ACCESS CONSTRAINTS EXPERIENCED BY STUDENTS WITH DISABILITIES AT A SOUTH AFRICAN UNIVERSITY

by

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ALL GLORY AND HONOUR TO OUR GOD

ABSTRACT

The main aim of the research was to determine whether visually and mobility disabled students experience access constraints at a particular tertiary education institution. Certain categories of difficulty, levels of accessibility and support provided to disabled students were identified. On the basis of the results of the study, guidelines were provided to increase the accessibility of the tertiary institution.

In the last two decades there has been increasing awareness of the need to take active steps against the discrimination of people with disabilities. It is therefore critical that institutions of higher education lead the way to show society how to overcome accessibility constraints that have always prevented people with disabilities from enjoying the same rights and privileges as nondisabled people.

The literature study covered themes relating to the number and classification of people with disabilities, as well as the schooling of people with disabilities in South Africa. Conceptual models of understanding disability were examined. The access constraints experienced by visually and mobility disabled students, as well as how to apply student-centred planning to increase accessibility, were explored. The literature review revealed why students drop out and the underlying motives that encourage disabled students to attend university.

The study followed a mixed method explanatory approach and consisted of a questionnaire survey, a focus group discussion and individual interviews. The purpose of this design was to use the qualitative findings to clarify the quantitative results, and the data were therefore collected in two separate phases. A purposive convenience sampling method was applied. Twenty-three students participated in the quantitative research, which involved completing the questionnaire, seven students were included in the focus group discussion and eight individual interviews were conducted. Owing to the limited number of participants, the study was more qualitative.

The main findings of this study were that students living with a visual or mobility disability experienced constraints relating to the accessibility of the tertiary education institution. Most constraints were experienced in the architectural environment and related to the lack of parking and access to the library. Additional constraints included the lack of visible

information, challenges with the study material and the University's requirement that disabled students have to submit a medical certificate annually.

The results show that the tertiary institution can be classified as accessible with minor assistance, because most students can help themselves, but still require the assistance of others. There was also a close link between students who see themselves as independent and their motivation to complete their studies. Disabled students were generally motivated by themselves and their family, friends and other disabled persons.

Although access constraints influence students living with a disability, the support structure of the University and the social support structures of these students play a crucial role in their lives. It was therefore also necessary to provide guidelines to the tertiary education institution on how to address the access constraints identified in the study.

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INTRODUCTION AND ORIENTATION TO THE RESEARCH

1.1   INTRODUCTION

Discrimination based on disability is no longer acceptable and goes against the right to equality. Active steps are required from educational institutions to address the needs of students who were previously disadvantaged owing to a disability (University of Witwatersrand, 2004:1). Today, disabled students have distinctive virtues, talents and competencies that enrich and add value to their endeavours, but all of these qualities are lost if a student with a disability cannot access the university's facilities. Therefore a study is required to identify the physical constraints experienced by such students in order to improve their daily interactions on campus.

1.2   BACKGROUND INFORMATION

Only 2.8% of disabled persons have access to higher education, whereas about 30% of them have no education at all, which is distressing in the light of South Africa's skills shortage (StatsSA, 2005:20). According to the 2001 National Census, it is estimated that there are 2.25 million South Africans with disabilities. This figure represents 5.03% of the total South African population (StatsSA, 2003:38). The highest prevalence was sight disability (32%), followed by physical disability (30%), hearing disability (20%), emotional disability (16%), intellectual disability (12%), and lastly, communication disability (7%) (StatsSA, 2005:14).

The above discussion confirms that people with disabilities, who constantly have to face constraints in the physical environment, do not have the same human rights and opportunities as the rest of their peers (Peat, 1997). Over the last two decades, companies throughout the world have become more aware of their limitations in

accessibility thus depriving disabled employees of certain human and civil rights (Helander, 1993).

In the past, there have been significant challenges in changing the overall attitude toward perception of people living with disabilities. Disabled people themselves were responsible for introducing many of these challenges, which focused mainly on questioning the notion of being a disabled human being - suffering some or other tragic incident that classified a person as being ill or incompetent and therefore having to depend on the care of others. From this perspective, a visually or mobility disabled person can be regarded as incompetent when it comes to participating in different activities in a way that is considered normal. Such opinions of disability show that people with disabilities will always be deemed inferior or below standard (DPSA, 2001:10).

People with certain impairments are classified as disabled because of the way the community responds to their specific impairments and not because of the fact that the necessary support infrastructure is not in place to accommodate them. For example, it is a wheelchair user's inability to climb the stairs that causes him or her to be disabled, and not the lack of sufficient ramps to give him or her access to a building

1.3   STATEMENT OF THE RESEARCH PROBLEM

The problem that was investigated in this study was that limited information is available on the possible constraints that a group of physically (mobility) and visually disabled students may experience in gaining access to the facilities of the main campus of the tertiary institution involved in the study. Furthermore, no information is available on the possible influence that access constraints may have on the motivation of students to further their studies.

1.4   RESEARCH QUESTIONS

This aim of the study was to answer the following questions:

- What constraints do mobility or visually disabled students experience with regard to accessibility at the tertiary institution's main campus?

- What categories of difficulty levels of accessibility (fully accessible, moderately accessible and inaccessible) exist when measuring accessibility, and what is the relationship between the levels of accessibility and the motivation of these students?

- What support structures do students with disabilities need from the tertiary institution?

- What guidelines can be provided to increase the accessibility in areas where access is unsatisfactory?

1.5   PURPOSE OF THE RESEARCH

The main objective of this study was to determine whether a group of mobility and visually disabled students experience constraints regarding access to the facilities at the main campus of the relevant tertiary institution where the research was conducted. A further objective was to examine the impact that possible constraints have on these students' motivation to further their studies. A mixed (quantitative and qualitative) approach was followed in conducting a questionnaire survey, focus groups and interviews with participants to determine the possible access constraints. (See the in-depth discussion of the research methodology in chapter 4.)

1.6   DELINEATIONS AND LIMITATIONS

This study included only those students with visual or mobility disability on the tertiary institution's main campus. The researcher decided to include only these two groups, because sight and physical disability have the highest prevalence in South Africa. The relevant tertiary institution has the largest population of students with disabilities in South Africa - hence the choice of this particular institution for the research. The students consisted of undergraduate and postgraduate students. One limitation of the qualitative method design was that collecting and analysing the data in two sequential phases meant that it took longer to complete the study.

1.7 DEFINITION OF TERMS AND CONCEPTS

This section focuses on various sources defining disability, but also relates to concepts on disability such as impairment and handicap. Inclusive education and access, as well as higher education will also be defined.

Table 1.1:   Abbreviations used in this document

Abbreviation	Meaning
ADA	Americans Disabilities Act
APD	Agency for Persons with disabilities
CHE	Council on Higher Education
DDA	Disability Discrimination Act
DOE	Department of Education
DPSA	Disabled People South Africa
EEA	Employment Equity Act
FET	Further education and training
GER	General Education Requirements
GLADNET	Global Applied Disability Research and Information Network
GUNI	Global University Network for Innovation
HEI	Higher Education Institution
IAU	International Association of Universities
ILO	International Labour Organisation
INDS	Integrated National Disability Strategy
ODP	Office of the Deputy President
QAA	Quality Assurance Agency for Higher Education (UK)
SAHRC	South African Human Rights Commission
SANCB	South African National Council for the Blind
SAQA	South African Qualifications Authority
RSA	Republic of South Africa
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPIAS	Union of the Physically Impaired Against Segregation (UK)
WHO	World Health Organisation

1.7.1   <u>Defining disability</u>

There are numerous sources that one use to find definition of a disabled person. In South Africa, these sources include the Bill of Rights (RSA, 1996), the Employment Equity Act (RSA, 1998), the White Paper on Higher Education (RSA, 1997a), the Integrated National Disability Strategy (RSA, 1997b), the Code of Good Practice (RSA, 2002) and the numerous nongovernmental organisations dealing with people with disabilities such as the Association for People with Disabilities (APD), as well as the South African National Council for the Blind (SANCB). International definitions one can draw from include the Americans with Disabilities Act (ADA) of 1990 (USA, 1990) and the Disability Discrimination Act (DDA) of 1995 (UK, 1995).

The Bill of Rights states that the following: "No person may unfairly discriminate directly or indirectly against anyone on one or more grounds in terms of subsection (3)." Subsection 3 lists these grounds as race, gender, sex, disability or birth. It stipulates further that discrimination on one or more of the grounds listed is unfair unless the discrimination is found to be fair.

The Employment Equity Act (EEA) protects disabled people against unfair discrimination in the workplace and directs employers to implement affirmative action measures to redress discrimination. Ultimately, this legislation compels organisations to employ more qualified disabled people. Tertiary educational institutions are therefore required to provide adequate support mechanisms to increase the graduate rate of disabled students in order to facilitate the active integration of students living with a disability into tertiary educational institutions and the workplace. The EEA defines people with disabilities as those who have a long-term or recurring physical or mental impairment that substantially limits their prospect of entry into or advancement in employment (RSA, 1998:10).

The White Paper on Higher Education states the following: "The principle of equity requires fair opportunities to access higher education programmes as well as to succeed in them." The identification of existing inequalities is critical when applying the principle of equity. This means that any existing policy, structure or practice based on any form of discrimination needs to be transformed and redressed.

Such changes not only eradicate all existing forms of unfair discrimination, but also promote empowerment, including financial support to bring about equal opportunities for individuals (White Paper on Higher Education, 1997). The following is one of the goals articulated in the White Paper: To provide a full spectrum of advanced educational opportunities for an expanding range of the population, irrespective of race, gender, age creed or class or other forms of discrimination.

Alfred Neufeldt, chair of the Global Applied Disability Research and Information Network (GLADNET) at the International Labour Organisation (ILO), argues that individuals have both an activist and a negative stake in determining who is disabled. While some wish to avoid discrimination and create accessible environments, others basically only want to benefit from financial (income tax) support systems. Government and support-lending organisations need to know about this for planning, strategising and support purposes (Neufeldt, 2002).

Disabled People South Africa (DPSA) is concerned about the requirement of defining disabled people. Defining disability has been an issue that people with disabilities have struggled with for a considerable time. The categorisation of disabled people into clearly defined groups is an essential requirement from service providers and policy makers for the purposes of service delivery, education, social security and employment. Unfortunately disabled people have learnt from experience that definitions act as mechanisms to marginalise and exclude them, instead of as a tool to facilitate development, integration and positive actions (DPSA, 2001:1).

Such concerns are mostly evident in discussions about the validity and reliability of studies and postulations on the prevalence of disability in any society. Statistics on disability can improve equality for disabled people through proper planning, but the downside is that such statistics can also be used to justify limiting access to essential services and benefits.

These debates influence procedures to ascertain proper and fair participation rates of disabled students in the higher education system. It is difficult to define norms for the

participation rates of students with disabilities, because the definitions of disability and higher education differ from country to country (GUNI, 2004).

A code of practice was developed by the Quality Assurance Agency (QAA) in the UK, despite all the difficulties experienced in defining students with disabilities. This QAA code of practice was developed to guide higher education institutions in achieving fair and proper provision for students with disabilities. Since the code follows no particular model, it maintains that there are numerous ways of defining students with disabilities.

Students with disabilities cover an extensive range of impairments including physical, visual, hearing, mental and learning difficulties. Some students may be disabled when they submit an application to an institution, while others may become disabled or aware of their disability only after joining the institution. Others may be temporarily disabled owing to ill health or an accident, while some may experience fluctuating conditions.

Institutions should be aware that some of these impairments may have many implications for a student's life or study, while others may have few if any. Institutions should not only provide sufficient support to the full range of students with disabilities, but they also need to be adequately flexible to cater for disabled students' changing needs throughout their period of study (QAA, 1999).

For the purpose of this research study, the definition of the Quality Assurance Agency is preferred because one is aware of the wide range of disabilities. It depends on the extent to which the type of disability affects the student's life.

Certain related concepts pertaining to disability need to be identified, as indicated below.

1.7.1.1   *Impairment*

The Code of Good Practice classifies impairments as either physical or mental. The term "physical impairment" implies a partial or total loss of a bodily function or part of the body and includes sensory impairments such as being deaf or hearing or visually impaired. The term "mental impairment" implies a clinically recognised condition or illness that

affects a person's thought processes, judgement or emotions (RSA, 2002:9). The term "physical or mental impairment" is prevalent in the definitions of the EEA, ADA and DDA and the Code of Good Practice.

1.7.1.2   *Substantially limiting*

In terms of the Code of Good Practice, an impairment is substantially limiting if, in the absence of reasonable accommodation provided by an employer, a person would be either totally unable to do a job or would be significantly limited in doing it (RSA, 2002:9). In terms of the ADA, the inability to perform a single particular job is not a significant enough limitation in the activity of working to constitute a disability and that the effect of mitigating measures, such as corrective lenses or medication, should be considered when determining whether an individual is substantially limited in a major life function (McNamee, 2001:15). The term "substantially limiting" is prevalent in the definitions of the EEA, ADA, DDA and the Code of Good Practice.

1.7.1.3   *Long-term or recurring*

The concept of time is present in all of the above definitions for a person with a disability, besides the one provided by the ADA. According to the Code of Good Practice, long term means that an impairment has lasted or is likely to persist for at least 12 months. A recurring impairment is one that is likely to happen again and therefore become substantially limiting. The DDA and EEA do not expand on the meaning of long term.

Before concluding this section on defining people with disabilities it is necessary to highlight the distinction between a disability and a handicap. The term "handicap" implies a loss or limitation of opportunities to take part in the life of the community on an equal level with others (UN, 2001:12). A handicap is a function of the interaction between the person with a disability and his or her environment and should not be confused with a disability, because the term "handicap" refers more to a loss of opportunity than to a loss of ability. The purpose of identifying the term "handicap" is to emphasise shortcomings in the environment and in the various organised activities in society, for example,

information, communication and education, which prevent persons with disabilities from participating on equal terms.

1.7.2   Defining access/inclusive education

To investigate the future of special education in South Africa, two definitions of inclusive education were formulated from the perspectives of the reference committees and consultative bodies.   Inclusive education is defined as a learning environment that promotes the full personal, academic and professional development of all learners, irrespective of race, class, gender, disability, religion, culture, sexual preference, learning styles and language (RSA DoE, 1997).

According to the Education White Paper 6, on Special Needs Education: Building an Inclusive Education and Training System (RSA DoE, 2001:19), inclusive education relates to the following:

- Acknowledging that all children and youth can learn and need support
- Accepting and respecting that all learners are different in some way (whether due to age, gender, ethnicity, language, class, and disability or HIV status), and have different learning needs which need to be equally valued
- Enabling education structures, systems and learning methodologies to meet the needs of all learners
- Changing attitudes, behaviour, teaching methodologies, curricula and the environment to meet the needs of all learners
- Maximising the participation of all learners in the culture and the curricula of educational institutions and uncovering and minimising barriers to learning
- Empowering learners by developing their individual strengths and enabling them to participate critically in the process of learning
- Acknowledging that learning also occurs in the home and community and within formal and informal modes and structures

Part of a universal human rights movement was to include learners with special education needs or learning difficulties into mainstream classes.   To create "equal opportunities for all learners to learn and succeed" has become imperative for all

countries (RSA DoE, 2001:25). Inclusive education addresses the educational needs of all learners in a nonthreatening supportive learning environment, including learners who were formerly disadvantaged and excluded from education because of "barriers to learning".

Stakeholders of the learning community include learners, educators and support staff, which is the fundamental pillar of a higher education institution. These stakeholders add their unique knowledge, abilities and qualities, as well as values and beliefs based on their cultures. They work together and participate in the context of the common task of teaching and learning. For the stakeholders to be valued as equal members of the community of an educational institution, they need to be able to contribute in different ways while participating significantly. Inclusive education provides the framework for ensuring this (RSA DoE, 2001:48).

Inclusive education increases awareness of human rights, decreases discrimination and fosters institutional improvement. Inclusive education can potentially address the rights of learners in a range of cultures and contexts because it involves changing stakeholders' working styles, behaviour and attitudes.

1.7.3   Defining higher education

Since there is no easy international definition of higher education, it is preferable to divide it into two halves: Type A (in this study referred to as higher education/university level) and Type B (further education and training [FET] in South Africa).

To complete a higher education qualification at degree level normally requires about three to four years. Degree programmes include a theoretical foundation and a number of research activities, which qualify a student to work in a skilled environment. Higher education has conventionally been founded for tripartite main "missions", versus learning and teaching, research and community outreach (*American heritage dictionary*, 2004).

No society can manage without higher education because it benefits everyone, not only those who attend university. Higher education is an essential element of any economy

because it provides highly skilled graduates such as doctors, engineers, dentists, scientists, pharmacists, teachers, librarians, writers, musicians and business leaders. Moreover, higher education offers additional training, research and development for industries and facilitates the invention of new products and processes, thus creating new markets. Higher education is also essential for a country's culture because it gives individuals the freedom to think about and discuss culture, by advancing creative achievements around the globe and protecting the legacy of a country for future generations (*American heritage dictionary*, 2004).

Higher education is fundamental to making South Africa a better place because it informs public policy, offers high-quality education for all, breaks down inequity, produces a generation of well-informed South Africans and creates opportunities to discuss economic, social, political, and environmental issues (SAQA, 1995).

According to Nelson Mandela, education is the only true weapon against poverty. Hence access to higher education is one of the significant predictors of financial wealth. Higher education is committed to widening access by offering an extensive choice of programmes, which affords every student an equal opportunity to obtain a degree, based on his or her abilities and not on financial position or family background (Badat, 2003).

According to the Green Paper on Higher Education Transformation (RSA DoE, 1996), higher education has several associated purposes, as set out below.

- Higher education meets the learning requirements and aspirations of individuals through the development of their intellectual abilities and aptitudes. Higher education is a key allocator of life chances which prepare individuals to make the best use of their talents and the opportunities offered by society for self-fulfilment.
- Higher education provides the labour market, in a knowledge-driven and knowledge-dependent society, with the high-level competencies and expertise necessary for the growth and prosperity of a modern economy. It teaches and trains people to fulfil specialised social functions, enter the learned professions or pursue vocations in administration, trade, industry and the arts.
- Higher education is responsible for the socialisation of enlightened, responsible and constructively critical citizens. Citizenship of this nature presupposes a commitment

to the common good, but also implies a reflective capacity and a willingness to review and renew prevailing ideas, policies and practices.

- Higher education is directly engaged in the creation, transmission and evaluation of knowledge. Its purpose is to ensure the continued pursuit of academic scholarship and intellectual inquiry in all fields of human understanding, through research and teaching.

1.8   UNDERLYING ASSUMPTIONS

In this study, the researcher assumed that all the respondents were able to read, write and speak English in such a way that communication would be effective. The reason for this assumption was that the researcher would expect university students to be able to communicate in English.

Additional assumptions were as follows:

- The participants would be able to exclude personal constraints and involvement to the point where they would answer the questions objectively.

- A large enough percentage of the population of 130 students would respond to the researcher's request to participate in the study. If too few students responded, the value of the study would be limited.

- A satisfactory number of participants would have the transport to participate in the focus group contact sessions. To ensure sufficient participation the following actions would be taken:

  o An introductory letter would be sent out to motivate the students to participate.

  o Follow-up telephone calls would be made to invite the students to participate.

1.9   SIGNIFICANCE OF THE STUDY

The rationale for this study was that it would provide insight into constraints experienced by visual or mobile disabled students studying at the tertiary institution used in the study.

The assumption was that by gathering this information on the degree to which constraints influence the respondents' levels of accessibility and motivation to further their studies, new resources would be made available to the University that would enhance its ability to accommodate and empower disabled students. Hence the results of the study should enable the management of the University to rectify access deficiencies if/where they occur.

1.10 BRIEF OVERVIEW OF CHAPTERS

The following is a brief outline of the study

- Chapter 1 dealt with the introduction and orientation to the research.

- Chapter 2 provides a discussion of the South African population and students with disabilities.

- Chapter 3 deals with the access constraints to persons with disabilities in tertiary institutions.

- Chapter 4 explains the research methodology used in the study.

- Chapter 5 discusses the research results.

- Chapter 6 makes recommendations and draws conclusions.

1.11 SUMMARY

The way society thinks about and defines disability has a critical influence on the social and economic participation of people with disabilities. This chapter provided a brief overview of the research and discussed the background to the research, the problem statement, the research questions, the purpose of the study and the delineations and limitations of the study.

Important definitions and concepts were discussed as well as the underlying assumptions and significance of the study.

Chapter 2 will discuss the South African population and levels of education in order to emphasise the fact that people with disabilities are significantly less educated compared with the general able-bodied South African population.

CHAPTER 2

THE MANIFESTATION OF DISABILITY IN SOUTH AFRICA

2.1   INTRODUCTION

This chapter provides an indication of the number of people with disabilities living in South Africa as well as the classification of these people. When conducting a study on people with disabilities, it is imperative to have a clear understanding of how the different types of disabilities are defined and categorised. This chapter will focus on the various types of disabilities and how each of these categories is represented in the greater population of South Africa.

According to Shakespeare, Bickenbach, Pfeiffer and Watson (2005) models are conceptual tools that can be used to make sense of reality and achieve consensus. Since one cannot neglect the importance of conceptual models, in this chapter, the medical, social, tragedy and affirmation models of disability will be analysed on the basis of their influence and significance.

Using the research of the National Census Committee, the different types of disabilities in the South African population will be listed, together with the total percentage of people living with such disabilities. Specific information will be gathered to show what percentage of the population of South Africa lives with disabilities.

The chapter concludes with a discussion of the schooling of people with disabilities with a specific focus on school attendance, different education levels, disabled students in higher education and enhancing the schooling of students with disabilities through Education for All (EFA).

2.2 THE NUMBER OF PEOPLE WITH DISABILITIES IN SOUTH AFRICA

The 2001 National Census shows that there are approximately 2,25 million people with disabilities living in South Africa. This figure represents 5,03% of the total South African population (StatsSA, 2003b:38). This information is presented in table 2.1

Table 2.1: People with disabilities as a percentage of the South African population

Classification	No. of people	Percentage of SA population
Able-bodied people	42 563 797	94,97%
People with disabilities	2 255 981	5,03%
Total	**44 819 778**	**100%**

Source: StatsSA (2003b:38)

The 1996 national census results showed that at the time of the census there were approximately 2,67 million people with disabilities living in South Africa, which represented 6,6% of the South African population (StatsSA, 1996:43). According to StatsSA (2003b:38), the disparity between the two sets of results was because of a change in the way people with disabilities were defined. However, no further information pertaining to the change in definition is provided by StatsSA.

The South African Human Rights Commission (SAHRC) estimated that South Africa has a disability prevalence of 7% of the total population or over three million people (SAHRC, 2002:16). However, according to data collected in the 2001 census there are 2 255 982 people with disabilities out of a total population of 44 819 778 (StatsSA, 2003). This represented a prevalence rate of 5%, which falls between international estimates of 4% in developing countries and 7% in developed countries (Health Systems Trust, 1999). From these data it is estimated that South Africa's prevalence of disability is somewhere between 4 and 7%.

Furthermore, these estimates are disputed, particularly by disabled people's organisations, which contend that the number of people with disabilities in South Africa is underestimated (DPSA, 2003). While the prevalence figures remain disputed, there is

agreement about the disproportionately high incidence of disability among poor people (SAHRC, 2002).

Numerous international reviews and research (UN, 1983:5) indicate that the prevalence of disability is about 7 to 10% of any given population. Unfortunately, the mainstream of disabled youth appears to never reach higher education, if in fact they ever receive any education at all. The ratio of female to male disabled students varies greatly: some universities have more male students, while others have more female students. In African universities, 10 to 20% of students with disabilities are females and 70% males (World Education Report, 1995).

2.3   CLASSIFICATION OF PEOPLE WITH DISABILITIES IN SOUTH AFRICA

A definition of a person with a disability was provided in chapter 1. In terms of classifying types of disability, StatsSA (2003b:38) classifies people with disabilities into seven mutually exclusive and collectively exhaustive categories. The seven categories used for the 2001 national census were the following:

- visual impairments
- hearing impairments
- communication impairments
- physical impairments
- intellectual impairments
- emotional impairments
- multiple impairments

The classification used for the 2001 national census differs from the one in the 1996 census (StatsSA, 1996:43) in the sense that two categories, namely communication and emotional impairments, were included in the latter census. Based on the definition highlighted in chapter 1, as well as the classification of types of disability provided above, it is possible to determine what percentage of the South African population is represented by people with disabilities.

In terms of the types of disability, StatsSA (2003b:39) provides seven mutually exclusive categories of disability, and each category includes a number of different disabilities. For example, a physical disability could mean total paraplegia or it could be something as minor as chronic arthritis. The classification provided by StatsSA, however, is sufficient in terms of providing a broad perspective of the various categories of impairments. Table 2.2 presents a breakdown of people with disabilities in South Africa in terms of the seven categories of disability.

Table 2.2 indicates that the most frequently occurring disability is visual impairment (25,58%), with the second most frequent disability being physical impairment (24,71%). What is promising is that serious disabilities such as intellectual impairments and multiple disabilities are in the minority. The decision to include only physically and visually impaired students as the respondents in this study was based on their higher prevalence.

Table 2.2:   Types of disability in the South African population

Type of disability	No. of people	Percentage
Visual impairment	577 096	25,58%
Physical impairment	557 512	24,71%
Hearing impairment	313 585	13,90%
Emotional impairment	268 713	11,91%
Multiple impairment	257 170	11,40%
Intellectual impairment	206 451	9,15%
Communication impairment	75 454	3,35%
Total	**2 255 981**	**100%**

Source: StatsSA (2003b:38)

2.4 FOUR IMPORTANT CONCEPTUAL MODELS FOR UNDERSTANDING DISABILITY

According to Shakespeare *et al.* (2005), models are conceptual tools that are useful for making sense of reality and for achieving consensus. Over the past two decades, there have been challenges to perceptions of and attitudes towards people with disabilities (CHE, 2005). The understanding of the different models of disability influences the

perceptions and approaches to disability, both internationally and locally. This section explores why disability models are important, and analyses four different models selected on the basis of their influence and significance. This section concludes with a discussion of disability identity.

2.4.1   The medical model

The dominant way of understanding disability and the associated attitudes and responses to disabled people is often referred to as the medical model of disability (Fulcher, 1989:26). The medical model focuses attention on the "nature of the person's impairment and the degree to which this impairment may or may not prevent the person from carrying out various tasks or participating in activities in ways regarded as normal".

The focus of such definitions is on the physiology of the impairment (i.e., a person's spinal injury) and the perceived underperformance of the person with a disability rather than on a limitation in society (i.e., physical constraints that limit mobility as a wheelchair user) that hinders people with disabilities. Such perceptions of disability are based on opinions on who is normal and who is not. Students with disabilities who complete activities in a different way, for example, reading in Braille, are regarded as inferior, and thus dependent on the support of others to balance their perceived deficits.

