22.6 minutes with the longest interview being 35.4 minutes and the shortest being 17 minutes. The length of interviews are summarised in *Table 1* below:

<b>Interview times (in minutes)</b>				
<b>Group</b>	<b>Number</b>	<b>Longest</b>	<b>Shortest</b>	<b>Average</b>
<b>Learners</b>	9	27.6	17.0	22.6
<b>Staff</b>	7	46.4	36.3	40.4

## **Annexure B**

Letter to learners, who have completed the Extended First Year Programme, requesting you to be part of a research study.

May I interview you for my research?

***Please first read this whole page carefully before deciding whether you are interested.***

I am presently registered at the University of KwaZulu-Natal for Masters in Education qualification. I am doing research with lecturers and specific learners to find out their views about the Dental Technology Extended First Year Programme (EFYP). The title of my research project is “***An investigation of learner’s and staff’s perceptions of the Dental Technology Extended First Year Programme***”. In doing this research I hope to gain greater insight in the EFYP and thereby improve this course to the benefit of future learners.

I am looking for learners, who have graduated through the EFYP, willing to be interviewed as part of my research. The interview will be approximately  $\frac{3}{4}$  hour with a maximum length of one hour. This will be a one-off interview and, in the event that that I need to contact you to check information it would be for a very short time. Interviews will be recorded and the recordings used for data transcription. At the conclusion of the research project the tape recordings will be disposed of. At no time will you be identified in the research (unless you want to be identified) and all responses will be treated in confidence and used only for research purposes.

Should you choose not to participate in this study you will not be disadvantaged in any way and your decision will be respected. Should you agree to participate in the study but later decide that you wish to withdraw, even after you have been interviewed, you will be free to do so. Data that may have been gathered by your participation thus far will be discarded.

If you agree to be part of my research project I will contact you to set up the interview. I will only be interviewing a small random sample of Learners and you might be contacted by me to set up an interview or you may not hear further from me in this regard. Whether you are eventually interviewed or not I appreciate the time you have spent indicating your willingness to be interviewed.

If you are willing to be interviewed and to be part of my project, please complete the details below and then hand in this page to your lecturer.

Should you require any further information in respect of this study you may contact my supervisor, Dr. Sioux McKenna<sup>13</sup> at the Durban University of Technology, telephone 031 204-2860.

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<sup>13</sup> At the time that the interviews were conducted Dr. McKenna was on the staff of the Durban University of Technology.

***Please complete the below and return to me via the Dental Technology secretary, any Dental Technology lecturer or by handing it to me directly.***

**I am happy to be part of Mr Bass' research into the Dental Technology Extended First Year Programme. I understand that final participants will be selected by the researcher on a random sample basis.**

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**(If you are contacted to do the interview you will be asked to sign the attached letter at the interview.)**

**Researcher:**

Mr Greg Bass, B.Comm, NHD: Dental Technology (status)  
Department of Dental Services  
Mansfield Campus  
Durban University of Technology  
P O Box 1334  
Durban  
4000

Tel: 031 204-2033 (w)  
Fax: 031 204-2047  
Cell: 0834402870

**Learner Consent to participate in research study and to publication of the results**

1. I understand that Mr. Greg Bass is doing research about the Dental Technology Extended First Year Programme (EFYP). He will be interviewing both learners and lecturers to hear their views.
2. I have volunteered to be part in this research study. I understand Mr. Bass will interview me and he will tape record the interview.
3. I accept that the results of this research study will be used toward a Masters degree through the University of KwaZulu-Natal. In addition, the results may be used for writing papers for presentation at conferences or publication in academic journals.
4. I understand that if I wish, my real name does **not** need to be used in any report describing the research study. But if I want to, I can be acknowledged in any reports on the research.
5. I agree to participate in the research study but I understand that if at any point I change my mind, I am entitled to withdraw my agreement to participate.