This view of a disability has significantly contributed to the way there are discriminated against people with disabilities. If one focuses on the impairment and the level at which a person cannot do certain activities in a normal way, then issues of the rights of people with disabilities and discrimination are neglected. Disability thus becomes something that is "imposed by society when a person with an impairment is denied access to full economic and social participation" (SAHRC, 2002:10). From the perspective of the medical model, a definition of disability should therefore illustrate the association between a disabled individual and the immediate environment that is part of him or her.

2.4.2   The social model

The Union of the Physically Impaired against Segregation (UPIAS), a small group of disabled people in the UK, developed the social model of disability in the 1970s. This organisation was underscored by Marxist politics, and decided to retain the concept of an impairment (physical impairment) but emphasised that a definition of disability should include a "relationship between people with impairments and a society that excludes them". Hence "[the disadvantage or restriction of activity caused by a contemporary social organisation which takes no or little account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities. Disability is thus a particular form of social oppression" (UPIAS, 1975:14).

The social model of disability hypothesises that the "locus of disability lies not in individual impairment, but rather in physical, social, economic, political, attitudinal and cultural barriers erected by society" (Bornman, 2004: 186). An impairment is a condition of an individual`s mind or body, a characteristic which forms part of a person (Burchardt, 2004). The social model argues that it is "not bodily, sensory, or intellectual impairment, but rather social discrimination and biases that produce disability and exclude or disadvantage individuals" (Barnes, Mercer & Shakespeare, 1999:-60). According to Taylor (2005), disability is thus situated in society's inequitable behaviour, attitudes and environmental barriers, and not in an impaired person's body or mind.

The social model proposes that the only way to understand disability is to focus on the relationship between people with disabilities (or perceived impairments) and the society or environment of which they form part. In the context of higher education, this refers mainly to the relationship between a student with a disability and the process of teaching, learning and conducting research at a tertiary education institution (CHE, 2005).

Since 1994, the South African government has been addressing disability issues with the emphasis on the social model of disability. The White Paper on an Integrated National Disability Strategy (INDS) published by the Office of the Deputy President, in 1997, explains the social model approach in the following way: "The social model of disability suggests that the collective disadvantage of disabled people is due to a complex form of

institutional discrimination. This discrimination is fundamental to the way society thinks and operates. This is based on the belief that the circumstances of people with disabilities and the discrimination they face are socially created phenomena and have little to do with the impairments of disabled people. The disability rights movement believes, therefore, that the cure to the problem of disability lies in restructuring society (ODP, 1997).

The social model of disability implies a paradigm shift in the way disability is constructed (CHE, 2005). Thus:

- "It is the stairs leading into a building that disable the wheelchair user rather than the wheelchair."
- "It is defects in the design of everyday equipment that cause difficulties, not the abilities of people using it."
- "It is society's lack of skill in using and accepting alternative ways to communicate that excludes people with communication disabilities."
- "It is the inability of the ordinary schools to deal with diversity in the classroom that forces children with disabilities into special schools."

Hence two factors are emphasised in the social model: the competence of disabled persons and the weakness of society in respect of disability. It is therefore imperative to recognise and endeavour to focus on developmental needs of disabled people (within a framework of inclusive development) through the reform and development of society (ODP, 1997).

According to the INDS, to ensure fairness towards people with disabilities, society should respond to the needs of every disabled individual, and this means that all resources must be engaged in such a way to ensure equal opportunities for every individual participating in society. Such an approach to disability enhances the exclusion of discrimination based on disability and removes constraints of equal participation (ODP, 1997).

Inequalities relating to a socioeconomic inheritance involve more than shifting society's way of thinking - more importantly, the structures leading to these inequalities need to be addressed (CHE, 2005:5). Higher educational institutions therefore need to diminish

both structural and attitudinal constraints, which prevent students with disabilities from participating equally in the learning process.

2.4.3   The tragedy model

Swain and French (2000) refer to the tragedy model as dominant, prevalent and infused throughout media, language, cultural beliefs, research, policy and professional practice. Furthermore, the most intrusive, violating and invalidating experiences, for disabled people, emanate from the policies, practices and intervention, which are justified and rationalised by the personal tragedy view of disability and impairment (Swain & French, 2000).

According to Oliver and Sapey (1999:26), some disabled people do experience the onset of impairment as a personal tragedy which, while not invalidating the argument that they are being excluded from a range of activities by a disabling environment, does mean it would be inappropriate to deny that impairment can be experienced in this way.

The tragedy is to be avoided, eradicated or nondisabled (normalised) by all possible means. The negative presumptions about impairment and disability are such that the abortion of impaired foetuses is barely challenged. As Disability Awareness in Action (1997) states, there is considerable and growing pressure on mothers to undergo prenatal screening and to terminate pregnancies in which impairment has been detected. The use of genetic technology in its different forms in so-called "preventive" measures is, for many disabled people, an expression of the essence of the personal tragedy model, better dead than disabled. The erroneous idea that disabled people cannot be happy or experience a decent quality of life lies at the heart of this response.

The disabled person's problems are perceived to result from impairment instead of the failure of society to meet that person's needs in terms of appropriate human help and accessibility (Swain & French, 2000). There is an assumption that disabled people want to be "normal", although this is rarely voiced by disabled people themselves who know that disability is a major part of their identity.

Disabled people are subjected to many disabling expectations such as being independent, normal in order to adjust and accept their situation. It is these expectations, rather than the impairment itself, that can cause unhappiness. There are a number of different possible explanations of this tragedy view of disability. It is sometimes deemed to reflect a deep irrational fear by nondisabled people of their own mortality (Shakespeare, 1994).

An alternative explanation, however, suggests that the tragedy perspective has a rational cognitive basis constructed through experiences in disabled social contexts (Swain & French, 2000). Fundamental to understanding nondisabled people's tragedy view of disability is the possibility of crossing the divide: "There but for fortune go you or I". Unlike the divide experienced between people of different genders or different races, nondisabled people experience daily the possibility of becoming impaired and thus disabled (the causal link being integral to the tragedy model). So-called irrational fears thus have a rational basis in a disablist society.

To become visually impaired, for instance, may be a personal tragedy for a sighted person whose life is based on his or her being sighted, who lacks knowledge of the experiences of people with visual impairments, whose identity is founded on being sighted and who has been subjected to the personal tragedy model of visual impairment. This may be compounded for the nondisabled parents of disabled children, for instance, by beliefs about the benefits that nondisabled people have in education, work and relationships. Such beliefs speak to dominant social values with a broader application than the disabled-non-disabled divide, particularly through the association of disability with dependence (Oliver, 1993) and abnormality (Morris, 1991).

The personal tragedy view of impairment and disability is thus ingrained in the social identity of nondisabled people. The nondisabled identity, like other identities, has meaning in relation to and constructs the identity of others. To be nondisabled is to be "not one of those". The problem for disabled people is that the tragedy model of disability and impairment is not only applied by nondisabled people to themselves, but it is also extrapolated and applied to disabled people. From this perspective too, the adherence to a personal tragedy model by disabled people themselves also has a rational basis. For a

nondisabled person whose life is constructed on the basis of being nondisabled, the onset of impairment and disability can be experienced as a tragedy, possibly even amplified if it is associated with the trauma of illness or accident.

Lastly, a personal tragedy view can have a rational basis for people with congenital impairments, living through the daily barrage from nondisabled people, experts, parents and the media, invalidating them and their experiences. Indeed, in the disabling context outlined here, the expression of an affirmative model by disabled people has to compete with the dominant values and ideologies. It is likely to be denied as unrealistic or a lack of acceptance distorted as an expression of bravery or compensation or simply ignored. The tragedy model is in itself disabling. It denies disabled people's experiences of a disabling society, their enjoyment of life and their identity and self-awareness as disabled people.

2.4.4   The affirmation model

An affirmation model is generated by disabled people through the rejection of the tragedy model, in which their experiences are denied, distorted or reinterpreted, and through building on the social model, within which disability has been redefined.

The affirmation model directly challenges the presumptions of personal tragedy and the determination of identity through the value-laden presumptions of nondisabled people. It signifies the rejection of presumptions of tragedy, alongside rejections of presumptions of dependency and abnormality. Whereas the social model is generated by disabled people's experiences within a disabling society, the affirmative model is born of disabled people's experiences as valid individuals, as determining their own lifestyles, culture and identity. According to the social model, "the problem" is in society. The affirmation model directly challenges the notion that the problem lies in the individual or the impairment. Embracing an affirmation model, disabled individuals assert a positive identity, not only in being disabled, but also in being impaired.

In affirming a positive identity of being impaired, disabled people are actively repudiating the dominant value of normality. The changes for individuals not only entail transforming

consciousness about the meaning of disability, but also an assertion of the value and validity of life as a person with an impairment. The social model has empowered disabled people to take control of support and services, the establishment of Centres for Integrated Living and the struggle for direct payment being clear expressions of this empowerment. The development of an affirmation model takes this fight squarely into the arena of medical intervention. Some impairments such as diabetes, epilepsy and those involving pain, can respond to intervention. In the same way as the social model signified, for disabled people, ownership of the meaning of disability, so too does the affirmation model signify ownership of the impairment or, more broadly, the body. The control of intervention is paramount. This is an affirmation by disabled people of the right to control what is done to their bodies. It includes the right to know the basis on which decisions of medical intervention are made, the consequences of taking drugs (including the side effects), the consequences of not taking drugs, and the alternatives.

The affirmation model, however, is not about the pain of impairment - on the contrary, it emphasises the positive experiences and identity of disabled people from being impaired and disabled. The writings and experiences of disabled people demonstrate that, far from being tragic, being impaired and disabled may have benefits. If, for example, a person has sufficient resources, the ability to give up paid employment, and pursue personal interests and hobbies, following an accident, may enhance his or her life. Likewise, disabled people sometimes find that they can escape class oppression, abuse or neglect by virtue of being disabled.

Swain and French (2000) interviewed Martha, a Malaysian woman with a visual impairment. She was separated from a poor and neglectful family and sent to a special school at the age of five. She states: "I got a better education than any of them (brothers and sisters) and much better health care too. We had regular inoculations and regular medical and dental checks." She subsequently went to university and qualified as a teacher. Similarly, many visually disabled people became physiotherapists, by virtue of having their own "special" college, at a time when their working class origins would have prevented them from entering other physiotherapy colleges. Of course, many disabled people who are educated in "special" institutions actually receive an inferior education and may, in addition be neglected and abused (Corker, 1996).

Another way in which disability and impairment may be perceived as beneficial to some disabled people is that society's expectations and requirements are more difficult to satisfy and may therefore be avoided. A disabled man quoted by Shakespeare *et al.* (1996:81) stated the following: "I am never going to conform to society's requirements and I am thrilled because I am blissfully released from all that crap. That's the liberation of disfigurement."

As far as nondisabled people are concerned, the quality of life of disabled people depends on whether they can achieve a lifestyle of their choice. This, in turn, depends on their personal resources, the resources in society and their own unique situation. The central assumption of the tragedy model is that disabled people want to be other than they are, even if this would mean a rejection of identity and self. Nevertheless, the writings of disabled people demonstrate that being born with an impairment or becoming disabled in later life can give one a perspective on life which is both interesting and affirmative and can be used positively.

Essentially, impairment which is social death and invalidates disabled people in a nondisabled society, provides a social context for disabled people to transcend the constraints of nondisabled norms, roles and identity and to affirm their experiences, values and identity. Phillipe (Shakespeare *et al.* (1996:184) explains this as follows: "I just can't imagine becoming hearing, I'd need a psychiatrist, I'd need a speech therapist, I'd need some new friends, I'd lose all my old friends, I'd lose my job. I wouldn't be here lecturing. It really hits hearing people that a deaf person doesn't want to become hearing. I am what I am!" Watson (1998:156) writes of Phil, a disabled participant in research he is conducting: "Phil sees his acceptance of his impairment as central to his sense of self and well-being …".

The social model is collectively expressed, most obviously through direct action and campaigns in the struggle of the powerless for power. Instead of being politically threatening to disabled people, the affirmation model builds on and strengthens the Disabled People's Movement, not least by bringing disabled people, who would not otherwise engage in political action, into the Disability Arts Movement.

Finally, in terms of visions of the future, the affirmation model builds on the social model, through which disabled people envisage full participative citizenship and equal rights. Disabled people not only look towards a society without structural, environmental or attitudinal barriers, but also one that celebrates difference and values people, irrespective of race, sexual preference, gender, age or impairment.

2.4.5 Disability identity

Disabled identity, like nondisabled identity, has meaning in relation to and constructs the identity of others. To be disabled is to be "not one of those". Group identity, through the development of the Disabled People's Movement, has underpinned the development of an affirmation model in a number of ways. First, the development of a social model of disability has redefined the concept of disability in terms of the barriers constructed in a disabling society instead of as a personal tragedy. Through group identity, the discourse has shifted to the shared experience and understanding of barriers. Personal tragedy has been reconceptualised as frustration and anger in the face of marginalisation and institutionalised discrimination.

Furthermore, being a member of a campaigning group developing a collective identity is, for some disabled people, a benefit of being disabled in its own right. It can be exciting to be part of a social movement that is effecting tangible change.

Moreover, frustration and anger are collectively expressed. They are expressed through Disability Arts and campaigns of the Disabled People's Movement, instead of being seen as personal problems to be resolved, through, say, counselling. The roots of Disability Arts lie in the politicisation of disability issues. As Shakespeare *et al.* (1996:186) put it: "Drama, cabaret, writing and visual arts have been harnessed to challenge negative images, and build a sense of unity."

Furthermore, through group identity, it is recognised that simply because there are benefits from being excluded from nondisabled society (which is capitalist, paternalistic and alienating) does not mean that disabled people should be excluded. By adopting this

kind of thinking, disabled people enjoy the benefits of being "outsiders", but should not be pushed out (ie they should have the right to be "insiders" if they so wish).

Finally, for some, group identity has been a vehicle for revolutionary instead of revisionist visions of change (Shakespeare, 1996). The inclusion of disabled people in the mainstream of society involves the construction of a better society and improved workplaces, physical environments and values, including the celebration of differences. As Campbell and Oliver (1996:180) conclude in their history of the Disabled People's Movement: "In building our own unique movement, we may be not only making our own history but also making a contribution to the history of humankind. Disabled people, encouraged by the Disabled People's Movement, including the Disability Arts Movement, are creating positive images of themselves and are demanding the right to be the way they are – to be equal, but different."

2.5 THE SCHOOLING OF PEOPLE WITH DISABILITIES

This section focuses on school attendance by people with disabilities as well their different education levels, specifically at higher educational institutes. The section concludes with a discussion of how to enhance the schooling of people with disabilities through the Education for All (EFA) initiative.

2.5.1 Comparative school attendance

One of the major adverse effects of the policies pursued by the apartheid regime was the restriction of access to educational opportunities for the majority of the population, particularly Africans. The information collected in the 2001 census provided insights into disabled persons with regard to this vital social need.

Table 2.3:   The percentage of disabled and abled persons who attend school (2005)

Age (years)	Disabled persons	Nondisabled persons	Total
5	38.9	45,7	45,6
6	60.5	70,6	70,3
7	76.9	88,7	88,4
8	82.6	93,7	93,4
9	84.8	94,9	96,6
10	85.2	94,6	94,4
11	85.9	95,0	94,8
12	86.1	96,0	95,7
13	85.8	95,4	95,1
14	84.5	94,3	94,0
15	81.5	91,6	91,3
16	77.8	87,8	87,4
17	72.3	81,8	81,5
18	61.3	71,0	70,7
19	51.4	58,1	57,9
20	41.7	46,4	46,2
21	32.6	35,8	35,7
22	23.4	25,6	25,5
23	17.7	18,9	18,8
24	13.8	14.4	14.0

Source: StatsSA (2005:32)

Table 2.3 indicates the percentages of disabled and abled persons aged between five and 24 years who attended school. The table shows that a lower percentage of disabled than abled persons (as percentage of total number in each group) attended school. The differences in school attendance were more pronounced for disabled persons between the ages of six and 18 (where in most cases the percentage attending school were, on average, 10 percentage marks lower than those of abled persons). Disabled persons between the ages of 18 and 20 who were attending school were on average 7 percentage marks lower than those of nondisabled persons. For persons aged between 21 and 24 years, there was only a slight difference of an average of 1,8 percentage marks.

2.5.2   The number of people with disabilities in different education levels

Table 2.4 indicates the level of education of disabled persons where the percentage of disabled persons was highest among those who had no education (10,5%) and lowest among those with higher levels of education. This could be a reflection of the fact that disabled persons were often excluded from educational opportunities because the environment in regular schools did not facilitate integration. Another possible explanation is that the low levels of education are generally associated with the prevalence of

poverty, which in turn renders people more vulnerable to becoming impaired owing to factors such as lack of access to healthcare and rehabilitation. Hence, the higher prevalence of disabilities in the group with no education could be as a result of both limited access to educational opportunities and poverty.

Table 2.4: Percentage of people in each education category who were disabled

Level of Education	Male	Female	Total
None	10,7	10,4	10,5
Primary	5,3	5,2	5,2
Secondary	4,1	3,8	3,9
Higher	3,1	2,9	3,0
Other	1,7	1,5	1,6

Source: StatsSA (2005:13)

When one compares the levels of education of disabled students with the total population, it is unacceptable that about 30% of disabled persons had no schooling, compared with 15% of the total population. The high proportion of disabled persons with no schooling could be due to the disadvantaged position they experienced as far as access to educational opportunities is concerned as well as the dominance of older persons in this group.

2.5.3 Disabled students in higher education

According to the UNESCO (1997), disabled students at universities represent a tiny minority of 1% of the total enrolment. Although the percentage is low, the actual number of students with disabilities is important in providing services. At least 50 or 100 students with disabilities are more likely to receive assistance than if they were only two or five of them.

According to the education statistics in South Africa (DoE, 2010), 799 387 students were enrolled in public higher education institutions (HEI) in 2008. Of these, 310 259 were enrolled in distance education programmes. The relevant tertiary institution had a headcount of 261 927 students in 2008. By 2010, the tertiary institution had exceeded 300 000 student enrolments, where just over 1 000 students were disabled. More than a quarter of these students had visual disabilities.

The majority of disabled students enrolling at universities have physical or visual impairments. Physical impairments are typical in the areas that have recently experienced war or other conflicts. Visual impairments seem to be typical throughout the continent. The third largest group comprises hearing-impaired students. Some universities also mentioned mental/psychiatric problems. It is quite probable that there are a number of students who experience less visible problems, and do not receive any additional support, either because there is no support available or they do not know where to obtain assistance.

With the redress policies of including students who were marginalised and/or excluded, there may be blind students as well as partially sighted students in higher education institutions. Braille and appropriate print, as well as other aid devices such as computers, tape recorders, slates and styluses for printing in Braille by hand, and so on, should be available to them. Since some of this equipment takes more time to use than ordinary typing and writing, educators at higher education institutions must allow for extra time whenever it is needed (RSA DoE, 1997). Blind and partially sighted students need to become familiar with the centre of learning, the classrooms/lecture rooms, as well as the regular and emergency routes and procedures, preferably before the term commences (Cook, Tessier & Klein, 1992). Visually impaired students should be encouraged to use whatever sight they have together with their other senses.

One of the consequences of restricted mobility and limited experience can be learned helplessness. To counter this, students should be exposed to as many practical experiences as possible and encouraged to become independent. As far as possible, they must experience what sighted students experience and should not be overprotected (RSA DoE, 1997).

2.5.4   Enhancing the schooling of students with disabilities through Education for All (EFA)

The World Conference on Higher Education (UNESCO, 1998:23) notes that one of the functions of higher education is to contribute to the development and improvement of education at all levels: "Higher education should enhance its contribution to the

development of the whole education system, notably through improved teacher education, curriculum development and educational research." However, this broader role of higher educational institutions is not always internalised by the actors in the system.

In a meeting on the role of Higher Education in EFA (IAU, 2007) it was noted that this role is not played to the extent to which it should be, partly because of limited awareness of the EFA in the higher education sector. Several participants from both development agencies and institutions revealed their unfamiliarity with EFA, its orientation and the terminology used.

Higher education fulfils a lead role, on the one hand, in directing and supporting other layers of education by providing human resources to teach and manage the education system at the primary, secondary and tertiary levels of education, and a receiving role, on the other, because the students moving up from the lower levels of education are its inputs (IAU, 2008:13).

On the basis of this premise, it can be argued that the cost of universalisation of primary education will be higher and the cost of universalising post-primary education lower in developing countries. Conversely, the cost of universalising primary education will be lower and that of post-primary education higher in developed countries.

If one looks at the expenditure pattern, the developing countries invested a larger share of their budgets in higher education when the cost of universalising higher education was lower, and invested a lower share of their education budgets to higher education when the cost of universalisation was increasing. The developed countries, however, followed a pattern of expenditure consistent with the cost of universalisation. The cost of universalising tertiary education has increased with the expansion of post-primary education, and most of the developed countries increased their share of expenditure on higher education during the period of its massification (IAU, 2008:14). It is clear that GER and the share of budgets allocated to higher education increased substantially in developed countries during the 1990s.

While the higher education sector receives its inputs from the lower levels of education, its outputs are responsible for the production of these outputs. This flow back from the system in terms of the number of secondary school and university graduates entering the system as teachers system increases extremely slowly (IAU, 2008). In fact, the share of the graduates entering the education sector as teachers may in fact be declining, especially when the system is expanding at the higher levels of education.

One of the impacts of the efforts to achieve EFA is the explosion in enrolment and completion rates at the primary levels of education. This has a tremendous impact on the subsequent levels of education. The expansion of primary education has increased social demand for secondary and higher education which cannot be supported by the public exchequer in many countries (IAU, 2008:15).

2.6   SUMMARY

Disabled people make up about 5% of the total South African population, which implies that one out every 20 people is classified as disabled. The most common types of disability are visual and physical impairments. It was revealed that, on average, the percentage of disabled students who receive primary and secondary education is 10% lower than that of nondisabled persons. A comparison of the levels of education of disabled students with those of the total population indicates that about 30% of disabled persons have no schooling compared to 15% of the total population. These numbers tend to increase even more dramatically when one looks at the percentage of disabled students who enrol for a higher educational qualification. The high proportion of disabled persons with no schooling could be due to the disadvantaged position they have experienced as far as access to educational opportunities is concerned.

All students, regardless of their educational level, deserve nothing less than a quality education and training that will afford them opportunities for lifelong learning, access to the world of work and meaningful participation in society as productive citizens. In the context of higher education, students should be afforded opportunities not only to enter higher education programmes, but also to succeed in them (National Plan for Higher Education, 2001). This would not only impact positively on their ability to improve their

own life chances, but also contribute significantly to the broader agenda for social and economic development.

Consequently, the basis for all learning and development should be the creation of an enabling and stimulating teaching and learning environment that promotes learner access, participation and success. The medical and social models of disability are two guidelines that may offer institutions a clear way of understanding disability and the associated attitudes and responses to disabled people, in order to accommodate such people in their daily activities.

Chapter 3 will focus on disabled students involved in tertiary education, including government policies, the access constraints experienced by visually and mobility disabled students, the reasons why students drop out and the underlying reasons for disabled students attending university.

CHAPTER 3

DISABLED STUDENTS ATTENDING TERTIARY EDUCATION INSTITUTIONS

3.1   INTRODUCTION

This chapter focuses mainly on disabled students who enrolled at a tertiary institution as a result of the new government policy for students with disabilities. The policy focuses on the way in which South African tertiary education institutions respond to students with disabilities in terms of ensuring inclusive education. This will act as a framework for the way in which disabled students should be accommodated during their studies, especially in terms of their rights and equity of access. The target audience for this study was specifically students living with a mobility or visual disability. These students may experience a variety of constraints.

The schooling system acted as a primary constraint because education was provided separately for disabled and "normal" students. The inaccessibility of institutions owing to architectural barriers is still the main constraint for students living with physical disabilities. In addition, students with disabilities had difficulty finding information on available support. Attitudinal constraints play an influential role in the access and participation of students living with a disability. Educational support constraints are evident – hence institutions should focus on each individual's needs, instead of using a formula for individuals' disabilities. Moreover, financial constraints persist because 80% of people living with a disability in the world, live in low-income circumstances. In this chapter, besides describing the access constraints experienced by students with disabilities, the reasons why students drop out will also be discussed.

Student centred planning, with a view to increasing student access will be discussed in detail. The chapter concludes with a discussion of the underlying reasons why disabled students attend university.

3.2 GOVERNMENT POLICIES ON THE MANAGEMENT OF DISABLED STUDENTS IN TERTIARY EDUCATION

The legislative and policy framework for the way in which the rights of persons with disabilities are understood and addressed in South Africa is set out the Constitution (RSA, 1996) and the INDS (ODP, 1997). This policy is in place to guide the public tertiary education system on how to address broad issues of equity and compensation within this system. The various government policies that focus on the management of students with disabilities in tertiary education will be briefly outlined below.

3.2.1 The Integrated National Disability Strategy (INDS)

The framework provided by the INDS is a fundamental policy document that focuses on the assurance that issues regarding disability are part of the global political, economic and social functioning of the country, which includes service delivery. The two main principles contained in this document are critical in understanding of the vital elements of any equity agenda that involves disabled people.

The first main principle presented in the INDS document is the acceptance and explanation of the concept of self-representation. This principle has formed the cornerstone for the development of disability rights both in South Africa and across many global countries, which is evident in its inclusion into the United Nations Standard Rules on the Equalisation of Opportunities for Disabled Persons (UN, 1993). The INDS describes the right to self-representation as a fundamental principle, which informs the views of the disability rights movement both in South Africa and internationally.

This implies that the collective determination of people with disabilities should be incorporated to inform the strategies of the government. The government recognised this principle by acknowledging that persons with disabilities, together with their representatives, should play an advisory role in the decision-making processes of the organisation. The reason is that a person with a disability will provide the best arguments to alter perceptions and attitudes towards disability, thus playing a key role in the development of strategies and projects for the organisation (ODP, 1997).

The second principle of the INDS is the argument for the implementation of a social model approach to disability, where disability is considered as a human rights and development issue.

3.2.2 Transforming South Africa's tertiary education system

White Paper 3 on the transformation of the tertiary education system (DoE, 1997) states that the main objective of the transformation process is to develop a tertiary education system that will encourage equity of access for all. An added objective is to provide all who wish to reach their potential through a tertiary qualification with a fair chance of success. This ideal can only be realised by eliminating all forms of unfair discrimination and promoting compensation for past inequalities (DoE, 1997:14). White Paper 3 further emphasises that the proposed changes to tertiary institutions should be clearly outlined in an equity model that acknowledges the need for rectifying previous inequity, overcoming unfair discrimination and in the process producing a fair and just tertiary education system.

White Paper 3 contains a number of other principles and strategies that are equally important for the promotion of the participation of students with disabilities in tertiary studies. It is especially the principles that suggest that the equity agenda involves the restructuring and reorganisation of an institution to better accommodate disabled students, which will make a significant contribution to this ideal.

In South Africa, the National Plan for Higher Education (DoE, 2001) places a great deal of emphasis on the issue of disabled students. The National Plan specifies that a disabled student is classified as a person who has been disadvantaged by the apartheid tertiary education system, and the government is therefore focused on increasing their access to tertiary education. The National Plan also highlights the fact that earmarked funds will be made available to realise the objective of increasing the access of disabled and underprivileged students (DoE, 2001:12).

Another important factor in the National Plan for Higher Education (DoE, 2001) is the connection between the South African Higher Education Responses to Students with Disabilities equity of outcomes and equity of access. The Plan further discusses the fact that academic development should play a vital role in ensuring equal and fair participation for all students in the learning and teaching environment and thus afford everyone the opportunity of succeeding.

It emphasises the fact that tertiary institutions have an educational and moral responsibility towards the needs of students by ensuring that they offer sufficient programmes that will meet their learning and teaching requirements. To this end, academic development programmes should form part of the institution's overall financial and academic planning (DoE, 2001:25). Although this highlights the responsibility of an educational institution towards the promotion of fair and equitable participation, it does not directly address the needs of disabled students.

In July 2001, the foundation of creating equity for disabled students in tertiary education was further enhanced through the publication of White Paper 6. Its main objective is accommodate the learning needs of students experiencing learning difficulties or who were not able to access the existing educational provision, by providing new educational opportunities for them (DoE, 2001). Disabled students in particular were the most affected by these inequalities in the education system.

The steps required to achieve these goals consist of two methods of intervention, which are applicable to all the sectors in the education system:

- Any constraints that may restrict the access to educational provision and prevent specific students from participating equally in the process of teaching and learning should be removed.
- Strategies should be implemented that are specifically aimed at improving the capacity of the sector in order to fullfil all its learning needs. One of the various issues highlighted in White Paper 6 is that prejudice should be overcome by changing attitudes, flexible programmes should be developed to accommodate various learning needs (responsive curriculum) and mechanisms should be implemented to assist students who require additional support.

Proper coordination of student support services will enable educational institutions to improve access to development and learning of students experiencing constraints or living with a disability. Regional collaboration could further assist in making these support services more cost effective. A key component of the National Plan for Higher Education (DoE, 2001:28) is institutional planning where tertiary education institutions are required to strategise and provide programmes for disabled students through regional collaboration.

Although the South African government plans to remove all discriminatory practices and barriers and attempt to provide access to all possible educational and social opportunities in order to have equal participation of disabled students, the practical implementation of these policies tends to lag behind.

3.3   MAIN CATEGORIES OF DISABLED STUDENTS IN TERTIARY EDUCATION

The emphasis in this research is on the access constraints to tertiary educational opportunities of visually and mobility impaired students, because most disabled students fall into these categories. More details on the various forms of impairment will be discussed in the sections below.

3.3.1   Visually impaired students

According to Stopford (1987:145), a person suffering from a visual impairment experiences a reduction in his or her ability to draw together information about the surrounding environment through the sense of sight. In order for a person to be certified as having a visual impairment, an ophthalmologist must provide confirmation of the impairment. The degree to which a person has lost his or her sight is crucial when assessing potential for employment and the choice of field of study.

There are mainly two categories of blindness, namely technically blind and partially sighted. The limitations on ability are far greater when a person is certified technically blind than when he or she is certified partially sighted. This once again emphasises the varying degrees of disability.

The degree to which a student is visually impaired is critical for the way he or she is accommodated. A partially sighted student would require enlarged or different coloured lecture notes, handouts and websites (Clark, 2007:4). The recording of lectures would be advantageous. If the blind student requires a guide dog, its welfare needs to be considered from the outset. Special accommodation regarding the guide dog should be accounted for, as well as familiarisation with the layout of the university.

According to Sacharowitz (2005), the eye care services in South Africa are largely provided by ophthalmologists, private optometrists and nongovernment organisations (NGOs). The Department of Health (DoH, 2001) estimated that 100 persons in South Africa become blind daily because of cataracts. The WHO (2000) recommends that to be able to deal with new cases of cataract blindness, one ophthalmologist and facility would need to be operational for a population of 250 000.

One of South Africa's major obstacles in eye care service is the scarcity of knowledgeable and experienced ophthalmologist practitioners. Population surveys completed through the WHO (2001) highlighted the fact that a large number of cases relating to blindness and visual impairments are caused by the lack of recognition and awareness around the cause of visual disability. The reason for this is that affordable eye care services and solutions are extremely limited in South Africa.

Universities should make an effort to create awareness among students about support groups for those with a visually impairment. According to Sacharowitz (2005), the Bureau for Prevention of Blindness undertakes more than 100 tours annually to rural township areas where it provides eye care to persons who otherwise would not be able to meet the expense of professional consulting. In addition to rendering these services, the responsibilities of the Bureau also include the Motswedi Information Centre located at Optima College in Pretoria. This is a multimedia centre at which health workers as well as educators and students can obtain the necessary information and teaching materials focusing specifically on the prevention of blindness, while emphasising the importance of good health in the community.

As the largest NGO in South Africa, the South African National Council for the Blind (SANCB, 2003) maintains several national and international organisations that support visually disabled learners. Optima College is one of the SANCB's most valuable resources offering independence training and guidance to visually impaired adults. This training helps these adults to continue performing efficiently in their communities. Training courses provided by the college include orientation and mobility, Braille, typing and daily living activities. In addition, the college also provides the students with the services of a low vision rehabilitator, an occupational therapist and a social worker.

The management of visual impairment is unique in the sense that in most cases the cause of low vision loss can be treated and even prevented more cost –effectively. Unfortunately, there are a number of barriers that prevent people from undergoing regular testing and receiving the required treatment. These barriers include high costs, ignorance of the services available, the inability to access these services, aversion of surgery and social and cultural barriers (Sacharowitz, 2005).

3.3.2 Mobility impaired students

It is in the category of physical disabilities that the multitude of impairments starts to become obvious. The general tendency is to view physical impairments as a spinal injury that has resulted in paraplegia and left the individual in the confines of a wheelchair. This is largely a symptom of stereotypical behaviour as alluded to by Klimoski and Donahue (1997:112). In reality, however, this is not the case. Physical impairments can range from neuromuscular disorders to spinal cord injuries.

These disabilities may be hereditary or acquired, and range in severity from extremely severe to not severe. The main result of physical impairments is a loss, to a lesser or greater degree, of mobility. Some physical impairment is so severe that the individual's mobility and communication ability are restricted. The greatest example of such a disability is muscular dystrophy, where the individual, according to Stopford (1987:65), loses the functionality of his or her legs, arms, hands and face, and in extreme cases, respiratory muscles, at which stage the disability can be fatal. People with such severe disabilities are often precluded from employment (Stopford, 1987:72). Examples of less

severe physical disabilities are multiple sclerosis and arthritis which, with the aid of medication, can often be controlled to such a degree that they become negligible.

According to Clark (2007:5), accessibility has improved considerably in the past decade through the use of lifts, ramps and automatic doors that have been installed for individuals with restricted mobility. Despite these efforts, it still appears that the auditoria and laboratory doors are still not wide enough to accommodate an electric wheel chair. It is also necessary for the student to see the projection screen clearly.

A study conducted among disabled adults showed that a person with a mobility disability will generally avoid uneven terrains as well as areas only accessible by stairs or escalators (Shumway-Cook *et al.* 2003). It was further noted that these environmental challenges have a negative impact on the social interactions and mobility of the students.

In addition, Maart, Eide, Jelsma, Loebe and Ka Toni (2007) maintain that the physical environment causes more barriers to mobility and accessibility, especially in urban areas. The ability of a person with a disability to access transport, together with the availability thereof contributes significantly to his or her ability to access various services such as schools or work. In addition to their impairment, it is the attitudes of family, society and health professionals that influence the physical activity of disabled people (Van der Ploeg, Van der Beeke, Van der Woude & Mechelen, 2004).

The main aim of a study by Losinsky, Levi, Saffey and Jelsma (2003) was to investigate the difference in the time it takes a wheelchair-bound student to reach his or her lecture across a specific route compared to the time it takes an ambulant student to walk the same distance. They found that wheelchair-bound students would consistently be unable to reach their lecture venues within the then minutes allocated by the University of Cape Town. Most of the buildings at the institution dated back to the early 1900s and the majority of them were found to be partly accessible. Some of the venues were completely inaccessible, where alterations to toilet cubicles, working surfaces and lift controls had been overlooked in the transformation process. These necessary facilities may be a huge inconvenience for disabled students. The involvement of people with disabilities and relevant professionals in ensuring access is absolutely imperative.

3.4 ACCESS CONSTRAINTS EXPERIENCED BY VISUALLY AND MOBILITY IMPAIRED STUDENTS

Mobility and visually disabled students may experience a variety of constraints such as the following: the schooling system as a primary constraint, physical accessibility constraints, lack of service information and educational support, attitudinal and financial constraints and psychological, academic and social constraints. These constraints will be discussed in detail below.

3.4.1   The schooling system as a primary constraint

The primary constraint experienced by disabled students when enrolling at a tertiary education institution is the schooling system. In the past, education was provided separately on the classification of learners who require special attention and those who were considered normal. The learners requiring special attention consisted of a wide range of disabilities that included behavioural problem learning difficulties (DoE, 1998).

To allow all disabled learners to apply for tertiary education, the institution must have the necessary enabling mechanisms in place to make it more accessible to the students. These mechanisms must then ensure that the curriculum and institutional transformation are adequate. It is also essential for additional support to be provided where needed (DoE, 1998:126).

Although it is not an easy task to quantify the accidental exclusion of disabled students from the tertiary educational system, the INDS estimated that in 1997 approximately 70% of disabled learners did not form part of the overall training and education system (ODP, 1997). The limited number of learners with disabilities who were privileged enough to be part of a special schooling system experienced different problems inherent in a separate peripheral system.

It was found that not all schools provided an adequate level of curriculum to prepare the pupil for life after school. With only a number of schools offering pupils the tuition to matriculate (DoE, 1998), this prevented potential students from achieving the required academic qualifications necessary to apply for tertiary education. Inequalities such as these have a direct influence on the limited number of students with disabilities enrolling at a tertiary education, which strengthens the argument of the INDS that tertiary education remains largely out of their reach.

Although evidence suggests that numerous challenging constraints still remain, the 2001 census actually showed an increase in the number of disabled children attending school (StatsSA, 2003). The reliability of this information remains unconfirmed by StatsSA because this figure was obtained through a study by the 2001 census on the number of people with disabilities in South Africa and the percentage of them enrolling at a school. However, there is still the popular belief that in order to increase the number of disabled students enrolling at tertiary institutions, more children with disabilities should enter the schooling system.

In its 2002 annual report, the CHE argued that obtaining reliable data on the number of disabled children in schools should be a priority. In conjunction with this information, it is also necessary to consider the capacity of tertiary institutions to accommodate disabled students who meet the necessary requirements to enter such an institution. In addition, the CHE states in its report that if as little as 10% of the current disabled learners in the schooling system were to enrol for a tertiary education, it would pose significant challenges for institutions in terms of support services, infrastructure, teaching and learning (CHE, 2001:27).

Although the empowerment of students with disabilities enabling them to form part the tertiary education system is absolutely crucial, their participation in the system is fundamental for the establishment of equity for these students. Special consideration should be given to the way disabled students are capable of participating equally in the educational process. This will ensure that they too have a fair chance of success.

A joint report was compiled by the national committees on Special Needs in Education and Training and on Education Support Services in an effort to highlight the challenges facing the tertiary education system. These two ministerial commissions, which were formed in 1996, were responsible for the publication of White Paper 6. This report stated that the main challenge for tertiary education institutions is to acknowledge the marginalisation of learners with disabilities in the past, and then afford them the opportunity to achieve the required training and education to enter the job market. In conjunction with this is the challenge of developing the required capacity to accommodate diverse needs, together with the constraints regarding the learning and development of students.

3.4.2   Physical accessibility constraints

A common complaint of physically disabled people in the study compiled by Pierce (1998) is the inaccessibility of the environment because of architectural barriers. A lack of accessibility to services in a community prevents functional independence and full social integration for physically disabled person into society (McClain, Cram, Wood & Taylor, 1998). Furthermore, Losinsky, Levi, Saffey and Jelsma (2003:305) reported that difficulty accessing educational institutions in particular, disadvantages those with handicaps because it limits their chances of developing their employment potential.

A study by Shevlin, Kenny and McNeela (2004) indicated that participants faced access difficulties at various levels of university life. Borland and James, Holloway and Tinklin and Hall (in Shevlin *et al.,* 2004) reported that for disabled students, the major obstacle to participation at university was difficult physical access – this, despite the notion that difficulties experienced by students with sensory and physical impairments are considered to be the most amendable.

The above authors indicate that many teaching spaces and a great deal of access to buildings remain inaccessible. According to Tinklin and Hall (Shevlin *et al.,* 2004), institutions offer limited library access to disabled students. Fuller, Healey, Bradley, and Hall (2004) contend that those students with a visual impairment found the library to be discouraging because of the requirement of reading the books, which made it difficult to

browse and find the relevant books. Access to learning centres and buildings is often challenging for mobility impaired students because of heavy doors and the lack of lifts and automatic doors. Students report that accessible toilet provision has an effect on their participation in lectures and examinations because it is sparse and remote.

Parking on campus is often indicated as problematic for students with disabilities because there are not enough accessible spaces or such spaces are far from the buildings. Moreover, when construction projects are in progress, students with mobility difficulties may find it challenging to navigate around the building sites and to find an accessible route.

Accommodation and transport issues are complex and inadequate (Shevlin *et al.,* 2004). The availability and accessibility of accommodation both on and off campus will influence the level of dependency on family members and peers.

Shevlin *et al.* (2004) classified the barriers that limit students with disabilities to access and participation in tertiary education into five general categories, namely levels of awareness, assumptions of normality, information, physical and transition to tertiary education. Andreon and Durocher (2007) reported that students may encounter obstacles across various domains including communication, socialisation, independent living skills, academic functioning and self-advocacy.

3.4.3   Service information constraints

Hill (1992) surveyed the offices for students with disabilities at 27 Canadian universities. She commented that problems persist in the following areas: identifying those students who require special services, making students aware of the services and developing fair and equitable admission policies. Moreover, Haller (2006) investigated information that universities provide in their general recruitment materials about disability-related topics, as well as services/information on the disability service materials provided.

According to Fuller *et al.* (2004) and Dowrick, Anderson, Heyer, and Acosta (2005), students found it difficult to obtain information on the learning and assessment support

that was available. They also indicated that student support services should provide more information and greater outreach to students. These students explained that although their disability had been disclosed, the institution did not have any mechanisms in place to routinely provide tutors with the information.

Lastly, Dowrick *et al.* (2005) contend that there appears to be an increasing need for disability service offices to improve procedures for facilitating student disclosure to faculty. Thus, a more comprehensive network of support services on campus where one would work in collaboration with disabled students, education peers and the faculty, would improve conditions.

3.4.4 Attitudinal constraints

The attitudes of students with disabilities play an influential role in their access and participation. Kennedy (Haller, 2006) argues that attitudinal barriers are considered to be far worse than architectural barriers. The authorities might place a ramp leading up to the stage in a theatre, but their policy may not allow students with disabilities to audition for a play. Furthermore, Shevlin *et al.* (2004) reported that disabled students found attitudinal issues as the most noteworthy obstacle to progress.

In research studies by Tinklin and Hall (1999) and Holloway (2001), it was found that disabled students were faced with a variety of responses from the institution's academic staff, which generally ranged from being unhelpful to supportive. Shevlin *et al.* (2004) reported that positive staff attitudes were reflected because of a personal interest in issues relating to disability and not because of the institution's policies or training. According to Shevlin *et al.* (2004), even at the same university, there are different levels of awareness that vary considerably between the various departments and that this reflects the lack of institutional support for disabled students.

Staff attitudes contribute significantly to the learning experience of disabled students. Fuller *et al.* (2004) and Dowrick *et al.* (2005) reported instances where lecturers did not attempt to accommodate students with disabilities. The reason for this lack of understanding or flexibility could be that they did not know about the specific disability,

staff were unwilling or unable to accommodate their needs or they lacked adequate awareness regarding the support required by students with disabilities (Dowrick *et al.,* (2005). Students mentioned that when experiencing a positive teaching and attitude on the part of staff, the difference was noticeable.   These attitudinal and awareness difficulties also spread to the social lives of students with disabilities and uninformed attitudes create suspicion of disability claims and support provision (Shevlin *et al.,* 2004; Dowrick *et al.,* 2005).

3.4.5   Educational support constraints

Assistive technology and faculty mentors were considered essential supports in tertiary education in the studies of Fuller *et al.* (2004), Shevlin *et al.* (2004) and Dowrick *et al.* (2005). Furthermore, all of these studies emphasise the importance of student disability services needing to improve coordination across all support services: "Students repeatedly mentioned individual counsellors or staff who offered support" (Dowrick *et al.,* 2005:43). Although disability support providers offered students a precious link to the university's services, students preferred individualised support services. They indicated that tertiary support service providers should focus on each individuals need instead of on a formula according to the individual's disability (Dowrick *et al.,* 2005:44).

Moreover, when students were asked to comment on the university's environment, they stated that a gap existed between policy and practice and claimed that disability policy often does not lead to practice.   Students felt they had to advocate for basic accommodation (Dowrick *et al.,* 2005; Shevlin *et al.,* 2004; Fuller *et al.,* 2004)

3.4.6   Financial constraints

The World Health Organisation (WHO) reported that at least 80% of people with disabilities live in low-income countries across the world, with the majority of them being poor and not having access to basic services like rehabilitation facilities (WHO, 2003). In Africa alone, less than 2% of the people with disabilities have the necessary access to rehabilitation, health care and education, making disability a fatal issue.   These inequalities are further exacerbated by the failure of most governments in Africa to

provide disabled people with the required services (Secretariat of the African Decade of Disabled Persons, 2000–2009). Financial pressures also oblige full-time students to work while they study or to even take breaks between years of study to earn the required funds, thus delaying their progress even further.

3.4.7 Other relevant access constraints

Visual and physical impairments can affect students in various ways in specific psychological, academic and social environment, as highlighted below (Chiriboga, 2007).

- *Psychological problems*. Students with health impairments face tremendous amounts of stress as they begin to understand their impairment and how it will influence their future. Fear, anger and uncertainty are common reactions and can result in psychological disorders such as depression, low self-esteem and anxiety. All of these will be experienced as constraints in accessing tertiary institutions.

- *Learning problems*. Students with health impairments are likely to demonstrate a decreased level of academic achievement and experience greater difficulty learning. Frequent absences because of medical appointments, treatment side effects and physical limitations may result in learning issues.

- *Social problems*. Students with health impairments are subject to social alienation from their peers and often have difficulty developing and maintaining friendships. They often face tremendous social obstacles caused by frequent absences, treatment side effects and negative peer perceptions. Opportunities and social skills are requirements for the development of peer relationships. However, these students often have fewer opportunities to socialise with their peers because of time away from campus. Without peer interaction, these students fail to develop appropriate social skills which makes them less appealing to their peers. Lack of friends (support system) can be a severe constraint in access to tertiary institutions.

Educators should be aware that students with disabilities experience possible psychological, learning and social implications in addition to obvious physical effects. Accommodation and interventions might be necessary in the environment in order to create a satisfactory and positive learning experience for students with disabilities.

3.5 STUDENT-CENTRED PLANNING TO INCREASE STUDENT ACCESS AT UNIVERSITIES

Although a wide variety of services are available to students, the main reason for enrolling at university is to achieve more through the development one's abilities, especially if one is disabled. While the goal of this development may be self-belief and self-confidence, students still experience access constraints when trying to gain access to the facilities at a university.

Universities can no longer expect every student to study in exactly the same way (Clark, 2007). The Special Educational Needs and Disability Act (SENDA) 2001 and the Disability Discrimination Act 1995 stipulated that universities are obligated to recognise and meet the different requirements of disabled students. These policies where gradually enforced between 2002 and 2005.

It is claimed that the Americans with Disabilities Act (ADA) 1990 is the most comprehensive civil rights law for disabled persons. ADA consists of five titles specifically aimed at eliminating discrimination by employers, as well as any transportation and communication constraints in an attempt improve access to public services and goods such as universities (Johnson & Baldwin, 1993).

However, ADA also stipulates that improvements to accommodate the requirement of physical accessibility should not be an unnecessary financial burden on companies. This implies that existing organisations that cannot afford to make sophisticated modifications may alternatively focus on implementing more accommodation that is reasonable. Universities are thus expected to implement reasonable adjustments in the methods they use to teach students in order to avoid discrimination.

Disabled person or student-centred planning by universities is about focusing on the individual when planning for his or her future (Amerman, 2007). In so doing, the individual's interest, strengths, passions and dreams become vital to the process. Student-centred planning takes into account the student's current situation, including school, community and home life activities. Using this information together with the

student's dreams and visions for the future, long-range goals are developed. These are then broken down into short-term and long-term steps to facilitate goal attainment. A major objective of student-centred planning is to find the community supports that will help students achieve their dreams and realise their goals. These supports may include community people, services and agencies for friendship, support and community networking.

The purpose of student-centred planning is to involve all individuals who are important to the disabled student and to focus on the disabled student's strengths and interests. The disabled student is the principal person in the student-centred planning team. Other team members should be those who know the student best such as members of his or her family, educational support staff and agency representatives. Teams may also include employers, friends and anyone who can support the student in pursuing his or her dreams.

The first step in disabled student-centred planning is finding out what the student's strengths, interests, preferences and vision for the future are. Once this vision has been established, it should be used not only to guide the development of the student's future but also to ensure that his or her academic experience addresses the vision. Student-centred planning is all about the journey. One method that has been used extensively for this process is known as "making action plans". The disabled student needs to be taught and encouraged to actively participate in and even lead the planning meetings. One way for a team to help is to teach the student self-advocacy skills. Students who are effective advocates can articulate their own dreams, desires, passions, interests and visions for the future. The team should listen to the student and provide the necessary support for his or her to achieve his or her goals.

Disabled student-centred planning is not an exclusive practice. The planning process is suitable for all students and adults with disabilities functioning at all levels. Student-centred planning is a process that extends through the lifetime of a person. It should be a continuous journey, not a once-a-year discussion at the student`s annual review meeting.

3.6   REASONS WHY DISABLED STUDENTS DROP OUT

Various explanations on why students drop out emerged from the review of the literature. This section will discuss lack of academic preparedness, the transition between school and university, institutional factors, individual characteristics, knowledge structures and pedagogic distance. In conclusion, Tinto's (1975) imperative model of dropout will be explained in detail according to the three variables.

3.6.1   Lack of academic preparedness

Students attending university come from different and unequal backgrounds. These inequalities are commonly the result of schooling and financial resources. According to Scott, Yeld, and Hendry (2007:42), one of the main reasons why students take longer or fail to obtain their degree is the combination of an inadequate school curriculum and social class, resulting in their not be academically prepared.

The Working Group on Retention and Throughput (Wits, 2003:42) reported that it requires significant resources and time to manage underpreparedness. Although it is the responsibility of the school system to prepare students, the tertiary sector mentioned equity and redress as a priority – hence their commitment to assume this responsibility with enthusiasm. Universities are able to assist students who are underprepared but cannot provide all of the required school education that some students lack.

Wits conducted research on the subject of underpreparedness and suggested that student ability at different levels of university studies should also form part the concept. This term is further used to refer to staff who find themselves inadequately prepared to deal with underprepared students owing to increasing work pressures, together with the challenge of teaching a constantly growing diverse student population (Inglis, 2005).

3.6.2   Transition between school and university

It is difficult for a learner to make the transition from attending school to being enrolled at a university (Thomas, Bol & Warkentin, 1991). This transition is associated with tension,

anxiety and stress, which may lead to students struggling and dropping out of university, a phenomenon that is separate from gender, class, background or race (Darlston-Jones, Cohen, Haunold, Pike, & Young, 2003). According to the literature on underpreparedness, there are a number of complex combinations of distinctive variables, which affect a student's success and performance at university.

The following are some of these factors:
- the maturity and age of the student
- the long-term goals of the student
- the institutional cultural differences between university and school
- the student's previous school performance
- the socioeconomic status of the student
- the student's mode of entry into the university
- gender differences

Students enrolling at a tertiary education institution for the first time, specifically those with a substandard educational background, require additional support and help with the enculturation and transition process.

3.6.3 Institutional factors

The most significant institutional factors that influence the performance of students are the student-teacher ratio, the size of specific classes, the size of the institution and the nature of specific courses (Tinto 1993). Schuetz (2005) examined the impact of the campus environment from an ecological perspective, specifically the impact of certain activities, relationships and the environment on a student's success. Graham-Smith and Lafayette (2004) found in their study on the experiences of students with disabilities, that the main factor in a positive campus experience was caring staff. During the University of Sydney's one-day experimental workshop to assist students form strong study-related and social networks, it was found that the attendees enjoyed self-motivation together with stronger peer relationships (Peat, Dalziel & Grant, 2000).

3.6.4 Individual characteristics

The individual characteristics and personality of students were highlighted as one of the difficulties that they might experience during their tertiary studies, which further include cultural and linguistic backgrounds, social, academic and economic difficulties (McInnis, James & Hartley, 2000). Similar studies also included life experience, maturity and the age of the students (Long, Carpenter & Hayden, 1995). In a study by Ochse (2003) regarding the expectations of students together with the assessment of their own ability, it was found that white females underestimated their ability to succeed, while the black students consistently overestimated theirs. White males were the only group who were accurate in their valuations.

3.6.5 Knowledge structures

In addition to the knowledge structures defined by Bernstein (1999; 2000), Muller (2006) examined the significance of progression and sequence in curriculum design together with its implications for productivity and performance. Griesel (2004) compiled a case study around pedagogic responsiveness, which proved to be useful in explaining the systematic socialisation of underprepared students, the importance of feedback and the pedagogic engagement with the thinking of learners.

Through curriculum responsiveness, Moll (2004:4) showed that the idea of access and equity is closely linked to the values and assumptions on which the curriculum of the university is built. Four key categories of curriculum responsiveness were defined according to the following descriptions:

- responsiveness to the learner: teaching and assessing students in ways that are accessible to them
- cultural responsiveness: the way the curriculum accommodates diversity in the sociocultural realities of the students through the development of a wider variety of learning pathways and instructional strategies
- responsiveness to the knowledge discipline: a systematic inquiry according to the procedures and principles dictated by the underlying knowledge discipline and an immersion in complex theoretical developments

- economic responsiveness: the extent to which the curriculum meets the changing needs of employers by producing graduates who are competitive, skilful, innovative and able to increase the economic competitiveness of their employers - in other words by facilitating "greater responsiveness between higher education and industry"

On the education side, this requires socialisation into academic inquiry of specialised knowledge. This includes making available the values of the underlying discipline, what evaluative criteria are significant and how knowledge will be assessed. In addition to the adjustment of teaching to the rhythms, the emotions and tensions of learning should also be part of this.