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

I wish to be acknowledged by name (thanked) in the thesis. I understand that no published data will be linked to my name. **(please tick the appropriate box)**

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

<p><b>Researcher:</b></p> <p>Mr Greg Bass, B.Comm, NHD: Dental Technology (status) Department of Dental Services Mansfield Campus Durban University of Technology P O Box 1334 Durban 4000</p> <p>Tel: 031 204-2033 (w) Fax: 031 204-2047 Cell: 0834402870</p>
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**Staff consent to participate in research study and to publication of results**

1. I understand that Greg Bass is conducting research into Dental Technology Extended First Year Programme. He will be interviewing DIT Dental Services academics who currently lecturing in the Dental Technology programme.
2. I have been asked to participate in this research study and agree to do so on my own free will. I understand that my participation will consist of being interviewed by Greg for approximately 1 hour.
3. I accept that the results of this research study will be used towards writing papers for presentation at conferences or publication in academic journals.
4. I understand that if I wish, my real name does **not** need to be used in any report describing the research study. But if I want to, I can be acknowledged in any reports on the research.
5. I agree to participate in the research study but I understand that if at any point I change my mind, I am entitled to withdraw my agreement to participate.

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

I wish to be acknowledged by name (thanked) in the thesis. I understand that no published data will be linked to my name. ***(please tick the appropriate box)***

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

**Researcher:**

Mr Greg Bass, B.Comm, NHD: Dental Technology (status)  
Department of Dental Services  
Mansfield Campus  
Durban University of Technology  
P O Box 1334  
Durban  
4000

Tel: 031 204-2033 (w)  
Fax: 031 204-2047  
Cell: 0834402870

**Learner interview questions**

The following formed the basis of questions asked of the graduates of the EFYP during the interview:

1. Was being an EFYP learner a positive or negative experience for you?  
Please qualify your answer.
2. When you were placed in the EFYP what were your feelings?
3. What expectations did you have of the EFYP?
4. Were these expectations met?
5. What aspects of the programme helped you academically?
6. What aspects of the programme do you think are not useful for learners?
7. Would you recommend the EFYP to a friend wanting to study Dental Technology?
8. What problems did you experience adapting as a new student in a University? Did the EFYP help you address these problems (if any)?
9. Did the mentorship programme in any way assist you in your university integration?
10. What was your relationship with the mainstream learners during your EFYP first year?
11. Did the EFYP help in your academic advancement?
12. Before you were accepted into the EFYP did you apply to do other programmes?
13. How have your studies been paid for? Did being in the EFYP help or hinder this process?

**Staff interview questions**

The following were the basis of questions asked to the teaching staff in the Dental Technology programme:

1. Do you believe that the EFYP is contributing positively to the academic advancement of those learners placed on the programme? Please qualify your answer.
2. Do you believe that there is a need for a Dental Technology EFYP?
3. Are you aware of the national objectives for higher education? Do you believe that the EFYP is meeting these objectives?
4. What expectations did you have of learners graduating from the EFYP?
5. Are these expectations being met?
6. What aspects of the programme do you feel are academically sound?
7. What aspects of the programme do you think are not useful for learners?
8. What specific skills, academic or otherwise, do learners lack?
9. Have you noticed if EFYP learners are any better in those areas that you have just identified?
10. In what way do you feel that the EFYP can be improved?
11. What are your feelings on the mentorship programme?
12. What is your perception of the relationship between the EFYP and the mainstream learners?
13. In your opinion, is the EFYP an academic success?

Annexure G



RESEARCH OFFICE (GOVAN MBEKI CENTRE)  
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18 FEBRUARY 2008

MR. GH BASS (204520903)  
ADULT & HIGHER EDUCATION

Dear Mr. Bass

**ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0036/08M**

I wish to confirm that ethical clearance has been granted for the following project:

**“An investigation of learner’s and staff’s perceptions of the Dental Technology extended First Year Programme”**

**PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years**

Yours faithfully

.....  
**MS. PHUMELELE XIMBA**

cc. Supervisor (Ms. R Searle)  
cc. Dr. S McKenna  
cc. Mr. D Buchler





**DURBAN**  
**INSTITUTE of**  
**TECHNOLOGY**



13 February 2006

The Executive Dean  
Faculty of Health Sciences  
Durban Institute of Technology

Dear Thandi

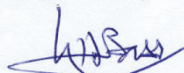
As you are aware I am presently registered at the University of KwaZulu-Natal for a M.Ed qualification.


I am presently submitting my research proposal to the Post-graduate Degrees committee. The title of my research project is "An investigation of the perceptions of learners and staff in respect of the Dental Technology Extended First Year Programme."

In terms of the rules at UKZN I am required to obtain your permission to conduct this study at DIT.

I trust that all is in order and that the necessary permission will be granted.

Yours faithfully

  
Greg Bass

*All that we will need (Bass) is ethical clearance from UKZN and then I do not see any problems*  
*13/2/2006*  


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