3.6.6   Pedagogic distance

The theory of pedagogic distance is catching on in South Africa. This theory integrates two dimensions of lecturer-student interaction that are valuable for understanding the nature of pedagogic and social mediation. The first dimension of pedagogic distance is transactional distance, for example, the cognitive space between peers. Using this notion, Moore (1997) explains that pedagogic and physical distance has an effect on the teaching-learning connection in the classroom. This concept is based upon the interpretations and understanding that exist between the students and the lecturer. In particular, it is those students who were historically disadvantaged that are the most affected by the institution's inability to decrease the distance. This problem can be overcome by implementing certain strategies to embrace the theory of "social presence" (Richardson & Swan, 2003). Gunawardena (1995:151) defines this theory as "the degree to which a person is perceived as a 'real person' in mediated communication", which then enhances the feelings and perceptions of a student about how he or she connects with the lecturer (Hostetter & Busch, 2006).

The second dimension of pedagogic distance is "teacher immediacy", which Witt, Wheeless and Allen (2004:190) as "the act of reducing the physical and/or psychological distance between lecturers and students through touch, direct body orientation, eye contact, gestures and positive head nods and related body language". One would

assume that this dimension is more appropriate to the school context. The theory suggests that narrowing the pedagogic distance between lecturers and students would enhance pedagogic mediation in several domains of interaction, that is, emotional, political, linguistic and physical.

3.6.7   Tinto's dropout model

Tinto (1975:94) theorises that the process of dropping out from university/college can be viewed as a longitudinal one in which the interactions between the disabled student, the academic and the social systems of the college/university continually modify his or her goal and institutional commitments in ways that lead to persistence and/or to varying forms of dropout. Tinto (1975) suggests that there is an integral institutional need in universities to integrate orientation programmes that introduce students to university life in an atmosphere of fun and support as opposed to one that provokes stress and anxiety.

Tinto (1975:94) developed a dropout model that presents three variables that help to explain the phenomena of dropping out and persisting. The first variable is background characteristics. The variable encompasses personal attributes (e.g., sex, race and ability), previous experiences and family situations. He (1975) theorises that each of these elements has an impact on performance at university or college. More importantly, these background characteristics and individual attributes also influence educational expectations and commitments. He further argues that given these educational goals and commitments, it is the student's integration into the academic and social systems of the institution that most directly relate to dropping out or persevering.

The second variable is integration into the academic milieu, which refers to the student's grade performance of his or her intellectual development during the time at university (Tinto, 1975:104). The student's performance relates directly to meeting certain standards of the university, while his or her intellectual development relates more to the identification of the individual with the university's academic system. Grade performance signifies an extrinsic form of reward of the student's participation at the university that can be utilised for educational and career mobility. However, intellectual development

represents a more intrinsic reward that is a fundamental component of the student's personal and academic development.

The third variable is social integration, which can be viewed as the interaction between the individual and other students at the university (Tinto, 1975:107). Social integration occurs through informal peer group associations, semiformal extracurricular activities and interaction with faculty and administrative personnel in the institution. Successful interactions in these areas result in varying degrees of social communication, friendship support and collective affiliation. Furthermore, these factors can be viewed as important social rewards that become part of the student's generalised evaluation of the costs and benefits involved while attending university. The student's perception is important for both integration into the academic and social systems of the tertiary institution as well as in the evaluation and costs relating to the institution.

3.7 UNDERLYING REASONS FOR DISABLED STUDENTS TO ATTEND UNIVERSITY

Disabled students are exactly the same as normal individuals who are driven to perform for achievement through motivation. This section provides an overview of the most relevant motivation theories including intrinsic and extrinsic motivation. Motives can be expressed as drives or goals. Specific references are made to goals in the achievement context as well as academic goals and prosocial goals. Lastly, self-processes and the self-worth theory are explained.

3.7.1   Intrinsic and extrinsic motivation

Since Vroom's (1964) development of the expectancy-valence theory of motivation, the most obvious distinction in motivation is between intrinsic and extrinsic motivation. Porter and Lawler (1968) define intrinsic motivation as an activity performed by people owing to their interest and satisfaction in the activity itself. They do not expect to derive anything from the activity, whereas extrinsic motivation requires an instrumentality between the activity and separable consequences in the form of rewards. Hence satisfaction derives

not from the activity itself, but from the reward. In the case of disabled students, it would be to obtain high marks, a degree, a well-paid job or a bursary.

3.7.2   Motives as drives

In the past half century, two broadly different conceptions of achievement motivation have emerged. First, there is the perspective that motivation is a drive - that is, an internal state, need or condition that impels individuals towards action. According to this perspective, needs were thought to reside largely within the individual, in the sense that they were deemed to be akin to traits. These drive notions evolved from earlier theories of motivation that emphasised satisfaction of such basic tissue needs as hunger and thirst (Woodworth, 1918). However, because of the limitations of applying a strictly physiological approach to understanding human behaviour, researchers eventually broadened their focus to postulate learned drives or such psychological motives as the need for social approval, power and achievement (Covington, 2000) by disabled students

Atkinson (1957; 1964) and McClelland (1961) developed the most sophisticated view of achievement motivation as a learned drive in the 1950s and early 1960s. This theory held that achievement is the result of an emotional conflict between striving for success and avoiding failure. These two motivational dispositions were largely characterised in emotional terms. For example, hope for success and the anticipation of pride at winning or prevailing over others was said to encourage success-oriented disabled students to strive for excellence.

However, a capacity for experiencing shame was thought to drive failure-oriented persons to avoid situations in which they believed themselves likely to fail. It was the balance — or more aptly the imbalance — between these two factors that was believed to determine the direction, intensity and quality of achievement behaviour (Covington 2000). For example, failure-avoiding disabled students were deemed likely to avoid all but the simplest tasks, unless extrinsic incentives such as money or the threat of punishment were introduced to overcome their resistance. In effect, it was this difference in emotional reactions (pride vs shame) that was thought to answer the question why some disabled students approach learning with enthusiasm and others only with

reluctance, and why some choose easy tasks for which success is assured and others tackle problems for which the likelihood of success is exquisitely balanced against the chances of failure.

3.7.3   Motives as goals

Over the years, this approach/avoidance distinction has undergone significant modifications, especially with the rise of the alternative view of motives as goals that entice disabled students towards action (Elliott & Dweck, 1988). Researchers in this tradition assume that all actions are given meaning, direction and purpose by the goals that individuals seek out, and that the quality and intensity of behaviour will change as these goals change (Covington, 2000). Obviously, this drive/goal distinction is somewhat arbitrary in the sense that the same achievement behaviour can often be construed as either satisfying a need or the result of pursuing a goal. In this sense, neither view discounts the validity of the other; instead, they are complementary, with each being an additive to our understanding. For instance, goal theory leaves largely unaddressed the question of why disabled students choose one goal over another, an issue that remains a central focus of need achievement theory.

However, goal theory offers a practical surrogate for a concept —motivation — whose nature is not yet fully understood and for which many differing perspectives have been put forward over the years (Maehr & Meyer, 1997). By rewarding some goals and not others, educators can change the reasons students learn - in other words, change their motives. Thus, by this analysis, one need not await final all-encompassing definitions or ultimate clarification before taking eminently practical steps to solve immediate pressing problems that are motivational.

3.7.4   Goals in the achievement context

The most recent embodiment of the motives as goals tradition is the achievement goal theory (Ames 1992; Dweck 1986. Urdan, 1997; Urdan & Maehr, 1995). Research on goals in the achievement context can be categorised according to three perspectives on

goals, that is, task-specific, goal content and achievement goal constructs. Each of these perspectives reflects a different level of analysis of the goal construct.

3.7.4.1 Task-specific goals

Task-specific goals are the individual's social cognitive level goals for a specific task or problem. For example, a disabled student doing an assignment might set a target of trying to get eight out of ten correct. These target goals do specify the standards or criteria whereby individuals can evaluate their performance, but they do not really address the reasons or purposes for seeking to attain these targets for their achievement.

3.7.4.2 Goal content approach

A second level of goals concerns more general goals that individuals may pursue that address, not only the target goal, but also the reasons why an individual or disabled student is motivated. This goal content approach attempts to specify the range of potential goals that could subserve motivated behaviour. Ford (1992) proposes 24 basic categories of goals in his motivational systems taxonomy including goals of exploration, understanding superiority, resource acquisition, mastery, creativity, happiness, safety and belongingness, to name a few. These general goals should apply to all areas of life and characterise what disabled students want or are trying to accomplish as well as their reasons for doing something (Ford, 1992).

These general goals do not necessarily have the same level of specificity in terms of standards or criteria for evaluation as target goals. There are a large number of other general goal content constructs such as personal strivings, personal projects, current concerns, possible selves and life tasks that reflect a more general perspective on goals and reflect different goal contents that disabled students may be striving for in many contexts, and not only in achievement contexts (Austin & Vancouver, 1996; Emmons, 1997).

3.7.4.3   *Achievement goals*

A third perspective on goals, namely achievement goals, reflects at intermediate level between very specific target goals and the more global goal content approach (Pintrich, 2000). Achievement goals refer to the purposes or reasons why an individual pursues an achievement task in terms of academic learning tasks.

Achievement goal constructs represent a combination of general goals or purposes such as mastery or superiority as well as more specific criteria or targets whereby performance will be judged. Achievement goal constructs such as mastery and performance goals are assumed to reflect an organised system, theory or schema for approaching, engaging and evaluating one's performance in an achievement context (Pintrich, 2000).

Hence the term "goal orientation" is often used to represent the idea that achievement goals are not only simple target goals or more general goals, but also represent a general orientation to the task, which includes a number of related beliefs about purposes, competence, success, ability, effect, errors and standards.

Task-specific goals and the more general goal content approach may be applied to many different contexts or type of goals (e.g., happiness or safety), but achievement goal constructs are more specifically developed to explain achievement motivation and behaviour.

3.7.5   Academic goals

The basic contention of achievement goal theory is that, depending on their subjective purposes, achievement goals differentially influence school achievement via variations in the quality of cognitive self-regulation processes. Cognitive self-regulation refers to disabled students being actively engaged in their own learning, including analysing the demands of school assignments, planning for and mobilising their resources to meet these demands and monitoring their progress toward completion of assignments (Pintrich, 1999; Zimmerman, 1990; Zimmerman, Greenspan & Weinstein, 1994). Thus, in effect, one's achievement goals are thought to influence the quality, timing and

appropriateness of cognitive strategies which, in turn, control the quality of one's accomplishments.

Two general kinds of goals that closely follow the original approach/avoidance designation of need theory have been made a particular focus of study: learning goals and performance goals, respectively. Although researchers have favoured different designations for learning goals such as task-goals (Anderman & Midgley, 1997; Kaplan & Midgley, 1997; Midgley, Kaplan, Middleton & Maehr, 1998; Nicholls, 1984) or mastery goals (Ames, 1992; Roberts, 1992), there is a general agreement that regardless of these variations, learning goals refer to increasing one's competency, understanding and appreciation for what is being learnt. Likewise, there is general agreement that performance goals, whether referred to as ego-goals (Nicholls, 1990; Thorkildsen & Nicholls, 1998) or self-enhancing goals (Skaalvik, 1997), involve outperforming others as a means to enhance one's ability status at the expense of peers.

3.7.6   Prosocial goals

The bulk of research inspired by achievement goal theory has focused on academic outcomes. Covington (2000:178) refers to a separate line of inquiry with different origins and emphases, but that will almost certainly contribute to a deeper understanding of academic achievement, which focuses on the interpersonal world of students living with a disability and on the expression of social goals, including peer acceptance and respectability. From the time that McClelland (1955) and others (e.g., Veroff, 1969) first identified the need for approval as a vital social motivator in the drive theory tradition, researchers have recognised a broad range of social concerns and behaviours as important aspects of school-related motivation, including the willingness to cooperate, comply with rules and help others.

Recently, investigators have located the need to achieve a sense of belonging, integrity and the respect of others in the larger context of goal theory (Farmer, Vispoel & Maehr, 1991). Prosocial goals such as gaining acceptance have much in common with academic goals (Schneider, Ackerman & Kanfer, 1996). The pursuit of social goals, like that of academic goals, can help to organised, direct and empower students living with a

disability to achieve more. For example, the desire of disabled students to achieve for the sake of the group is a well-known phenomenon and forms the basis for much of the success of cooperative learning (Hertiz-Lazarowitz, Kirdiz & Miller, 1992).

3.7.7   Self-processes

Research inspired by goal theory has substantially advanced our understanding of classroom achievement dynamics. Covington (2000:180) clearly states that the quality of self-regulation forms an essential link between academic goals, on the one hand, and the quality of achievement behaviour, on the other. Although achievement goals organise behaviour via self-regulation mechanisms, thereby addressing the sustaining function of motives, what about the arousal and selection functions of motives? Why, for example, do disabled students choose to pursue some goals and not others, and strive for the chosen goals with different degrees of energy? Moreover, what of the adaptive function of motives? If the highest goal of most disabled students is to achieve the best grades possible, as appears to be the case (Covington & Wiedenhaupt, 1997), then why do some of them sabotage their chances by procrastinating in their studies or setting unrealistically high goals that doom them to failure?   These questions imply that achievement goals may serve more fundamental adaptive, even survival, functions than has previously been acknowledged by goal theorists.

However, perspectives are rapidly changing. In the past decade there has been growing recognition that neither motivational nor cognitive models per se can fully describe all aspects of academic achievement (see especially Garcia & Pintrich, 1994; Graham & Golan, 1991).   Several approaches to establishing a theoretical rapport between a cognitive agenda and motivational concerns have been proposed. Some researchers have suggested infusing achievement goals with self-motivating processes (Maehr, 1998; Roeser, Midley & Urdan, 1996), including internalised self-talk to help monitor and sustain long-term task engagement.

Other researchers propose conceptualising goal orientations as highly personal, that is, based on stable, trait-like dispositions instead of being treated as more situated reactions that are subject to prevailing environmental demands (Emmons, 1997; Pintrich, 1999).

The treatment of achievement goals as enduring adaptive drives has remained a central emphasis in the need achievement tradition. The most recent expression of this focus was the advent of the self-worth theory.

3.7.8   Self-worth theory

The self-worth theory (Covington, 1992, 1998; Covington & Beery, 1976) assumes that the achievement goals adopted by students living with a disability, whether learning or performance oriented, reflect a Promethean life-spanning struggle to establish and maintain a sense of worth and belonging in a society that values competency and doing well. This means that, in our society, individuals are widely considered to be only as worthy as their ability to achieve. Hence the kinds of grades disabled students achieve are the unmistakable measure by which many, if not most, youngsters judge their worth as students.

Although a grade focus dominates, it is the way disabled students define success that is the all-important factor whereby self-esteem mechanisms operate to effect achievement. For example, those students previously described as success oriented (Atkinson, 1957; Covington, 1992) define success in terms of becoming the best they can be, irrespective of others' accomplishments. They also value pushing the envelope of their current skills and understanding through diligence and hard work. Success-oriented students living with a disability value ability as much as others do, but as a tool or resource to achieve personally meaningful goals.

By contrast, other disabled students value ability as a matter of status, which means defining competency in terms of doing better than others academically. In the process they are often forced to avoid failure or at least avoid the implications of failure - that is, they are incompetent, because the rules of competition dictate that only a few can succeed. The failure-avoiding tactics involved here have many guises, but whatever their form or character, they are all linked to the fear of failure, in the sense that they are part of the defensive repertoire of those disabled students who tie their sense of worth to grades and as a result are dominated by performance goals (Fried-Buchalter, 1992; Thompson, Davis & Davidson, 1998).

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3.8 SUMMARY

This chapter focused on various constraints experienced by visually and mobility impaired students studying at a tertiary institution. Seven categories of constraints were identified namely the schooling system, physical, information, attitudinal, educational support, financial and other relevant constraints. Each one of these categories was investigated in line with the policies that influence the management of South African tertiary education institutions, as discussed at the beginning of the chapter.

Although tertiary institutions have made valuable improvements to accommodate mobility disabled students by building ramps and lifts, certain challenges still exist which limit their access to auditoria rooms and laboratories. One such limitation is the fact that doorways and roll gates are not wide enough for electric wheel chairs to pass through, which means that students may often be late for their lectures. This lack of convenient accessibility can be ascribed to the fact that special mechanisms to accommodate mobility disabled students were not part of the initial building designs.

Where certain physical mechanisms are implemented to accommodate a wide variety of mobility disabilities, visually impaired students require special consideration. It is essential for a tertiary institution to note the degree to which a student is visually impaired because they may vary from being partially sighted to being technically blind. With this information, the institution will be able to correctly accommodate the student, whether it involves larger handouts for those who are partially blind or recording lectures that will help those who are technically blind. When technically blind students use a guide dog, special arrangements need to be made to accommodate and familiarise the guide dog with its new surroundings.

Various explanations as to why students drop out emerged in the literature study, for example, lack of academic preparedness, the transition between school and university, institutional factors, individual characteristics, knowledge structures and pedagogic distance.

It was further noted that the characteristics that may influence the motivation of students with disabilities to further their studies can be summarised by using Tinto's dropout model. This model suggests a direct link between the interaction of students in the institution, and their commitment towards the institution and to graduation. It is thus the interplay between the three key variables of social integration, institutional integration and goal commitment that actually determines whether or not a student will graduate.

There are two kinds of motivation, namely intrinsic and extrinsic. Over the years, motives-as-drives experienced various modifications, especially with the development of the alternative view of motives-as-goals, which entices disabled students to take action (Elliott & Dweck, 1988).

The achievement goal is one of the most noted embodiments of the motives-as-goals concept (Ames, 1992; Dweck, 1986; Urdan, 1997; Urdan & Maehr, 1995), where the achievement goal is categorised into three different perspectives, each reflecting a specific level of analysis regarding the goal construct. Research based on the achievement goal theory has mainly been focused on academic outcomes. Goal theory has inspired a substantial amount of research, which has contributed significantly to advancing classroom achievement dynamics.

The following chapter discusses the research design and the methodology used to apply the design.

CHAPTER 4

RESEARCH METHODOLOGY

4.1   INTRODUCTION

The main objective of this study, as stated in chapter 1, was to determine whether a group of mobility and visually disabled students experience constraints in their access to the facilities at the main campus of a tertiary institution. A further objective was to identify categories of difficulty levels of accessibility and to determine the relationship between the levels of accessibility and the motivation of students with disabilities. An explanatory research design was used to achieve this goal (Mouton, 2006).

The purpose of this chapter is to justify the use of an explanatory research design and discuss the methodology used to apply the design. This chapter also explains how the researcher selected the sample, how data were collected and what data collection instruments were used. Finally, the relevant ethical considerations are discussed.

4.2   RESEARCHING SENSITIVE TOPICS

Research involving people with disabilities is always a sensitive topic, as are topics such as Aids or child abuse. According to Renzeti and Lee (1993:4), research on these topics often poses technical problems and issues that have to do with the ethics and politics of the research. They (1993:3) define sensitive research as follows: "Studies in which there are potential consequences or implications, either directly for the participants in the research or for the class of individuals represented in the research."

According to Mouton (2006:104), research questions of a sensitive nature may lead to nonresponse or refusal of the respondents to participate in research projects. Hence the tertiary institution requested that the questionnaire should be anonymous in the sense that certain personal information including race, student numbers and religion should not

be gathered. Justification for this request relates to the fact that authorities felt that the "sensitivity" of the research would influence most phases of the research process - hence the need to mention this before discussing the research.

4.3   CHOICE OF RESEARCH DESIGN

The method of investigation was simplified mixed methods where the researcher combines qualitative and quantitative research. Owing to the limited availability of the participants for interpersonal contact with the researcher, self-administered questionnaires were deemed to be the most viable data collection method. The second research method was more interpretive in the sense that the researcher sought an in-depth understanding of the individuals' experiences, and this was achieved by adopting a qualitative approach through a focus group discussion and interviews.

The combination of these two methods afforded the researcher an opportunity to conduct both quantitative and qualitative research. According to Reichardt and Rallis (1994:54), leading theorists have for many years integrated these two methodologies in one study, often using the different methodologies to answer different but related questions, which was precisely the aim of this study.

When quantitative and qualitative methods are combined in a mixed method approach, they generally complement each other and allow for a more complete analysis of the research condition (Greene, Caracelli & Graham, 1989; Tashakkori & Teddlie, 1998). A mixed method approach can be used to address different research problems, and may be helpful in gaining in-depth understanding of certain trends, instruments and patterns, generating and testing theories, studying diverse perspectives or understanding the relationship between the variables. In this instance, the mixed method approach was useful in gaining an in-depth understanding of the access constraints experienced by disabled students.

4.3.1 The research design

Creswell (2003) acknowledges that the most straightforward mixed method design is explanatory design. The purpose of this design is to use the qualitative findings to help clarify the quantitative results. This was indeed what the researcher aimed to do in this study. The quantitative results provide a general picture of the answers to the research problem, while the qualitative results refine, explain or extend the general picture (Creswell, 2003; Ivankova, Creswell & Stick, 2006). The data were collected in two separate phases. The quantitative data were collected and analysed first. On completion of the analysis of the quantitative data, the qualitative data were then collected and analysed.

Owing to the transport problems experienced by participants during the quantitative phase, the sample that was available was small (n = 23), and the researcher had to rely on a smaller focus group (qualitative phase) for more in-depth information. Sections 4.4.1 and 4.5.1 provide a more in-depth discussion of the sample.

The word "explanatory" in the design suggests that the qualitative findings help explain the quantitative results obtained in the first phase. The advantage of the explanatory design is that its two separate phases simplify the implementation thereof. The steps fall into clear separate stages conducted by a single researcher. This also makes it easier to describe and report the explanatory study. One of the limitations of this design is that collecting and analysing the data in two sequential phases' means that the study takes longer to complete.

4.3.2 The research paradigm

The research paradigm is fundamental to the research design and influences the way in which the research questions are asked and how they will be studied (Terre Blanche & Durrheim, 1999). The research question should fit logically into the paradigm. According to Terre Blanche and Durrheim (1999:36), paradigms act as "perspectives that provide a rationale for the research and commit the researcher to particular methods of data collection, observation, and interpretation",

Guba (Denzin & Lincoln, 2000:19) states that a paradigm is "the grid that contains the researcher's epistemological, ontological and methodological premises". A paradigm or an interpretive framework is thus a basic set of beliefs that guide action. According to Terre Blanche and Durrheim (1999:6) and Mertens (1998), a paradigm comprises the following three dimensions.

- Ontology refers to the question, "what is the nature of reality"? A fundamental assumption of the interpretive paradigm is that reality constitutes subjective experience. There are thus multiple constructs to reality and perceptions of reality might change throughout the process of the research (Mertens, 1998). This study explores the subjective experience of access constraints experienced by visually and mobility disabled students at the tertiary institution involved in the study. The aim was therefore to unearth the multiple perspectives of the participants from the stance of their unique contexts, backgrounds and disabilities.

- Epistemology specifies the nature of knowledge. Epistemology of interpretivism refers to a concern to explore and understand the social world using both the participants' and the researcher's understandings (Ritchie & Lewis, 2003). Knowledge is therefore multiple, subjective constructions of meaning. During the study, the researcher was concerned with the different ways students living with a mobility or visual disability subjectively constructed their experiences of access to the tertiary institution's facilities. The researcher was also involved in an interactive meaning-making process with visually and mobility disabled students.

- Methodology relates to the method the researcher will adopt to construct and co-construct knowledge and insight in practice (Terre Blanche & Durrheim, 1999:6). As mentioned earlier, the researcher opted for a mixed methodology and conducted a survey questionnaire, one focus group discussion and eight individual interviews.

According to Terre Blanche and Durrheim (1999), if one assumes that people's subjective experiences are real, and that one can understand their experiences through interaction with them, then the interpretive paradigm, using qualitative techniques would

be the most appropriate research method to follow. Neuman (2000:71) substantiates this statement as follows: "for interpretive researchers, the goal of social research is to develop an understanding of social life and discover how people construct meaning in natural settings". Hence the assumption in this paradigm is that data, understanding and results are embedded in individuals and their contexts.

4.4   THE QUANTITATIVE PHASE

Since the participants used for the qualitative research were a subsample of the quantitative research, it would be appropriate here to discuss sampling first.

4.4.1   Sampling

The target population comprised 129 registered visually and mobility disabled students (living in Tshwane) registered for 2010 at the relevant tertiary institution. The institution provided the researcher with a list of mobility and visually disabled students and she telephoned each student on the list. During the telephonic conversations, she introduced herself, explained the purpose of the research and the potential benefits of participating.

A total of 23 students ultimately participated in the quantitative research by completing the questionnaire. Twelve students indicated their details and willingness to participate in the follow-up qualitative research phase. For the qualitative research approach, the researcher conducted a focus group and eight individual follow-up interviews.

4.4.2   Sampling methods and approaches

As mentioned earlier, this study was qualitative because of small number of participants. Normally, researchers in quantitative research are concerned with probability sampling whereby the sample is selected in such a way that it will mathematically represent subgroups of large populations (Shaughnessy, 2008; Vito, Kunselman & Tewksbury, 2008). However, the researcher studied a situation in which it was not possible to select the probability samples that are normally used in large-scale surveys - hence her

application of the nonprobability sampling method. The most appropriate sampling method for the study was a combination of purposive and convenience sampling.

4.4.2.1 *Purposive sampling*

This method of sampling is also referred as judgemental sampling (Hagan, 2006). In such a study, the researcher endeavours to understand a phenomenon. The participants were therefore purposefully selected because on the strength of their disability they were "experts" and "information rich cases" (Merriam, 1998). The researcher drew on her knowledge of mobility and visually disabled students, its elements and the aim of the research to select participants who represent the population (Babbie & Mouton, 2006:166). The main limitation of purposive sampling is often the lack of generalisability.

4.4.2.2 *Convenience sampling*

A convenience sample relies on the availability of subjects, those who are willing to participate and accessibility. This type of sampling is thus often referred to as accidental or availability sampling (Babbie, 2007; Mutchnick & Berg, 1996.)

4.4.3 Criteria for the selection of the purposive participants

Creswell (2003:220) emphasises the fact that qualitative data collection uses purposeful sampling to ensure that individuals are selected because they have experienced the central phenomenon. Black (1999) makes it clear that purposeful sampling involves the researcher handpicking participants on the basis of an exact characteristic – in this research, visually or mobility disabled students, to obtain a sample that is large enough, but still comprising the necessary qualities.

The participants had to meet the following criteria for inclusion in the sample:
- They had to represent different fields of study including the humanities, law, economics and the management sciences and engineering.
- They had to manifest a visual or mobility disability (e.g., blind, partially sighted, quadriplegic, paraplegic or cerebral palsied).

- They had to reside in the Tshwane district so that they were easily available and approachable to enable the researcher to arrange the focus group and interviews.

The main objective of this study was to determine whether a group of mobility and visually disabled students experience constraints in their access of the facilities at the main campus of the tertiary institution at which the research was conducted. A further objective was to examine the impact that possible constraints have on the students' motivation to further their studies. A mixed (quantitative and qualitative) approach was followed in conducting a questionnaire survey, a focus group and individual interviews with the participants. The quantitative approach was followed to explore the breadth and the qualitative approach to explore the depth of the constraints experienced by the participants.

4.4.4   Data collection

To collect the quantitative data, the researcher developed a self-administered questionnaire. Although self-administered questionnaires are only appropriate when the respondents are adequately literate, the researcher assumed that university students would in fact be literate. To accommodate the visually disabled students, the questionnaire was converted to Braille by the Advocacy and Resource Centre for Students with Disabilities (ARCSWiD).

4.4.5   Self-administered questionnaire

The self-administered questionnaire was administered during the quantitative data phase. This section will focus on the purpose, design, reliability and validity of the questionnaire as well as the method the researcher adopted to collect data.

4.4.5.1   The purpose of the research instrument (questionnaire)

The measuring instrument in this study for the collection of primary data was a questionnaire designed by the researcher and an expert (Dr Strasheim) in the

development of questionnaires. Owing to the limited number of recent studies on the topic, few questionnaires could be used or adapted in the compilation of the questionnaire. There were also no psychometrically standardised and validated questionnaires available in South Africa dealing specifically with the research questions. The decision was therefore to design a questionnaire that focused mainly on the research question (ie to identify constraints). The items were compiled on the basis of information collected in the literature study.

The questionnaire consisted of closed and open-ended questions. The open-ended questions revealed richness and depth of information that is not possible with closed-ended questions (Lancaster, 2005). Hence the main purpose of the open-ended questions was to assist with the qualitative study. For the quantitative purpose of the study, closed-ended questions on a seven-point Lickert scale were used. The questionnaire is provided as appendix A.

4.4.5.2   *The design of the research instrument*

The researcher first attended a workshop on questionnaire design. She then drafted the questionnaire and consulted Dr Strasheim, who had also been one of the facilitators at the questionnaire design workshop. The design of the questionnaire was thus a collaborative effort. After drafting the questionnaire, it was edited by the researcher and the institution's editing division.

The questionnaire consisted of three sections. Section A focuses on access constraints information and was mainly designed on the basis of the literature. This section contains open- and closed-ended questions. Section B contains information on the students' motivation to study. Elliot and McGregor's (2001) Achievement Goal Questionnaire (AGQ) and Elliot and Murayama's (2008) AGQ were revised and used as a framework to develop this section of the questionnaire. Section C includes biographical data on the students. This section was classified as optional because this was deemed to be sensitive information. Most of the students did not complete this section.

4.4.5.3   Process of collecting survey questionnaire data

The 129 students on the institution's list of disabled students were contacted telephonically. The researcher first asked the students whether or not they were visually or mobility disabled. Thirty-one students refused to answer, became angry and said that they were not disabled.   A few students mentioned that they had asked ARCSWiD several times to change this, but without any success.   However, the students who confirmed their disability were friendly and helpful.   One could hear that they were interested in the research and appreciative that someone was actually showing an interest in them.

The researcher informed ARCSWiD about the students who had denied having a disability.   ARCSWiD responded with shock and affirmed that this was not possible, because before a student can be classified as disabled, he or she needs to submit a medical certificate and ARCSWiD is familiar with all the students on its database.   The researcher concluded that either ARCSWiD's database of students with disabilities was incorrectly dated or that the students refused to recognise themselves as disabled owing to the sensitive nature of the topic.

Once the students had agreed to participate in the research project, the communication channel became a limitation.   Some students had limited internet access, fax or email facilities and were thus prevented from participating in the research.   Because the researcher did not consider the landline postal services to be reliable enough, she did not post any questionnaires to students.

Forty-seven questionnaires were ultimately sent out to students via fax or email facilities and they promised to complete the questionnaire and return it via email or the internet on the survey monkey link. However, only 25 questionnaires were returned, of which only 23 could be used.   One of the limitations of anonymous questionnaires is that the researcher generally cannot trace which participants did in fact complete the questionnaire and which ones failed to honour their commitment.   In this study, a response rate of 48.9% was thus achieved. Baruch (1999:432) examined 175 different studies using questionnaires and reported that the average response rate was 55.6, with

a standard deviation of 19.7. Although the response rate for this study was below 55.6, Baruch (1999:434) suggested that an acceptable response rate should be within one standard deviation from the average. Hence the response rate in this survey can be regarded as acceptable. It would seem that the researcher was not the only one who experienced such a problem. Duquette (2000:127) also received a low response rate from students with disabilities at a Canadian institution of higher education.

4.4.6   Pilot study

Before finalising the questionnaire, the researcher conducted a pilot study to test the questionnaire for the following:

- obvious errors

- questions that were unclear or could be misinterpreted

- questions that could be offensive (this is especially important because of the sensitive nature of the topic)

- the time needed to complete the questionnaire (this is necessary to plan the structured interview time and sequence efficiently)

- determining the validity and reliability of the questionnaire

- reliability (the Cronbach alpha coefficient)

The pilot study was conducted in the form of personal contact with five respondents completing the questionnaire. Two were experts from ARCSWiD, who were visually and mobility disabled. The other three were respondents from the sample from the tertiary institution. Based on the characteristics of the participants who the researcher had included in the pilot study, five respondents were deemed enough to test for the elements mentioned above. Based on the results of the pilot study, the questionnaire was adjusted accordingly.

4.4.7   Data analysis

The research instruments included both closed- and open-ended questions. The closed-ended questions drew on "yes" and "no" answers and on the quantity of proportions, and

were therefore descriptively analysed. The open-ended questions were analysed according to themes by using inductive techniques.

4.4.8 The reliability and validity of the quantitative results

To ensure the internal validity of the questionnaire, two experts from ARCSWiD as well as an expert in questionnaire design reviewed the researcher's questionnaire. Item-to-total-item analysis was also conducted to investigate the validity of the items. Unfortunately, the limited numbers of participants did not permit factor analysis. The reliability of the qualitative items of the questionnaire was determined by calculating the Cronbach alpha coefficient.

The Cronbach alpha, also referred to as alpha coefficient or coefficient alpha, is a measure of internal consistency, and is typically found in the description of the materials used in this study. Besides reporting the coefficient only, it is also useful in providing a description of the measures (including means and standard deviations) used to derive the reliabilities.

The reliability coefficient normally ranges between zero and one. However, there is actually no lower limit to the coefficient. The closer the Cronbach alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale will be. George and Mallery (2003:231) provide the following rules of thumb: "_ > .9 – excellent, _ > .8 – good, _ > .7 – acceptable, _ > .6 – questionable, _ > .5 – poor, and _ < .5 – unacceptable". An alpha of .8 is regarded as a reasonable aim of internal consistency (Gliem & Gliem, 2003).

In considering the responses to the different items in Question 5 (measured on a 6-point scale, ranging from easily accessible to not at all accessible) as a scale to estimate the overall level of difficulty to access different areas of the University, a single measure was created by calculating the mean of the responses to the items in question.

According to table 4.1, the scale demonstrates a high level of internal consistency with $\alpha = 0.86$.

Table 4.1: Reliability statistics: Cronbach alpha

Cronbach alpha	Cronbach alpha based on standardised items	No. of items
0.861	0.869	15

The 18 items (statements) in Question 17 measured on a seven-point scale (ranging from strongly disagree to strongly agree) were not treated as a single scale because it was difficult to verbalise what such a scale would represent.

The literature discusses many theories on the learning approach (deep, surface or achievement) and intrinsic and extrinsic learning motivation. With this in mind and after due consideration of the content of each statement, the following observations were formulated:

- Questions 1, 3, 5, 7, 9 and 11 all refer to the study material.
- Questions 1, 7, 9 and 11 express an intention about learning the material.
- Questions 3 and 5 express general affect regarding the material.
- Questions 1 and 7 express a positive intention to master the material.
- Questions 9 and 11 express the negative intention of avoiding not learning the material as fully as possible.
- The other 12 statements all express either an intention to avoid doing worse than others (Qs 6a, 6b, 10a, 10b, 12a & 12b) or doing better than others (Qs 2a, 2b, 4a, 4b, 8a & 8b).

The four different sets of statement responses were considered as scales (latent concepts), and four different measures were created by calculating the means for the relevant items. Questions 3 and 5 had to be interpreted individually because including them in any of the four scales would have had a detrimental effect on their reliability statistics. These latent factors, together with their reliability statistics, are listed in table 4.2.

Table 4.2: Latent factors and reliability statistics

Latent factor	Questionnaire items	Cronbach alpha	Cronbach alpha based on standardised items	No. of items
For mastering the material	Qs 1& 7	0.789	0.856	2
For not mastering the material	Qs 9 & 11	0.827	0.828	2
For doing better than others	Qs 2a, 2b, 4a, 4b, 8a & 8b	0.893	0.892	6
For doing worse than others	Qs 6a, 6b, 10a, 10b, 12a & 12b	0.903	0.898	6

Table 4.2 indicates that the scale and subscale demonstrate a high level of internal consistency, with an average of $\alpha = 0.853$

4.5   THE QUALITATIVE PHASE

In addition to the quantitative research method, the qualitative research method was also implemented to form a mixed-method research study. In the qualitative approach, the sample was a subsample of the quantitative research, and data were collected by means of a focus group discussion and individual interviews. The primary purpose of the qualitative phase was to gain a more in-depth understanding of the access constraints experienced by students living with a mobility or visual disability. The purpose of the qualitative exploration of the focus group discussion and the interviews was to gain a better understanding of the impact of access constraints on the participants' motive to further their studies.

4.5.1   Sampling

For the qualitative research, the researcher contacted the participants who had showed an interest in the questionnaires to request them to participate in the second phase of the research. Seven students were involved in the focus group discussion. Four of the focus group participants were subsequently interviewed individually in four separate interviews.

4.5.2   Data collection

The purpose of using a focus group and follow-up individual interviews is to gather more in-depth information that would otherwise not be accessible. In focus groups, the participants provide an in-depth view by building on each other's ideas, experiences and comments. This is not possible in a questionnaire. According to Babbie and Mouton (2006), new perspectives and surprising comments can be explored in the focus group and thus add value to a study.

4.5.2.1   *Focus group discussions*

For the focus group discussion and interviews, ARCSWiD supported the researcher by arranging the focus group. After conducting the focus group discussion, the researcher asked the participants if they were willing to attend individual follow-up interviews. The researcher relied on the students' willingness, which was obviously influenced by their availability and time constraints.

According to Bloor, Frankland, Thomas and Robson (2001:26), the optimum size for conducting focus groups is between six and eight participants. However, Babbie and Mouton (2006:292) suggest a discussion group comprising eight to 12 at a time in order to collect in-depth qualitative data on their perceptions, attitudes and experiences regarding their disability. The researcher adhered to the suggested criteria and held only one focus group discussion with seven students.

Both the researcher and the student support officer facilitated the focus group. The benefit of including the student support officer as a facilitator was his familiarity with most of the students and the fact that he himself is mobility disabled. The focus group discussion guide is provided in appendix B. The researcher first introduced the facilitators and obtained the participants' informed consent. She also drew attention to the ground rules and stated what was expected in the focus group discussion. She allowed a brief period to break the ice so that the participants could introduce themselves.

The researcher started the focus group discussion by asking general and less structured questions to put the participants at ease. As soon as there was more interaction, the discussions became more structured by covering topics that were pertinent to the study. Both facilitators endeavoured to generate as many views and perceptions as possible from the group by encouraging full participation and interaction between all the members, but at the same time remaining in the background. Towards the end of the discussion, all the participants started to focus on the crux of the research question. The closing questions were aimed at a broader, more general wrap-up session in the sense that the preceding discussions were summarised and the main points verified. The researcher concluded the session by thanking the respondents for their participation and conducting a debriefing.

A vital consideration was the students' financial constraints and inability to arrange for transport or for someone to accompany them to the main campus. To assist all the focus group participants the researcher gave them each R50 to at least cover their transport and refreshment costs.

The success of the focus group depended on the skills of the facilitators to encourage discussion and generate interest throughout the discussion. A limitation was that participation was only possible for those who managed to meet in the same place at the same time. That was particularly difficult because the participants' visual or mobility disabilities limited their access. This was also inconvenient in the sense that some of the participants needed to bring someone to assist them to the campus. However, the researcher was satisfied that the difficult research circumstances did not have a negative influence on the quality of the data.

4.5.2.2   Face-to-face (follow-up individual interviewing)

The researcher conducted eight interviews to extend the understanding of how visual and mobility disabled students experience their world and to hear them express their opinions and views in their own words and in more depth. For four of the interviews, information gathered in the focus group was also clarified during the interviews. The main objective

of the four individual interviews were to confirm and clarify information obtained with the focus group and to collect more detailed information on their experiences that they did not disclose during the focus group discussion.

The researcher conducted semi-structured interviews by making use of a set of interview questions/guide that she had developed before the interview. The interview guide/questions are presented as appendix C. According to Patton (2002), this strategy allows flexibility in probing and exploring certain subjects in greater depth. It was necessary to provide a framework within which respondents could express their understanding in their own terms and where the interviewer was free to probe and ask questions that would illuminate a particular subject (Patton, 2002).

To cover specific topics and issues that the researcher had specified in advance, she followed the interview guide approach. However, she decided on the sequence and wording of the questions during the course of the interview. Patton (2002) believes that the interview guides create systematic data for all participants and therefore increase the comprehensiveness of the data. In addition, the researcher was able to anticipate logical gaps in data and fill them in afterwards.

According to Patton (2002), one of the weaknesses of the interview guide approach is that it is possible to miss important and salient topics. In addition, the flexibility of the interviewer in the sequencing and wording of questions can result in substantially different responses from different perspectives, thus reducing the comparability of responses.

The interviews and the focus group discussion were audio taped with the permission of the participants to enable transcription thereof.

4.5.3   Data analysis

The qualitative data (focus group and interviews) were analysed by means of ATLASti, which is a code-based theory-builder designed to become an extension of the researcher

himself or herself (Babbie & Mouton 2006). Because ATLASti supports content analysis and grounded theory, the researcher opted for a combination of the focus group and interviews. According to Archer (2008:4), ATLASti allows for the analysis of textual, graphical and audio data. Willig (2001:151) describes ATLASti as moving beyond mere coding and retrieval. To obtain the required competence in ATLASti, the researcher attended two workshops presented by experts.

The content analysis method will be discussed in the following section.

4.5.3.1   The content analysis method

Krippendorff (1980:8) and Weber (1990:14) define content analysis as follows: "[a] systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding". In nontechnical language, this basically means sifting through a heap of information and extracting meaning by grouping and interpreting texts.

A general concept in qualitative research is that a content analysis simply means doing a word frequency count, on the assumption that the most frequently words will reflect the greatest concerns. However, content analysis extends far beyond straightforward word counts. Furthermore, when a researcher reduces the wording to categories comprising a word, set of words or phrases, he or she can focus on and code for specific words or patterns that are indicative of the research question.

According to Carley (1992:4), content analysis occurs in a sequence of the following eight steps:

(1) *Decide on the level of analysis.* This means deciding whether to code for a single word or for sets of words or phrases. In this study, the researcher's aim was to code for sets of words and phrases (concepts) relating to the research question.

(2) Decide how many concepts to code for. In this step, the researcher must decide whether a predetermined number of concepts will be coded for or whether categories can be added during the coding phase. In this study, the researcher decided not to limit the number of categories because the study was exploratory, and although a number of existing concepts were identified in the literature, the researcher expected to find new and unique concepts.

(3) Decide whether to code for the existence or frequency of a concept. In this step, the researcher must decide whether the concepts will be coded on the basis of existence or frequency. Owing to the fact that a set accessibility constraints would be identified, the researcher deemed it necessary to code for frequency and in so doing allow for the ranking of constraints. According to Leedy and Ormrod (2001:156), a crucial step in content analysis is to tabulate the frequency of each concept found in the material being studied.

(4) Decide on how to distinguish between concepts. A certain level of subjectivity is involved in this step because the researcher must decide whether the concepts are similar and whether they can be generalised. To reduce this subjectivity, the researcher requested a second researcher to validate the concepts that were coded, as well as the way in which the concepts were condensed into categories.

(5) Develop coding rules. In this step, the researcher develops a set of rules to ensure that he or she codes for exactly what he or she intends to. Once again, in this study, this step was left to the discretion of the researcher.

(6) Decide what to do with irrelevant information. At this stage, the researcher must choose between ignoring irrelevant information (Weber, 1990:34) and using it to re-examine the coding scheme.

(7) Code texts. The texts were coded by means of ATLASti, which included reading through the text and selecting the concept occurrences.

(8) Analyse the results. In this step, quantitative data are analysed to identify the following:

➢ concepts and categories relating to the research questions

➢ groupings of concepts and categories

➢ meanings of concepts and categories

➢ context of concepts and categories

4.5.5   Trustworthiness of qualitative research

According to Lincoln and Guba (1985:20), the conventional constructs of validity and reliability do not apply to qualitative research, and as an alternative, they propose four constructs that are more appropriate, namely credibility, transferability, dependability and conformability.

- *Credibility.* This refers to attempts to demonstrate that the study was conducted in such a way that that the subject was accurately identified and described. The aim of a qualitative study is to explore a problem or describe a setting or process, in this case, access constraints experienced by students living with a mobility or visual disability. In terms of credibility, these parameters were adequately stated in the research question and objectives of the study.

- *Transferability.* This refers to the applicability of one set of findings to another context. The researcher accepted at the outset of the study that one of the limitations of having a small sample from only one academic institution would mean that it would not be possible to generalise the findings across the whole population or all universities in South Africa. However, the researcher is of the opinion that the findings of this study could in fact be generalised to similar institutions.

- *Dependability.* The third construct proposed by Lincoln and Guba (1985:21) is dependability, in which the researcher attempts to account for changing conditions in the design created by an increasingly refined understanding of the setting and

topic. Because it is difficult to satisfy this criterion, the researcher made use of overlapping methods such as the focus group and individual interviews, but also reported the process that was followed in detail for future research purposes.

- *Confirmability.* The final construct, confirmability, corresponds to the traditional concepts of objectivity. Lincoln and Guba (1985:22) emphasise the need to question whether an external party can confirm the findings of the study. While external parties did not confirm the data in this study, the results and findings were compared with the findings in the literature study to ensure a measure of confirmability.

4.6 ETHICAL CONSIDERATIONS

Researchers in the social sciences have an ethical obligation to their colleagues, their study population and the larger society (Berg, 2009:60). Ethical considerations revolve around various issues of harm, consent, privacy and the confidentiality of data (Punch, 1994, 2005; Berg, 2009). According to Babbie and Mouton (2006) and Terre Blanche and Durrheim (1999), researchers need to consider the following ethical considerations: informed consent, voluntary participation, accurate information and confidentiality. Merriam (1998:198) also emphasises that qualitative research should be conducted in an ethically to ensure validity and reliability.

The Professional Board for Psychology (PBP) and the Health Professions Council of South Africa (HPCSA) have an Ethical Code of Professional Conduct on how to deal with research.

- **Consent from the institution**
  Before conducting the research study, the researcher obtained written permission for conducting this study from the Dean of Students, Mr Convy Baloi. A copy of the letter is included in appendix D.

- **Informed consent from participants**

According to the Ethical Code of Professional Conduct (HPCSA 2000), participants should be informed about the nature of the research and the responsibilities of the parties involved as well as the research procedure to be followed. During the focus group discussion, a written letter of consent was handed out to each participant. The researcher read the letter to the participants and afforded them the opportunity to ask questions to gain clarity. All the participants involved in the focus group were willing to sign the consent form. Before conducting the interviews, the researcher also handed out consent forms to the participants. The researcher addressed this ethical consideration in the consent letter.

- **Transparency**

All researchers should ensure that the participants in their studies are not exposed to any undue physical or psychological harm (Leedy & Ormrod, 2001). Researchers should be aware of any physical risks, discomfort or unpleasant emotional experiences that have the potential to deceive participants about key factors that could affect their willingness to participate in the research (HPCSA, 2000). In this study, the researcher endeavoured at all times to be honest, respectful and sympathetic towards all the participants. In the consent letters, the researcher explained the purpose of the research study and informed the participants that some of the questions would be sensitive and personal and possibly make them feel uncomfortable. The participants were also informed about their right to refuse to answer questions at any time, without any penalty or loss of benefits involved.

- **Confidentiality and anonymity**

According to Burns (2000), both the researcher and the participant should have a clear understanding of the confidentiality of the results and findings of the study. The Ethical Code of Professional Conduct (HPCSA, 2000) emphasises the

importance of ensuring complete confidentiality. In the focus group discussions, the participants were informed that they should keep all the information that was discussed confidential. However, the researcher could not guarantee that all the participants would honour their commitment. All other information and responses of the participants shared during the study were kept private and the results were presented anonymously in order to protect the identities of the participants.

- **Voluntary participation**

Participants were informed that their participation was strictly voluntary. This principle highlighted the fact that the participants were free to decide whether or not they would participate in the research (HPCSA, 2000). The participants were reminded that they could withdraw at any time during the process if they wished to do so, but none of them did, and everyone participated right to the end of the sessions. The Ethical Code of Professional Conduct (HPCSA, 2000) also stipulates that special care should be taken to protect participants from the possible adverse consequences of withdrawing from participation. Hence the researcher also informed the participants that they would not forfeit their compensation if they withdrew from the research study at any time.

- **Accuracy**

According to the Ethical Code of Professional Conduct (HPCSA, 2000), one of the main principles is to provide accurate data. One should not publish falsified or fabricated data (HPCSA, 2000). According to Denzin and Lincoln (2000:140), generating valid internal and external data is the ultimate aim, both experimentally and morally. Hence in this study, the researcher strove to be honest and did not falsify or fabricate any data.

4.7   SUMMARY

In this chapter, the research methodology was discussed and the choice of the research design justified. The discussion indicated how quantitative and qualitative methodologies were combined in order to achieve the research objectives.

The sampling methods and approaches as well as the three data collection methods were explained.   Content analysis was highlighted in the context of the qualitative research approach.   Validity and reliability were discussed with specific reference to quantitative research designs, as well as the trustworthiness of the qualitative research phase. The chapter concluded by addressing the ethical considerations revolving around issues of informed consent, transparency, confidentiality and anonymity, voluntary participation and accuracy.

The research results will be discussed in chapter 5.

CHAPTER 5

DISCUSSION OF THE RESULTS

5.1 INTRODUCTION

After applying the research methodology discussed in chapter 4, the results were obtained as presented and discussed in this chapter. Although a sequential and explanatory mixed method approach was applied in this study, more emphasis was placed on the qualitative methods and results than on the quantitative results. The quantitative method was initially applied to identify some of the constraints and to broaden the data, while the qualitative method provided the required depth.

5.2 BIOGRAPHICAL INFORMATION

This section deals with the biographical information of the participant group.

5.2.1 Age, gender and ethnic group

The last section of the questionnaire requested students to provide certain biographical information relating to their age, gender and ethnic group. This information is presented in table 5.1 and figures 5.1, 5.2 and 5.3.

Table 5.1: **Distribution of respondents in the different age, gender and ethnic groups**

		Frequency	Percentage
Age	Younger than 19	0	.0%
	19-24 years	1	6.3%
	25-30 years	6	37.5%
	31-35 years	2	12.5%
	36-40 years	2	12.5%
	41-45 years	2	12.5%
	46-50 years	1	6.3%
	51-55 years	0	.0%
	56-60 years	1	6.3%
	60+ years	1	6.3%
	TOTAL	16	
Gender	Male	11	64.7%
	Female	6	35.3%
	TOTAL	17	
Ethnicity	Black	10	58.8%
	Coloured	0	.0%
	Indian	0	.0%
	White	7	41.2%
	TOTAL	17	

Figure 5.1: Visual representation of the distribution of respondents in the different age groups
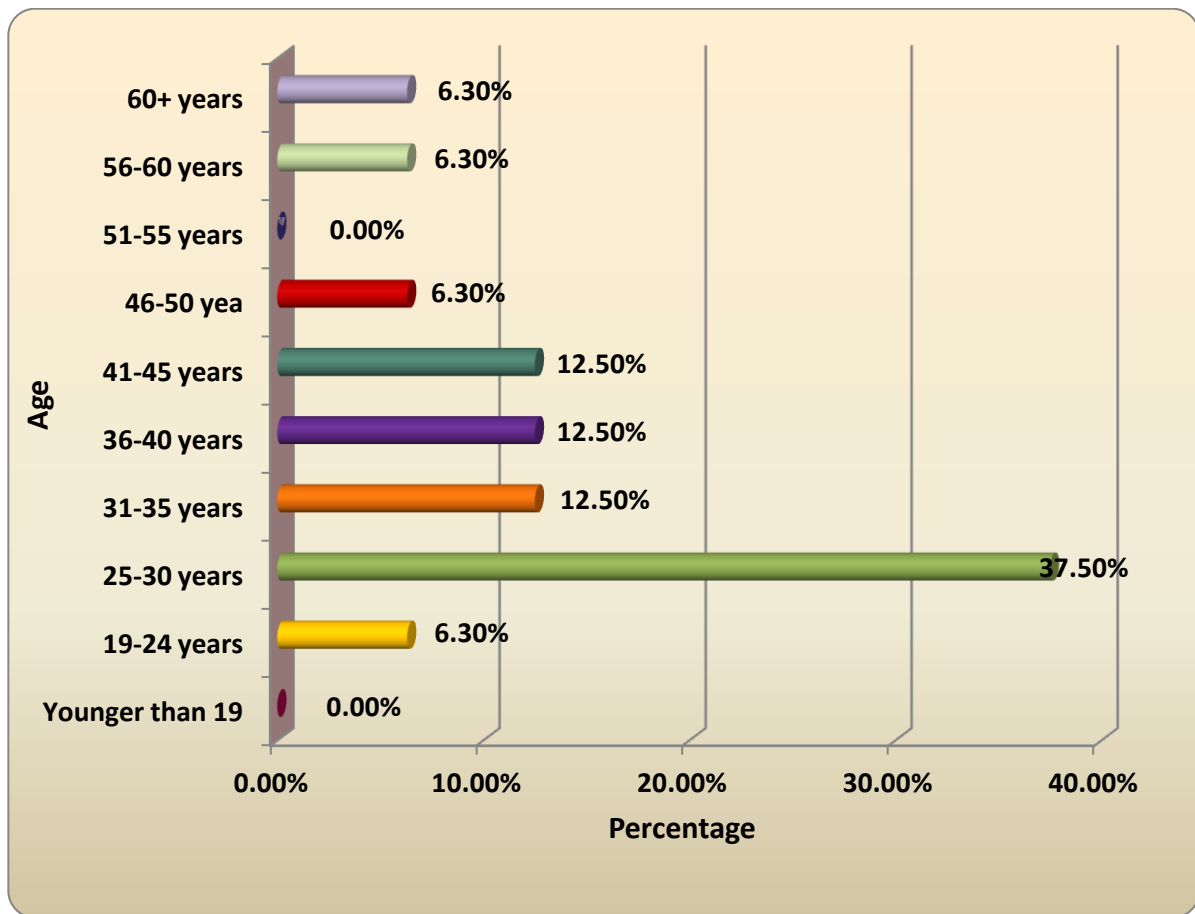
Table 5.1 and figure 5.1 indicate that 16 of the 23 respondents divulged information about their age. The age group that was best represented among these 16 respondents was the 25 to 30 age group (37.5%, n = 6). None of these respondents was younger than 19 or between 51 and 55 years of age and only one of the respondents was older than 60.

As indicated in a publication (*Inspired,* 2010) for students at the tertiary institution, these results are to a certain extent a true reflection and representation of the tertiary institution's age span, where 47% of all students were in their twenties, and only 4% were older than 50.

Figure 5.2: Gender distribution of respondents
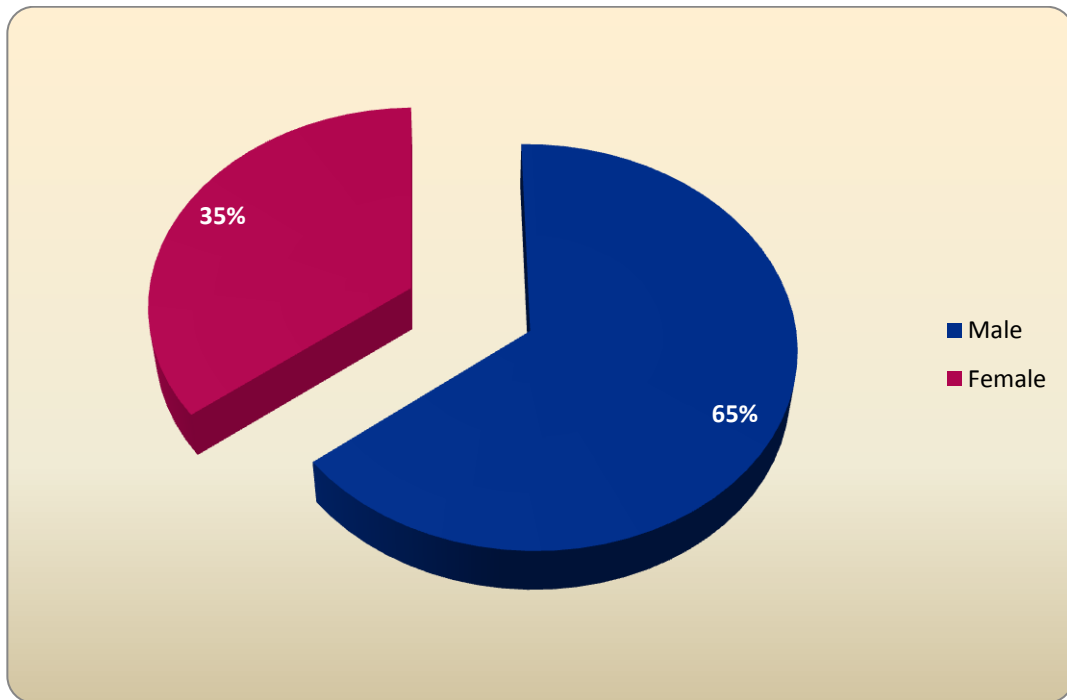
Table 5.1 and figure 5.2 indicate that 17 of the 23 respondents supplied information on their gender. Of these 17 respondents, almost two-thirds of the sample (64.7%, n = 11) were male.

Figure 5.3: Visual representation of the distribution of respondents in the different ethnic groups
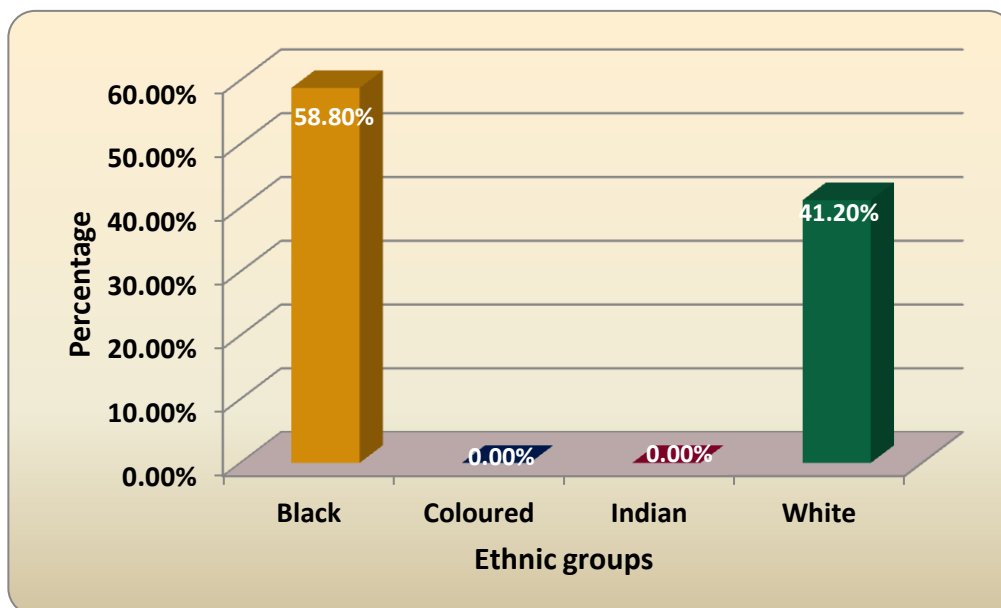
Table 5.1 and figure 5.3 indicate that 17 of the 23 respondents supplied information on their ethnicity. Owing to nonrandom sampling, only the black (58.8%, n = 10) and white (41.2%, n = 7) ethnic groups were represented in the sample. Only 26% of the respondents did not provide any information on their ethnicity.

The fact that 26% of the respondents did not provide information on their ethnicity may be ascribed to the historical, racial and political connotation that some of the participants give to the words or labels "black", "coloured" and "Indian".

5.2.2   Disability categories (types)

This section focuses on the different types of disabilities as well as the way students describe themselves. This information is provided in tables 5.2 and 5.3 and figures 5.4 and 5.5.

Table 5.2:   Distribution of respondents on the basis of their disabilities

Type of disability	Frequency	Percentage
Visually impaired	6	35.3
Mobility disability (including cerebral palsy and physical challenges)	11	64.7
TOTAL	17	100.0

Table 5.3:   Disabilities: subcategories

	Frequency	Percent
Missing	6	26.1
Blindness	1	4.3
Partially blind/visually impaired	4	17.3
Partially sighted	1	4.3
Cerebral palsy	1	4.3
Mobility disabled	8	47
Physically challenged	2	8.6
Total	23	100.0

Figure 5.4: Respondents with different types of disability
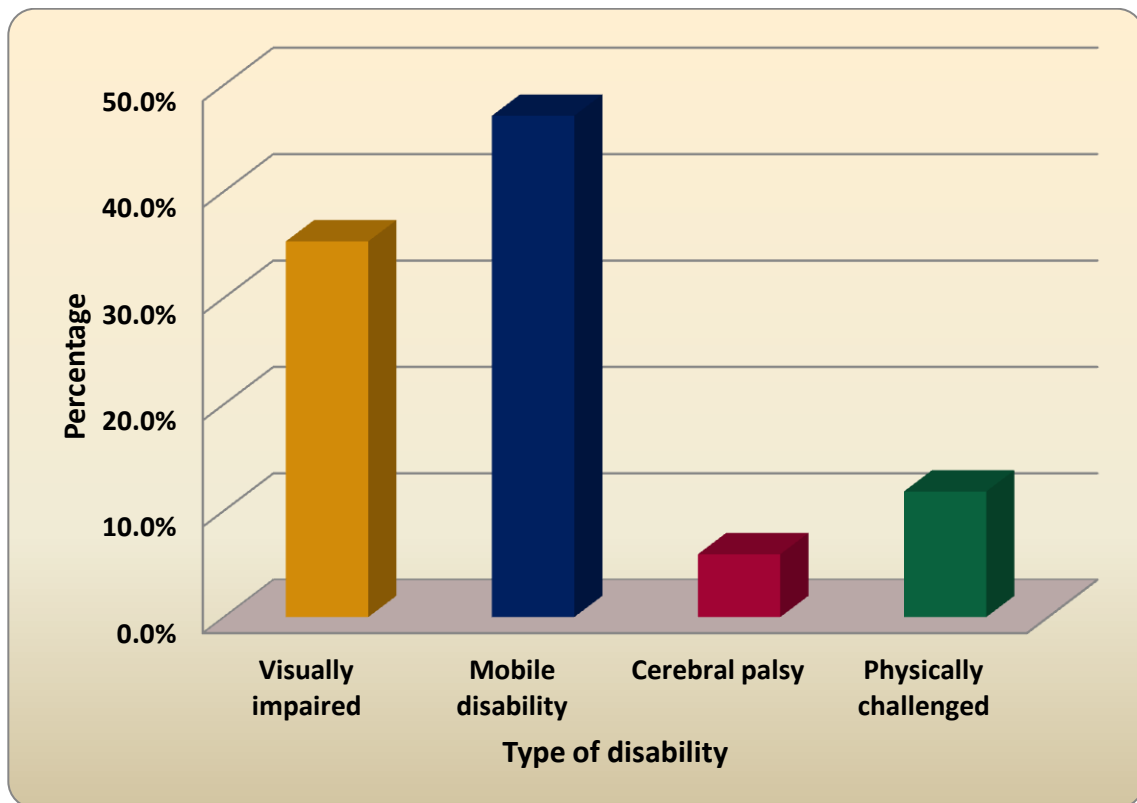
Tables 5.2 and 5.3 and figure 5.4 indicate that 17 of the 23 respondents mentioned their disability. The most common disability among the 17 respondents related to mobility disability (47.10%, n = 8), followed by impaired visibility/blindness (35.3%, n = 6). Since cerebral palsy and physical challenges are also classified under mobility disability, this group constituted 64.8% (n = 11).

Figure 5.5: Self-descriptions of students
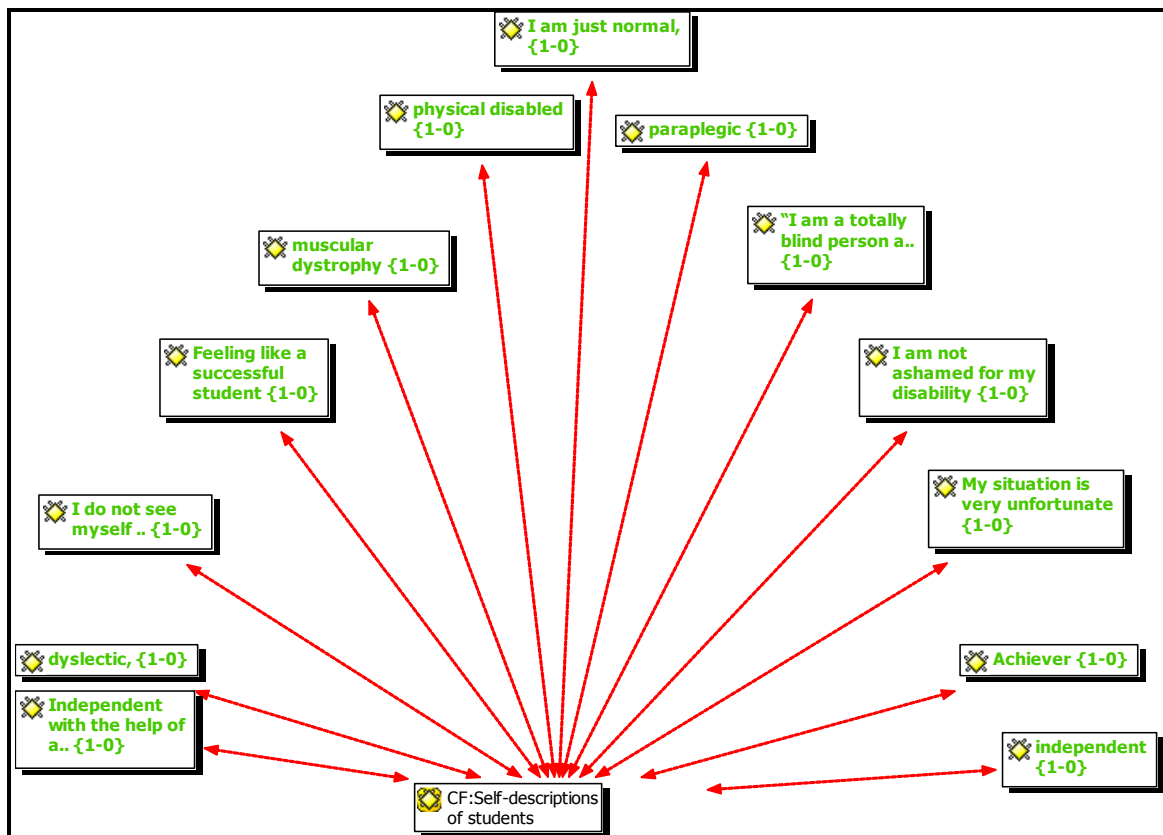
During the sampling procedure, the researcher was surprised by the large number (31/129*100=24%) of nonparticipating disabled students who did not view themselves as disabled. The researcher therefore decided to determine how the participants viewed their own disability. This could have influenced the way they saw and experienced the constraints.

Figure 5.5 indicates that although most of the students had the same disability (physical or visual), they all described themselves differently. Some described their physical appearance as it is: "I am a totally blind person and I am independent, and I am a student at Unisa", "physically disabled", "paraplegic", "and independent with the help of an electronic wheelchair", "positive", "muscular dystrophy and dyslectic".

At the same time, the others viewed themselves as normal, with the following comments: *"Actually, I do not see myself as a disabled student. I take (see) myself as any other student the tertiary institution has."* (1:1)

"To me it is not an obstacle, because I am open about it, even I wrote sometime about it. And I don't have a problem, if people say disabled, I just look and say yes I am disabled. And it's no obligation, I can't change. It is who I am. If I am not part of who I am, I … end up frustrated, having depression, I don't have to regret for who I am. Actually I am suppose[d] to be glad, because [of] what God has given me. He didn't keep." (3:2)
"I am just normal." (6:6)

The above variations in self-description may influence the way the students' perceive the constraint – that is, those who perceive themselves as "normal" may experience fewer constraints than those who regard themselves as disabled.

5.2.3   Qualifications

This section includes information on the students' qualifications, which is provided in tables 5.4, 5.5 and 5.6 and figure 5.6. The aim is to represent students with different levels of qualifications.

Table 5.4:   Summary of qualifications

	Cases					
	Valid		Missing		Total	
	N	Percentage	N	Percentage	N	Percentage
Qualifications (multiple response group)	17	73.9%	6	26.1%	23	100.0%

According to table 5.4, 17 of the 23 respondents indicated their current qualifications.

Table 5.5:   Representation of students with different qualifications

Qualification(s) you currently hold	Number	Percentage of cases
Grade 12	13	76.5%
Additional certificate	10	58.8%
Diploma	5	29.4%
Bachelor's degree	5	29.4%
Honours degree	1	5.9%
Master's degree	2	11.8%
Total	36	211.8%

Figure 5.6: Visual representation of respondents with different qualifications
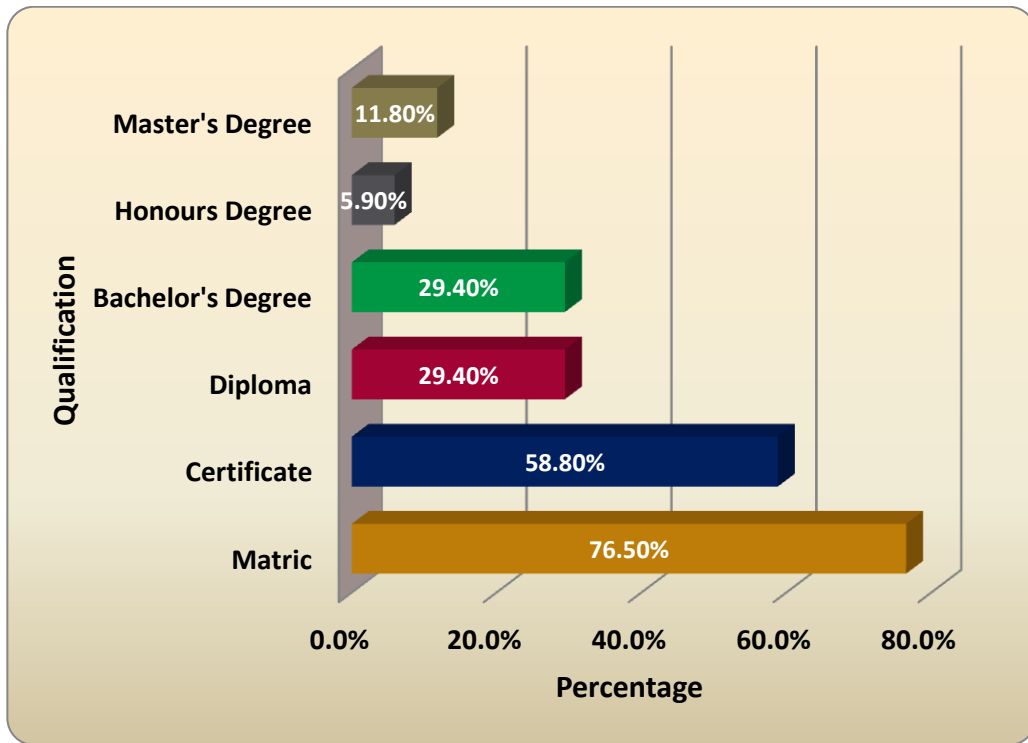
Most students had an additional certificate followed by a diploma and bachelor's degree. Of the students, 55.6% had an undergraduate qualification, while only 8.4% had a postgraduate qualification. According to table 5.5 and figure 5.6, more participants had master's degrees (11.8%) than honours degrees (5.9%). One would have expected the opposite. This could have been mere coincidence and not for any specific reason.

Table 5.6: Other qualification(s)

	Frequency	Percentage	Cumulative percentage
Missing	22	95.7	95.7
Master's Certificate Foreign Going (Class 1) with Tanker Endorsement. Maritime qualification to command an ocean going ship	1	4.3	100.0
Total	23	100.0	

Table 5.6 indicates that only one student had a qualification not mentioned in the list. This student also indicated that he or she had a bachelor's and a master's degree.

5.2.4   Representation of study programmes

In this section, the students' current study programmes varied from a range of study programmes as represented in tables 5.7, 5.8, 5.9 and 5.10 and figures 5.7, 5.8 and 5.9.

Table 5.7:   Breakdown of representation of different study programmes

	Frequency	Percentage	Cumulative percentage
Missing	7	26.1	30.4
BCom Strategic Management	1	4.3	34.8
BTheology/National Diploma Public Relations Management	1	4.3	39.1
BA (Human and Social Studies)	1	4.3	43.5
BA Literary Studies	1	4.3	47.8
BCom Internal auditing	1	4.3	52.2
Certificate in Human Resource Management	2	8.7	60.9
Civil engineering diploma	1	4.3	65.2
DLitt et Phil Public Administration	1	4.3	69.6
Honours BCom	1	4.3	73.9
BSC (Computer Science and IT)	1	4.3	78.3
LLB	2	8.7	87.0
MBL	1	4.3	91.3
National Diploma in Public Management	1	4.3	95.7
National Diploma in Marketing	1	4.3	100.0
Total	23	100.0	

Table 5.7 indicates that seven of the 23 respondents did not supply information on their current study programmes at the University. One student who was studying for an engineering diploma had cerebral palsy. Because of additional access problems posed by the engineering sector, this student would probably experience additional access-related challenges in his career.

The students were well represented in the different study programmes with one student in each category, except for the LLB degree and the certificate in Human Resource Management with two students each.

Table 5.8:   Representation of different academic colleges

College	Frequency	Percentage	Cumulative percentage
Economic and Management Sciences	7	43.8	43.8
Human Sciences	5	31.3	75.0
Law	2	12.5	87.5
Science, Engineering and Technology	2	12.5	100.0
Total	16	100.0	
Missing	7		
TOTAL	23		

Figure 5.7: Visual representation of different academic colleges
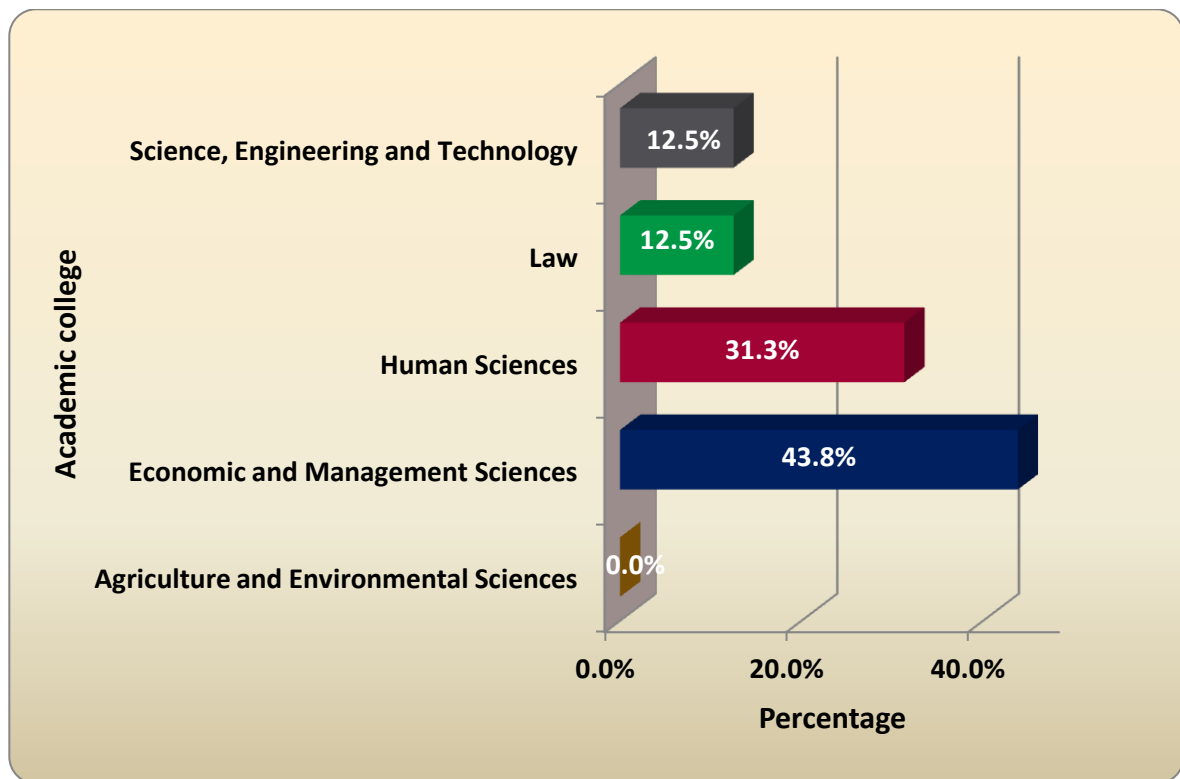
Table 5.8 and figure 5.7 indicate that the largest subgroup of the disabled students who did supply information on their current study, were enrolled in the Economic and Management sciences (43.8%, n = 7) followed by the Human Sciences (31.3%, n = 5). There was no (0%) representation in Agricultural and Environmental Sciences.

The representation of the different academic colleges by the disabled students was a reflection (correspondence) of the University's overall representation of students in the different academic colleges. According to an official publication for students (*Inspired* 2010:32), the Economic and Management Sciences were by far the most popular field of

study and represented 47% of students, followed by the Human Sciences with 30%. The Agriculture and Environmental Sciences comprised of only 2% of all students of the tertiary education institution.

The percentage of disabled students in the different years of study is depicted in table 5.9 and figure 5.8 below.

Table 5.9:   Representation of students in different years of study

Year of study	Frequency	Percentage	Cumulative percentage
First year	3	18.8	18.8
Second year	3	18.8	37.5
Third year	2	12.5	50.0
Fourth year	4	25.0	75.0
Fifth year	2	12.5	87.5
Six or more years	2	12.5	100.0
Total	16	100.0	
Missing	7		
TOTAL	23		

Figure 5.8: Visual representation of students in different years of study
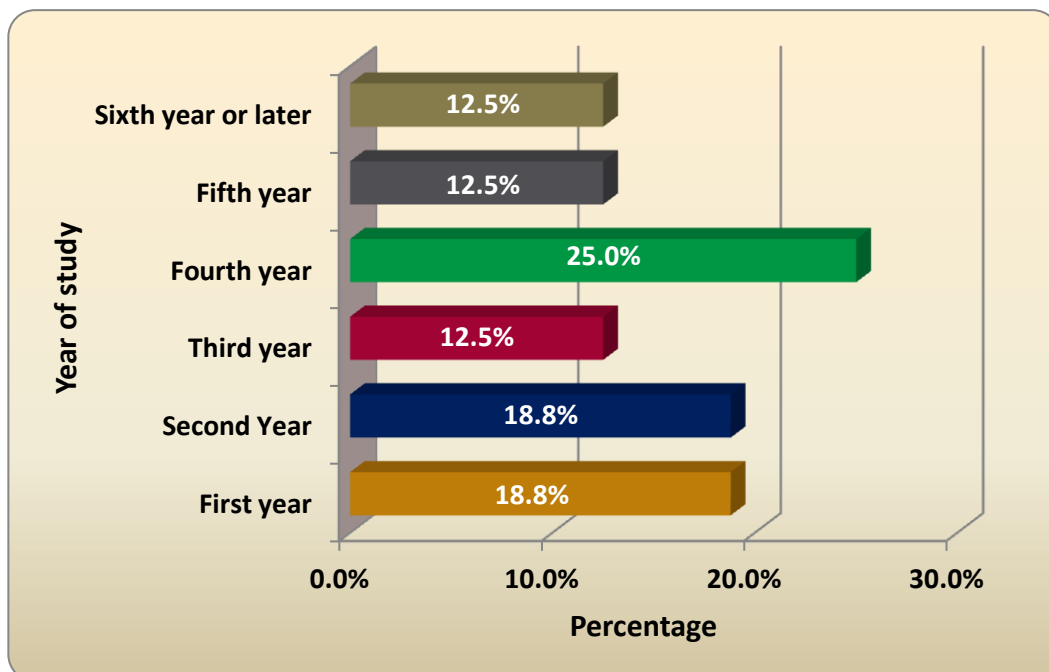
Table 5.9 and figure 5.8 indicate that seven of the 23 respondents did not indicate their current year of study. Of the 16 respondents who did, the majority (25.0%, n = 4) were in their fourth year.

The percentage of of full-time and part-time students is indicated in table 5.10 and figure 5.9 below.

Table 5.10: Representation of full-time and part-time students

	Frequency	Percentage	Cumulative percentage
Full time	16	94.1	94.1
Part time	1	5.9	100.0
Total	17	100.0	
Missing	6		
	23		

Figure 5.9: Visual representation of full-time and part-time students
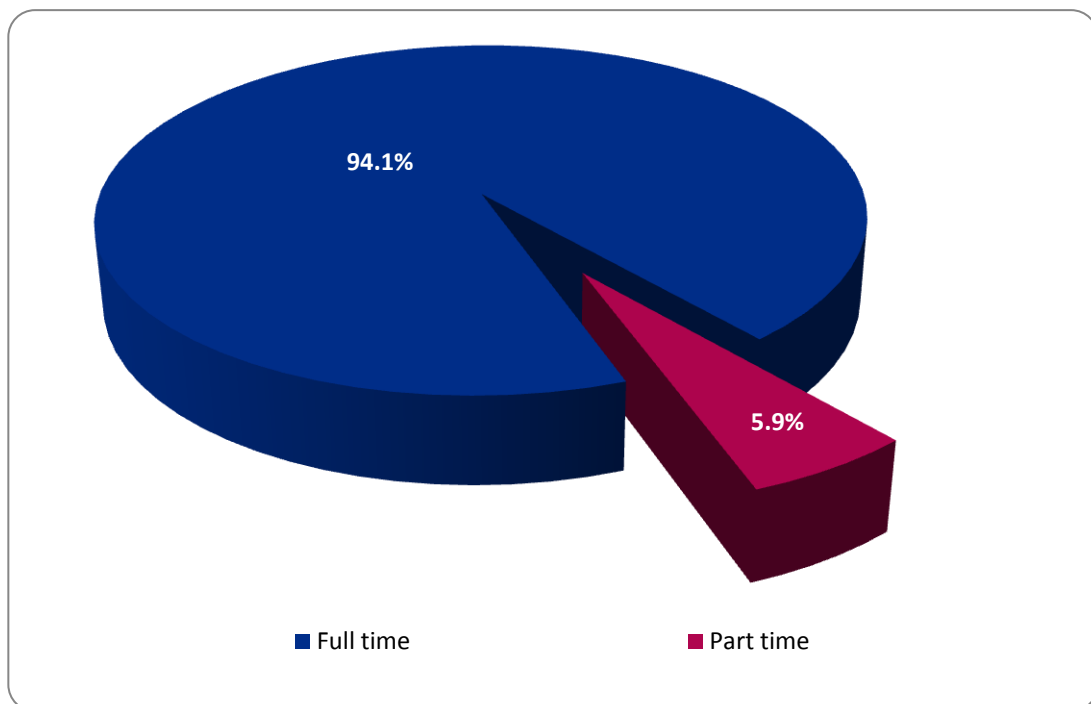
According to table 5.10 and figure 5.9, 17 of the 23 respondents indicated that they were studying either full time or part time. The majority of these 17 respondents were full-time students (94.1%, n = 16).

5.3 ACCESS CONSTRAINTS ON CAMPUS

Methodological triangulation was applied (Olsen, 2004) in the research by using three research methods: the questionnaire, a focus group and individual interviews to gather data and identify the constraints. In this section, the areas of access constraints and the emotions that disabled students experience because of access constraints will be discussed. An area was regarded (classified) as a constraint when one or more students described it as difficult to access or found it nonaccessible. Areas were not classified as constraints when they were accessible, even if they were "not so easy".

5.3.1   Integration and discussion of the findings from the three research methods to determine access constraints

A number of constraints were identified from the results of all three data gathering methods. The following constraints were deemed to be the most important ones and will therefore be discussed in more detail: architectural environment, parking, lack of visible information, library, study material and requesting medical certificates annually.

5.3.1.1   Architectural environment

According to table 5.11, most of the constraints are associated with the architectural environment and comprise almost 40% of the constraints. These results are supported by the results of a study by Pierce (1998) in which the most common complaints about inaccessible environments involved the architectural environment.

According to McClain *et al.* (1998), a lack of accessibility to services in a community prevents functional independence and full social integration for physically disabled persons into society. In addition, Losinsky *et al.* (2003: 305) found that difficulty in accessing educational institutions in particular disadvantaged those with handicaps because it limits their chances of enjoying educational opportunities and thus developing their employment potential.

The verbatim statements below reflect the architectural constraints that were identified in the questionnaire:

Some of the halls and examination centres (1:1-2)

"Entrances to buildings, heavy doors, toilets for disabled, counters and taps that are too high." (5:1-5)

"Steepness of ramps. These are difficult to go up and often require assistance." (6:1)

"Outside ramps and walkways are not always in a good state of repair and have holes in them which we cannot get around; try to push yourself over grass in a wheelchair." (6:3)

"Some counters where admin work has to be done are made at a suitable standing person's height. Sitting in a wheelchair, you cannot even read a document put in front of you and you cannot or with difficulty sign a document on the counter top." (6:4)

"Doors to toilets should be slightly wider and if possible, there should be at least a toilet for disabled person. At the Florida campus, the disabled toilet is on the ground floor, which means that you have to go with a lift down to the ground floor just to get there." (6:5)

"Doors, toilets and ramps." (7:2-4)

"The campus is too big for someone rolling around on a wheelchair." (12:2)

"The hill-top makes accessibility difficult – accessing the buildings." (14:1-2)

"The whole environment is difficult to access." (16:2)

The verbatim text below reflects the architectural constraints identified by by respondents in the follow-up interviews:

"The doors, they are not eas[il]y accessible, because when I open the door I have to move back." (4:3)

"… the floor is very uneven and it is very uncomfortable pushing yourself going under, it is very bumpy, very uncomfortable …". (6:11)

All the participants mentioned the following constraints identified in the focus group discussion.

"The uphill, the doors, the stairs"

5.3.1.2 Parking

More than 10% of the identified constraints were associated with parking. This finding supports the results of a study by Shevlin *et al.* (2004) with students and in which accommodation and transport issues were found to be complex and transport was deemed inadequate. Parking on campus is often indicated as problematic for students with disabilities because there are not enough accessible spaces or these spaces are situated far from the buildings. Moreover, when construction projects are in operation, students with mobility difficulty find it challenging to navigate around the building sites and to find an accessible route. The limited availability and accessibility of accommodation both on and off campus make the students more dependent on family members and peers.

The following verbatim statements relating to parking constraints appeared in the questionnaires:

"Parking (5:2)

Parking of able-bodied persons … in disabled allocated parking bays. Normal parking bays are narrower than disabled bays which allow one to get out a car and into a wheelchair placed next to the door, we then have to go longer distances to our venues as well. (6:2)

Parking (12:1)

Accessing parking (14:3)"

The following verbatim statements relating to parking constraints were identified in the follow-up interviews:

"The problem reaching the tertiary institution is basically not here inside; it is the transport system, especially when I come here. Because you found out that those taxis, with my wheelchair, sometimes I take time to come here because I have to wait for another taxi which is accessible for a wheelchair, so it takes time for me to reach here, and then I am frustrated and angry." (4:5)

"Most of the time and sometimes it is very difficult to find parking around the university and at the Sunnyside campus where I registered[.] {T}here is no parking, there are two parking bays that I know of, I just have to drive right round the campus and then that

parking is also not well suited for people on wheelchairs because one it is not even, so where you park your wheelchair can just run away from you, it is quite steep." (6:8)

"It is for me very difficult to park. The escalators to the library have not been working for the last three years, and there is no parking. I have to park at the building opposite the library[,] that is if parking is available." (7:12)

5.3.1.3   Lack of available information

The lack of available information was identified as a relevant constraint, in the responses in the questionnaire and in the follow-up interviews. For the purpose of this study, invisible security guards form part of the lack of visible information.

This finding corresponds to that of Fuller *et al.* (2004) and Dowrick *et al.* (2005) who reported that students had difficulty accessing available advice and support for learning and assessment. They also indicated that student support services should provide more information and greater outreach to students. The students in the above study explained that although their disability had been disclosed, there was no mechanism in place in the institution for this information to be routinely supplied to tutors.

The following verbatim statements on the lack of visible information were identified in the responses in the questionnaire:
"The centre is not well marketed. Faculties do know about the centre for Students with disabilities, but do not know what it does, or what it is suppose[d] to do." (1:4)
"Sign boards and directions are hard to see and read. Dark areas, then I see even less; steps that are not clearly marked and I don't see where I am walking, very poor room numbering." (8:2-5)
"If you look for info, it is difficult." (15:2)

The following verbatim statements on the lack of visible information were made during the follow-up interviews:
"… you have to look where the security guard is to actually open the gate for you. I am very patient when it comes to such things because there was a point when I was going out of the campus, in fact it was out of the office of the admin building and I had to wait

for security for like 5 minutes and no one was around working so I just came there to do whatever I needed to do." (6:9)

"… there is no security guard to assist me…". (7:23)

"The security guards must not be more visible, we must be more visible to them. When they see somebody is parking on a disabled parking zone, they must know that the person will require some assistance in terms of taking out the wheelchair or to just give a helping hand to enter the library." (7:23)

5.3.1.4   Library

Constraints relating to the library were identified in all three data gathering methods. Tinklin and Hall's (in Shevlin *et al.,* 2004) research findings support the result of the study that the tertiary institution offered limited library access for disabled students. In addition, Fuller *et al.* (2004) point out those students with a visual impairment found the library daunting because the need to read certain information made browsing and finding books difficult.

The following verbatim statements about the library were made in the responses in the questionnaire:

"The Library is difficult because I have to wait for the security guard to open the wider door for me, while other students are staring wondering why I get special treatment." (9:1)

"Libraries in most SA universities are not properly accessible to wheel-chair bound students. In most instances even if they are accessible in terms of personally getting there, they are not properly structured for being used by the disabled the apparatus (equipment) so as the tables and chairs are at an inconvenience height for the wheel chair." (11:1)

Library - The stairs are impossible with a wheelchair and to get access to go through the offices to the library is not easy." (13:1)"

The following verbatim statements on the library were made in the follow-up interview:
"Well I seldom come to the university; I do most of my things from home. Even when I need library material, what I noticed how it is currently, I am not comfortable with the

location of the library. Because it is up here, to wheel myself it is a problem, I have to bring somebody with if I have to come after hours." (5:10)

"Access to the library is a nightmare." (7:14)

The following verbatim statements on the library were made in the focus group discussion:

"The library is full during 8:30 or 9 o'clock so for me as a physical challenged when I get there, because I get there I have to ask the security to open the library for me but they cannot open because the library is already full. Then I have to queue. Maybe they can activate my card, when I get there; I can just go inside and out." (1:430).

5.3.1.5   Study material

Disabled students experienced difficulties with their study material because this was identified as a constraint in the application of all three methods. Some of the students received the study material late, while others did not receive it in the correct format.

Information obtained from the questionnaire indicated that more than two-thirds (68.8%, n = 11) of the 16 respondents who responded to this question received their study material in a format that was appropriate for their disability. It is also evident that the percentage of the 17 respondents who responded to this question who did not receive their study material in time to complete their assignments (52.9%, n = 9) is larger than the proportion of those who did receive it in time (47.1%, n = 8).

The following verbatim statements on the study material were made in the questionnaire:

"The situation should really improve. We need our study material in time and in the right format." (1:1)

"Study material arrives late, and then assignments are late. We need extensions on assignments, as it takes time to do enlargements." (9:1)

"Do not receive my study material in time. No one pays attention to it. (10:1)"

Figure 5.10: Study material
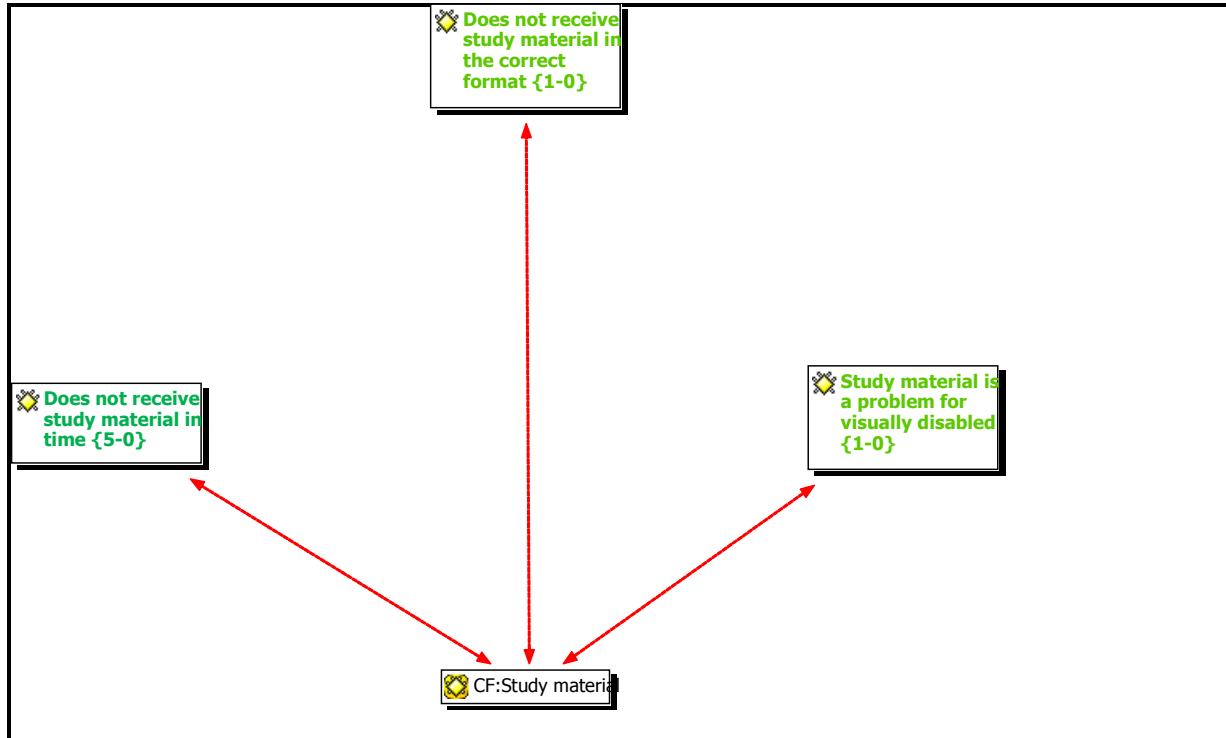
Figure 5.10 indicates that all seven students in the focus group discussion experienced some or other problem with their study material. Five students complained that they received their study material late, while one mentioned that the study material was not in the correct format. A visually impaired student mentioned that the study material was a challenge because it was not timeously issued, while the visually impaired students needed more time to prepare on the basis of the study material.

The following confirmatory verbatim statements on the study material were made in the focus group discussion:

"You know, the material is a big problem here at the tertiary institution. I register (when did I register?) I think last month, but … so far I haven't receive[d] anything [not] even a tutorial letter, I don't know when I am going to receive those things."(6:84)

"It's a problem." (5:96)

"I think the best way is to like with the material to bother these people until they issue your material." (6:322)

The following verbatim statements on the study material were made in the follow-up interviews:

"I am sorry to take you back but at the registration, with the current registration system, when you register then you don't take your material and leave. For me it creates further delays because I know that when I saw, you know, if I have everything on time then I can pace myself, but now we are told that the material will be couriered and then you wait for two weeks and nothing comes through. And then you keep on fighting with the admin people to get the material, so for me that, I don't know, not to say that they should make favours for us, but they should take that into account that if we register, we need to get the material promptly. So to accommodate those study schedules plus our disabilities and that we are also working, so you have very little time to go through the study material." (5:15)

"Study material late." (2:1)

"When you register then you don't take your material and leave. For me it creates further delays because I know that when I saw, you know if I have everything on time then I can pace myself, but now we are told that the material will be couriered and then you wait for two weeks and nothing comes through." (5:16)

5.3.1.6   *Requesting medical certificates annually*

It is noticeable that 80% of disabled people in the world live in low-income countries, with the majority being poor and having no access to basic services, including rehabilitation facilities (WHO, 2003). With this in mind, the students have reason to be frustrated about the University requesting medical certificates annually.   This request to prove their disability every year has unnecessary additional financial implications, which the students regarded as avoidable.   Many of them already find it difficult to finance their studies without this additional cost and physical effort.

The following confirmatory verbatim statements on the study material were made during the individual interviews:

"The only snag is that every time prior to the exams you have to submit that application, yet in my forms I am indicated that I have a disability and given the record that they have

of my profile, for me it should automatically tell the university that this is a permanent disability. But where rules are rules I comply, I go and get my doctor's letter and I apply for extra time." (5:6)

"There are cost implications, for those who do not have a medical aid you have to pay out of your pocket and given that, disability do[es] not come cheap." (5:7)

The following confirmatory verbatim statements on the study material were made in the focus group discussion:

"It is about a bursary, the bursary requirements; proof of ID is there, proof of pay slips, salary slips, medical certificate, and proof of disability. It worries me; the proof of disability worries me. Why, because each and every year when I apply for the bursary it needs the proof of disability, meaning that did I ever change or will I ever change to be a normal person again, I am this way and I will remain this way continuously." (2:161)

From the students' interpretation, as set out above, it is clear that visually and mobility disabled students do experience access constraints. These constraints could be overcome with minor changes such as raising greater awareness among security guards about assisting disabled students the moment they arrive on campus.

5.3.2   Categories of access constraints according to access difficulty level

Difficult areas to access are indicated in table 5.11 and the most frequently occurring constraints as identified in the questionnaire are presented in table 5.12; the constraints identified in the follow-up interviews in figure 5.11; and the constraints identified in the focus group discussion in figure 5.12.

Table 5.11: Categories of access constraints according to access difficulty level

	ACCESSIBLE AREAS						DIFFICULT AND NONACCESSIBLE AREAS						
	Easily accessible		Not so easy		Undecided		Difficult to access		Extremely difficult		Not at all accessible		Percentage
Entrance	11	61.1%	2	11.1%	0	.0%	3	16.7%	1	5.6%	1	5.6%	27.9
Examination venues	10	55.6%	2	11.1%	1	5.6%	2	11.1%	2	11.1%	1	5.6%	27.8
Library	7	38.9%	4	22.2%	2	11.1%	1	5.6%	2	11.1%	2	11.1%	27.8
Parking	7	38.9%	4	22.2%	3	16.7%	3	16.7%	1	5.6%	0	.0%	22.3
Senate Hall	7	38.9%	4	22.2%	3	16.7%	3	16.7%	0	.0%	1	5.6%	22.3
Ramps	7	41.2%	4	23.5%	3	17.6%	0	.0%	3	17.6%	0	.0%	17.6
Restrooms/ toilets	8	44.4%	5	27.8%	2	11.1%	1	5.6%	1	5.6%	1	5.6%	16.8
Lecture halls	9	50.0%	5	27.8%	1	5.6%	2	11.1%	0	.0%	1	5.6%	16.7
Signage	7	38.9%	5	27.8%	3	16.7%	2	11.1%	1	5.6%	0	.0%	16.7
Telephones	7	38.9%	5	27.8%	3	16.7%	3	16.7%	0	.0%	0	.0%	16.7
Clinic	4	25.0%	4	25.0%	6	37.5%	1	6.3%	0	0%	1	6.3%	12.6
Doors	11	64.7%	3	17.6%	1	5.9%	1	5.9%	1	5.9%	0	.0%	11.8
Drinking fountain	7	41.2%	4	23.5%	4	23.5%	0	.0%	2	11.8%	0	.0%	11.8
Lifts	11	61.1%	4	22.2%	1	5.6%	0	.0%	1	5.6%	1	5.6%	11.2
Aisles	9	56.3%	4	25.0%	2	12.5%	1	6.3%	0	.0%	0	.0%	6.3

According to table 5.11, the access constraints were identified and arranged in categories from least accessible to more accessible. They are thus arranged from highest difficulty level to access to lowest level of difficulty to access. Applying the criteria as discussed, the following areas were identified and categorised from most difficult to less difficult to access constraints: entrances, examination venues, the Library, parking, the Senate Hall, ramps, restrooms, lecture halls, signage, telephones, clinic, doors, drinking fountain, lifts and aisles. Even if only one student found an area difficult to access it was regarded as a constraint that the University needs to address.

Almost two-thirds (64.7%, n = 11) of the respondents indicated that entrance through doors did not pose much of a problem in terms of accessibility. The area which most of the respondents rated as either extremely difficult to access or not accessible at all, was

the Library (22.2%, n = 4), followed by the ramps (17.3%, n = 3) and the examination venues (16.7%, n = 3).

5.3.3 Frequency of occurrence of constraints within different categories (identified in the questionnaire)

The identified constraints were grouped according to themes and frequency of occurrence and indicated in table 5.12.

Table 5.12: Most frequently occurring constraints (questionnaire)

Theme	Frequency
Architectural access barriers including: Accessing the buildings Counters and taps are too high Doors Entrances to buildings Heavy doors Moving from one office to another Some of the halls Steepness of ramps. These are difficult to go up and often require assistance The campus is too big for someone rolling around on a wheelchair The hill-top makes accessibility difficult Toilets Walking around to reach where you need to; too long to reach the suitable offices	**18**
Parking	**5**
Lack of visible information: Dark areas, then I see even less Sign boards and directions are hard to see and read Steps that are not clearly marked and I don't see where I am walking Very poor room numbering	**4**
Library: difficult to access	**4**
Study material	**4**
Exam venues	**2**
There are many obstacles The whole environment is difficult to access	**2**
ARCSWiD not well marketed	**1**
Customer service	**1**
Lack of awareness training	**1**
Lack of communication between faculties, schools and sections of the University	**1**
Lack of information	**1**
Lack of transport	**1**
Stereotyping persons with disabilities	**1**
Total	**46**

Table 5.12 indicates that most constraints were associated with the architectural environment and comprised almost 40% (n = 18 or 39.1%) of the identified constraints. More than 10% of the identified constraints were associated with parking (n = 5 or 11%). The other three most common constraints, representing 9% of the constraints each, were associated with lack of visible information, lack of access to the Library and study material.

5.3.4   Constraints identified in the follow-up interviews

The constraints identified in the follow-up interviews are represented in figure 5.11.

Figure 5.11: Most frequently occurring constraints (follow-up interviews)
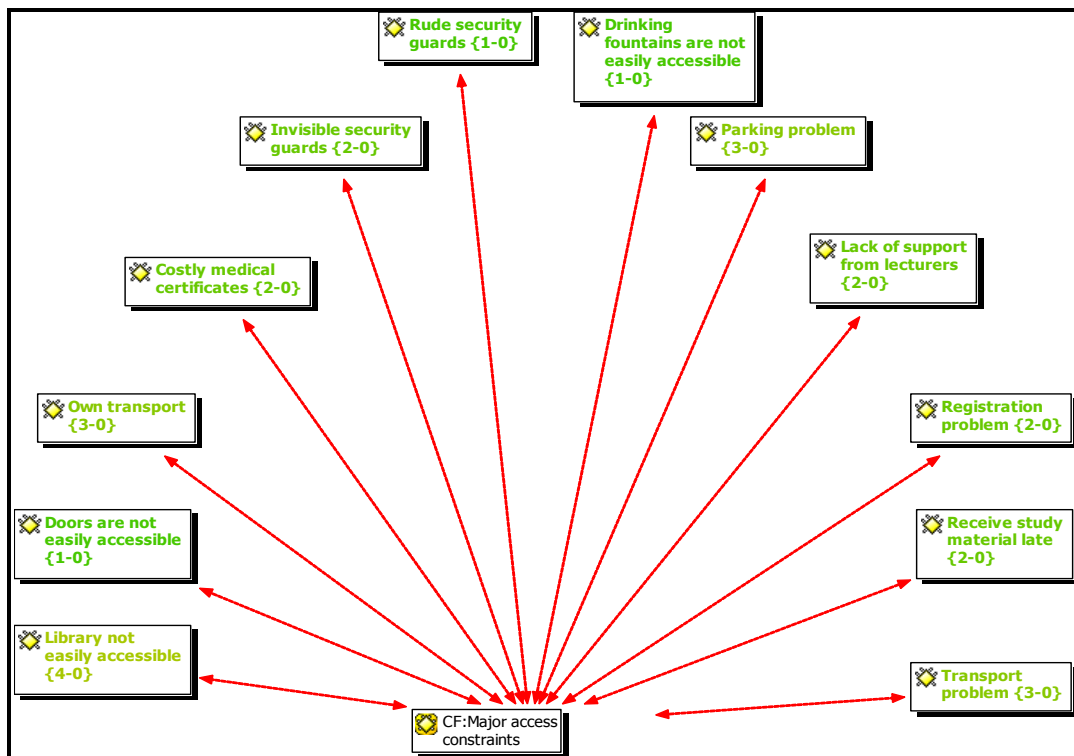
More in-depth data gathered from the follow-up interviews, as indicated in figure 5.11, confirm that the major access constraints related to the architectural environment. The main architectural constraints were access problems relating to the Library, transport and parking.

Another cause of frustration for the disabled students is that the University requires a medical certificate annually to confirm a student's disability, even though this disability is permanent. This annual requirement poses additional financial costs for the students which they regard as avoidable.

The students also complained about the slow registration process. The consequence of this is that they sometimes received their study material late and wasted a lot of time because they could not start studying.

5.3.5   Constraints identified in the focus group discussion

The constraints that were mentioned in the focus group discussion are indicated in figure 5.12.

Figure 5.12: Most frequently occurring constraints (focus group discussion)
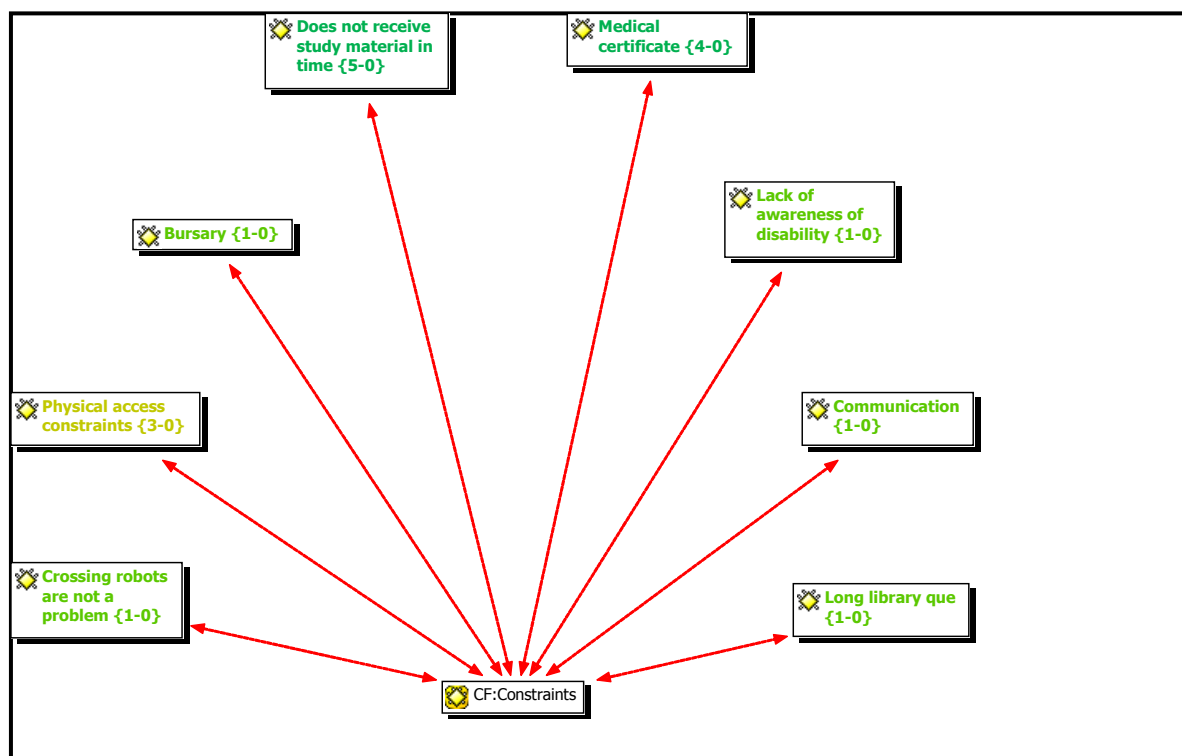
Figure 5.12 indicates the constraints experienced by students participating in the focus group discussion. The students were mostly concerned about their study material (5),

costly medical certificates (4) that the University requires annually as well as problems with the physical accessibility (3) of the University.

The findings of the focus group discussion confirmed that the following constraints identified in both the follow-up interviews and the focus group discussion were relevant: receiving the study material late and access to the Library. The lack of awareness of disability and architectural access constraints were confirmed in the findings from the questionnaire, while the request for annual medical certificates was confirmed in the results of the individual interviews.

5.3.6   The institution's overall level of physical accessibility

The overall level of physical accessibility is represented and discussed in table 5.13.

Table 5.13: Disabled students' experience of the University's overall level of physical accessibility

	Frequency	Percentage	Cumulative percentage
Inaccessible	3	17.6	17.6
Accessible with minor assistance	12	70.6	88.2
Fully accessible	2	11.8	100.0
Total	17	100.0	
Missing	6		
TOTAL	23		

According to the information in table 5.13, the majority of the respondents (12 or 70.6%) who could access the University's facilities required little assistance.

5.3.7   Negative emotions associated with access constraints

The intensity of the negative emotions that disabled students experience because of their constraints has a disrupting influence on their motivation. This in itself is also a constraint. The emotions of students living with a disability that were indicated in the responses to questions in the questionnaire are represented and discussed in table 5.14.

Table 5.14: Negative emotions experienced by students when they cannot access all the University's facilities

	Frequency	Percentage	Cumulative percentage
Missing	7	30.4	30.4
Frustrated	5	21.7	52.1
It feels bad	2	8.7	60.8
Sad	2	8.7	69.5
For me the campus is inaccessible	1	4.3	73.8
I feel inadequate, less confident	1	4.3	78.1
I get by and at the end get where I should be	1	4.3	82.4
Disappointed	1	4.3	86.7
Sometimes it's hard	1	4.3	91.0
This gives an indication the campus is not meant for people with disabilities	1	4.3	95.3
Upset, and questioning why I'm a disabled person	1	4.3	100.0
Total	23	100.0	

Table 5.14 indicates that seven of the 23 respondents did not answer the question relating to their emotions regarding inaccessibility. However, most of the negative emotions experienced were associated with frustration (n = 5) and sadness (n = 2).

Verbatim descriptions of their negative feelings as set out in the responses in the questionnaire are provided below.

"Frustrated and sometimes angry because of the disability preventing one from doing what should be accessible to all" (4:1)

"It is a very bad feeling to be denied access by the infrastructural inconveniences. Personal[ly] I feel [I do] not belong[;] this feeling is equal to discrimination but this situation is generally not regarded as discrimination by the general public[;] but indeed we are discriminated if it happened that our access to main facilities is limited due to our condition and the infrastructure[,] whereas that is not the case with our able bodied colleagues." (9:1)

5.4   SUPPORT STRUCTURE FOR STUDENTS WITH DISABILITIES

Students living with disabilities need support from the University and community to assist them with their basic needs. It is therefore important to determine the support that the

University provides as well as the support currently provided by their family and friends. From the limitations in support provided by the University, the support needs of the students will be identified.

5.4.1 The University's services for students with disabilities

The students' perceptions of the efforts the University has made to limit constraints are indicated in table 5.15.

Table 5.15: Students' perception of the efforts (support) made by the University to overcome constraints

Students' perception of the efforts made by the University to overcome constraints	Frequency	Percentage	Cumulative percentage
Missing	10	43.5	43.5
Do not know of any effort.	9	39.3	82.8
I think with the Government and other organisations have helped open doors to more opportunities for the physically handicapped. The University for the first time has actually invited the handicapped to get bursaries and have actually made it possible for the disabled to empower themselves and to be able to take on better positions in the open labour market industry. I do not consider myself as disabled because it has empowered me to make something better for me.	1	4.3	87.1
Not in a position to answer.	1	4.3	91.4
Training of staff.	1	4.3	95.7
The tertiary institution is not much involved with the disabled students.	1	4.3	100.0
Total	23	100.0	

Table 5.15 indicates that more than 40% (n = 10) of the students did not answer the question about any efforts known to them that the University had made to overcome constraints. A further almost 40% (n = 9) indicated that they did not know of any effort. Only one respondent indicated that the University is providing some form of training. The results show that the students are either not seeking support or that communication between the University and the students needs to be improved because the students are not aware of the University's efforts.

The awareness of students living with a disability regarding the provision of bursaries and grants is indicated in tables 5.16, 5.17 and 5.18 and figures 5.13 and 5.14.

Table 5.16: Students' awareness of the University's efforts (support) to provide bursaries/grants for disabled students

	Frequency	Percentage	Cumulative percentage
Yes	15	83.3	83.3
No	1	5.6	88.9
Don't know	2	11.1	100.0
Total	18	100.0	
System	5		
	23		

Figure 5.13: Students' awareness that the University provides study bursaries/grants
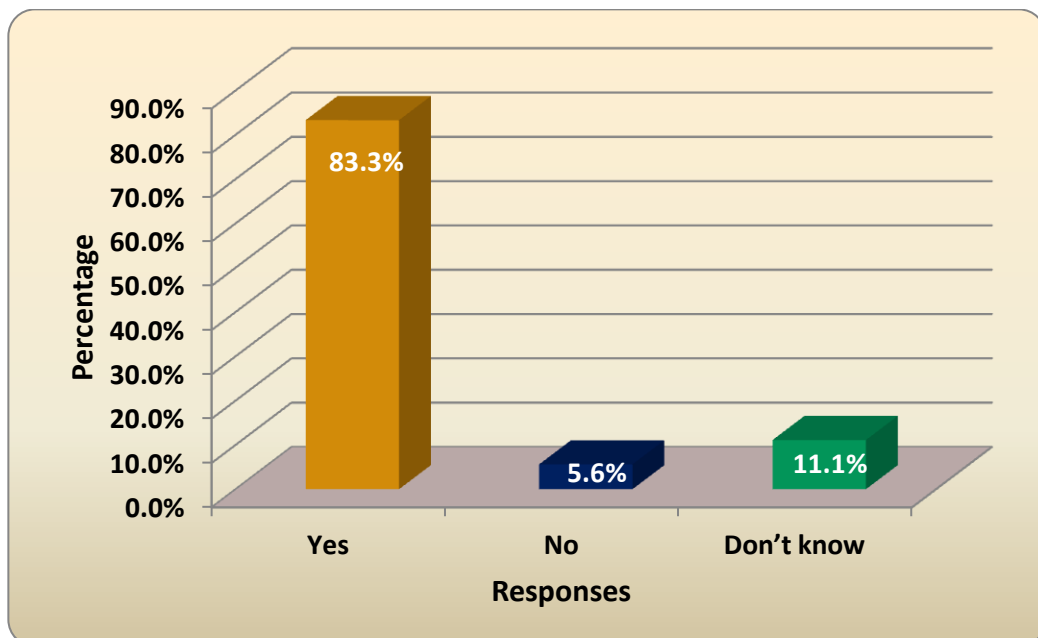
Table 5.16 and figure 5.13 indicate that more than 80% (83.3%, n = 15) of the 18 respondents who answered to this question were aware of the fact that the University provides study bursaries/grants. Of these respondents, 16.7% (n = 3) either believed that no such support is available or did not know that such support is available.

Table 5.17: Number (percentage) of students making use of bursaries/grants

Responses	Frequency	Percentage	Cumulative percentage
Yes	4	23.5	23.5
No	13	76.5	100.0
Total	17	100.0	
Missing	6		
TOTAL	23		

Figure 5.14: Number (percentage) of students making use of bursaries/grants
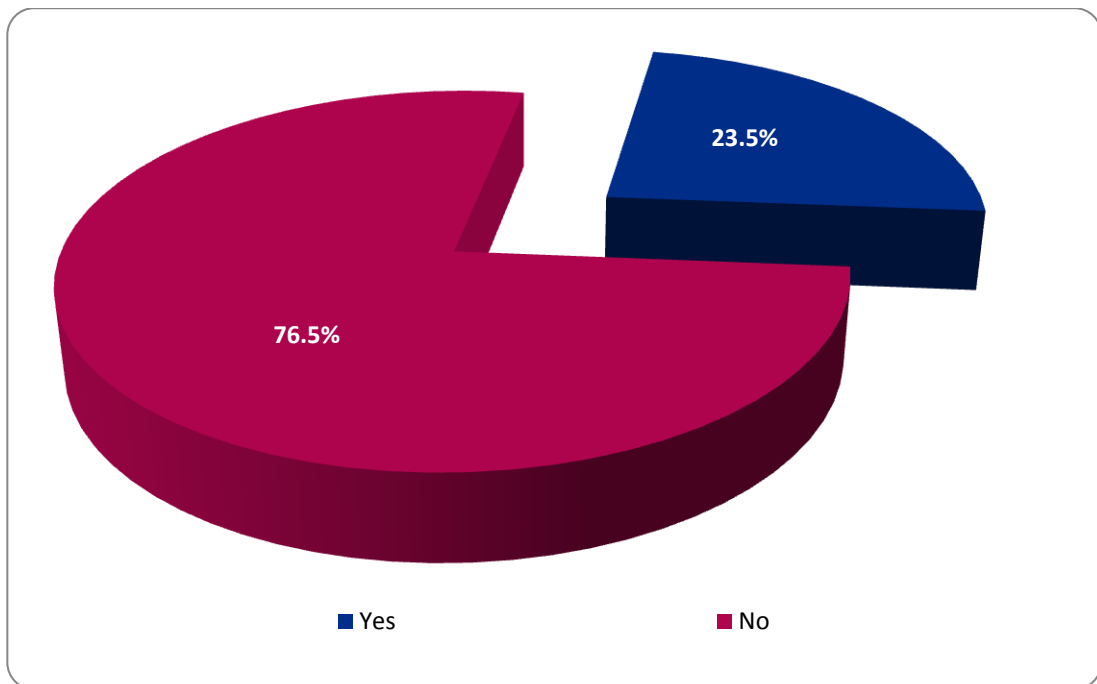
It is evident in table 5.17 and figure 5.14 that more than 76.5% (n = 13) of the 17 respondents who responded to this question did not make use of the bursaries/grants offered by the University.

The following are explanations why the majority of students (76.5%) did not make use of bursaries/grants:

- Respondent 1: I was not provided with a bursary as I already have a degree.
- Respondent 2: I did not have the contact details to apply last year.
- Respondent 3: I have NRF funding, not university funding.
- Respondent 4: I have never thought that I would qualify for such grants and they should go to students more deserving than me.

- Respondent 5: The University manages the Department of Labour bursary for the disabled. From my own experience that bursary is not properly managed at the tertiary institution.
- Respondent 6: Only heard about the scheme last week after receiving an SMS from the tertiary institution
- Respondent 7: If you fail, they want the bursary to be refunded.
- Respondent 8: The University only suppl[ies] a computer.

The awareness of students living with a disability of the service offered by the Advocacy and Resource Centre for Students with Disabilities (ARCSWiD) at the particular tertiary institution is indicated in figure 5.15

Figure 5.15: Awareness regarding the service offered by ARCSWiD
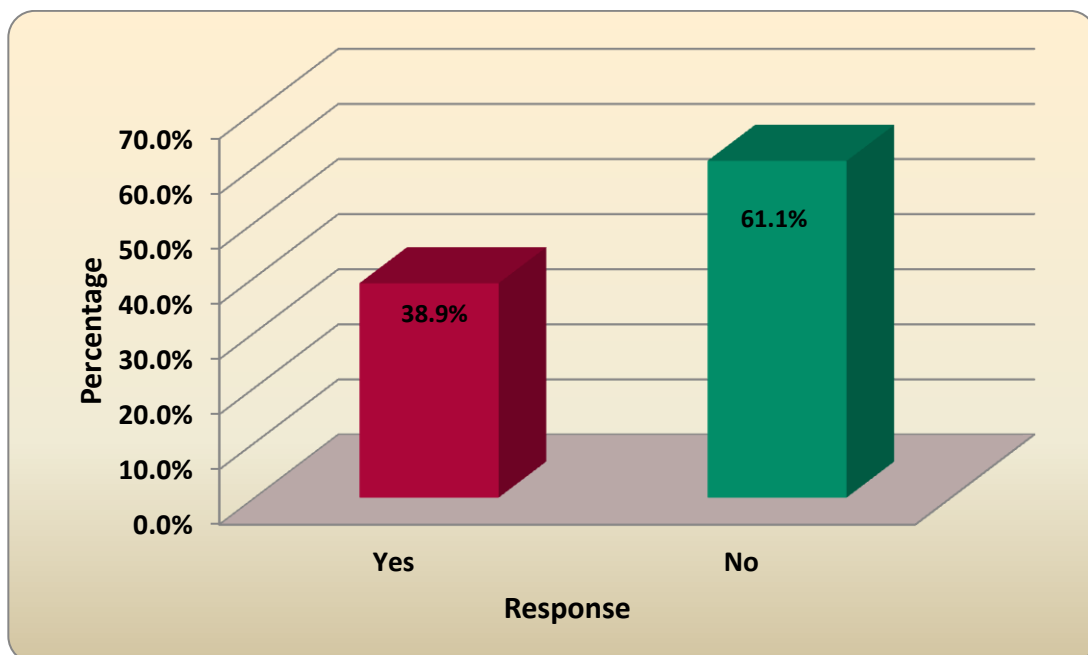
Figure 5.15 indicates that 61.1% (n = 11) of the 18 respondents who answered this question were not aware of the service offered by ARCSWiD. Most of the students (61.1%) did not know of or did not make use of the services of ARCSWiD. According to Vogel and Adelman (1992), many factors influence a student's decision to use or not use the available services for disabled students. The person may not recognise the need to use them or, having recognised the need, may not know how to access the available service. Self-understanding, prior experience and reality testing, level of acceptance and

denial, availability and quality of intervention, developmental life stage, motivation and goals are some of the factors that enter into the complex decision to acknowledge one's disability and seek support services.

From the results in figure 5.15 and as discussed above, one can infer that the majority of the disabled students in the sample were not aware of the University's efforts to render services. This limited awareness of available services is a constraint that the University needs to address.

The experiences of participating students living with a disability of the services rendered by ARCSWiD are presented and discussed in table 5.18.

Table 5.18: Experiences of disabled students with the services provided by ARCSWiD

Number	Experiences
Respondent 1	The centre says it provides material in accessible formats, but my experience has been very negative. I sent my material for brailling in April, May, June and July, but since then I have not received any material. As a result, I struggle to do my assignments and I am likely to struggle to do an open book exam. The centre is supposed to train and support academic staff in other faculties, but my experience in the School for Business Leadership is negative. The SBLEDS is not user friendly with JFW (JAWS). I've reported this several times, but some secretaries even think I am incapable to the extent that they persuade me to quit, but I cannot quit now because I am left with four modules to complete my MBL, and I will definitely complete in due course.
	Why was I capable of doing eleven courses? The other issue is that [the] SBL knows about the centre, but does not even make use of it. There is no communication breakdown between faculties. My exam or tests for May were postponed to June because there was no question paper in Braille. Why? Especially because I registered as a disabled student. Why don't they capture my needs from the [out]set? This leaves much to be desired. I've been a student since 1984, before the centre, and things were far better. Now with the centre available, the situation has worsened, why?
Respondent 2	My experience is that they offered limited help to the students.
Respondent 3	Because I am also working at the relevant tertiary institution, and am on the Library's Disability Forum, we work in close contact with ARCSWiD. Thus I am aware of the services that they offer to students with disabilities
Respondent 4	I [had] only heard [about] it and applied last year in writing but heard nothing.
Respondent 5	They are very helpful.
Respondent 6	But I never spend much time.

The results presented in table 5.18 indicate that the students who had made use of ARCSWiD had mixed perceptions. Some had had negative experiences with the services rendered by the centre. Management should take cognisance of the negative experiences in order to improve the service. The main area for improvement of ARCSWiD's services is the conversion of the study material to the correct format.

To determine the extent (depth) of the possible negative experiences of the students with the support structure, follow-up interviews were conducted.

During the follow-up interviews, the students were asked whether they felt comfortable in the social milieu of the University. Their comments are indicated in figure 5.16.

Figure 5.16: Feelings towards the social milieu of the University
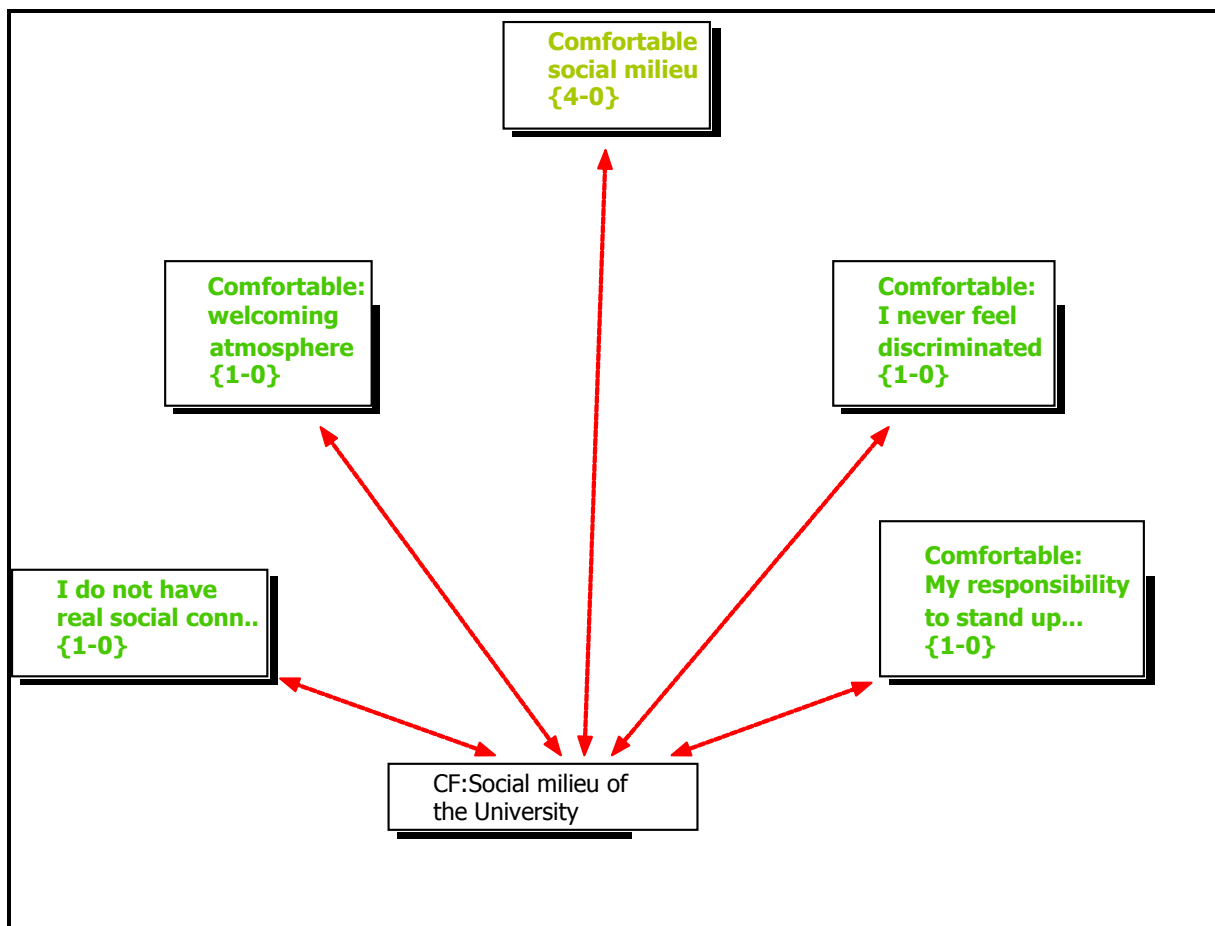
Figure 5.16 illustrates that seven out of the eight students who participated in the follow-up interviews felt comfortable in the social milieu of the University, and stated the following:

 "AA, yes. Yes" (1:17)
"There is a welcoming atmosphere, I feel comfortable." (2:21)
"Actually at the University no one had ever treated me badly." (3:15)
"I never feel discriminated [against]." (4:10)

One student mentioned that she did not have real social connections with the University.

From the data in figure 5.16 and subsequent discussions, it is clear that the dissatisfaction with the services of ARCSWiD was limited to a specific complaint and cannot be generalised to the social milieu of the University. The majority of the participants considered the social milieu for students with disabilities to be extremely positive.

5.4.2   Additional special assistance and measures required by disabled students from the University

Special assistance refers to the additional assistance that the disabled students require irrespective of assistance associated with the main constraints that were identified in section 3. The special assistance needs were identified after applying only two data gathering methods. These requirements are set out in figures 5.17 and 5.18.

Figure 5.17: Special assistance identified in the follow-up interviews
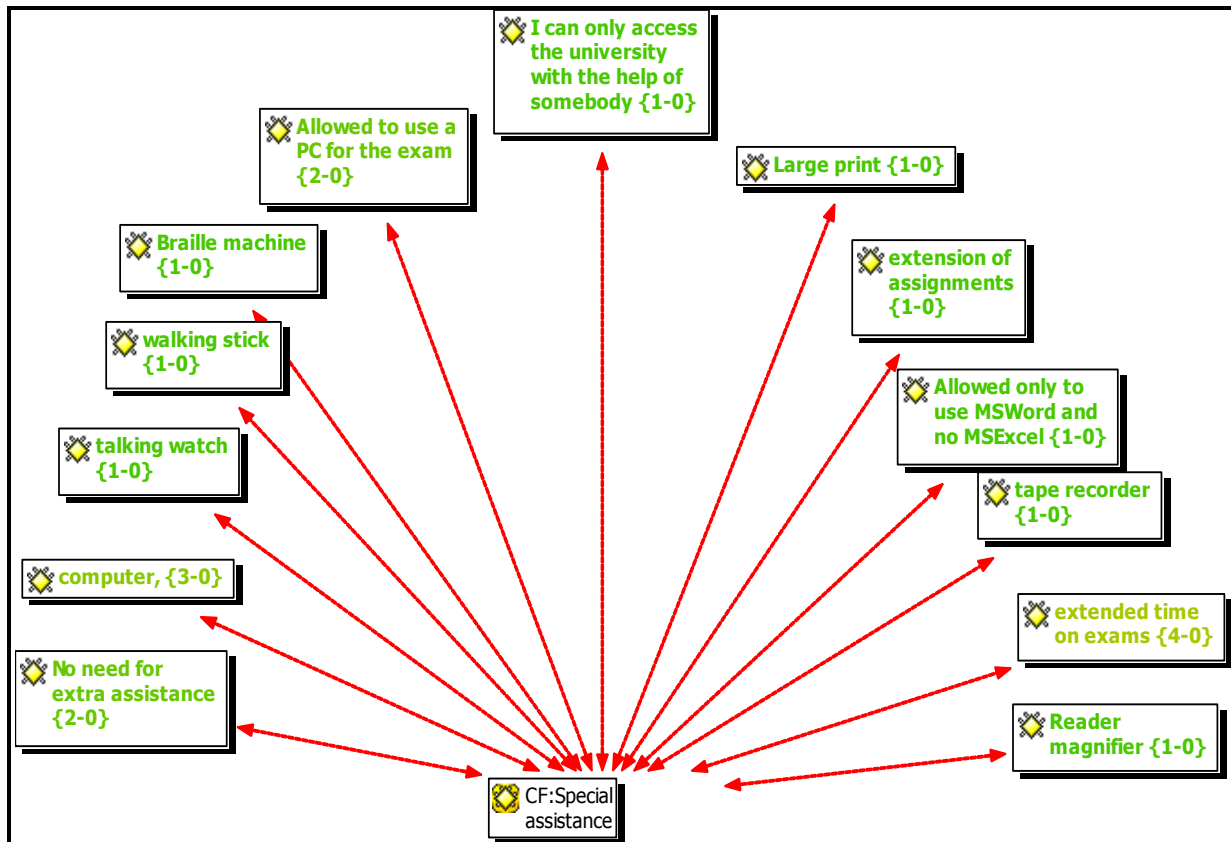
Figure 5.17 indicates that additional special assistance for students from the University is vital because they require it in order to perform to the best of their abilities. Most of them require minimal extra assistance from the University that can make an enormous difference in their lives. The visually impaired students require mostly, larger print, extra time and Braille print or a computer to assist them. Furthermore, most of the mobility disabled students expected the venue to be at least easy to access as well as additional time. Other than that they stated that they did not require extra assistance.

The students' responses were as follow:

"I require a computer, a walking stick, a talking watch, and a Braille machine to write down my notes, a tape recorder to tape down my notes; sometimes I prefer a tape recorder, sometimes the Braille machine." (2:14)

"Yes I do because with my disability I also have a problem with my hands. My hands, I can use them but it gives me trouble so that reduces my speed of doing things, so what takes somebody 30 minutes, it will take me double that time. Hence, with my exams I

have to request extra time. Currently they give me 60 minutes for every hour, so it is double the time that the university allocates for a paper that I get for my exam." (5:6)

"My problem is that if I write a numerical subject like calculations then I have to do everything in hand which is non-practical because I can't with Word, the word processing program, do calculations; I do it better in Excel, but the university prescribes that you cannot use Excel. Ok, I know maybe because of all the formulas and what have you, but that becomes a problem, a long time it takes for me to do calculations working on Word." (5:12)

"Yes, it is extra time and I am allowed to use a PC for my exams". (5:12)

"Large printed question papers and so I did my examinations at the Vista campus in a separate room, in an office." (7:8)

"Additional time." (7:8)

"No, I don't think I need extra or special assistance, as long as the venue is accessible, in all, that is basically what I need." (6:22)

"Nothing really." (3:13)

The last two responses were made by the two mobility disabled students with a lower degree of disability than the rest of the students.

Special assistance required by the disabled students identified in the focus group discussion is indicated in figure 5.18.

Figure 5.18: Additional special assistance required from the University as identified in the focus group discussion
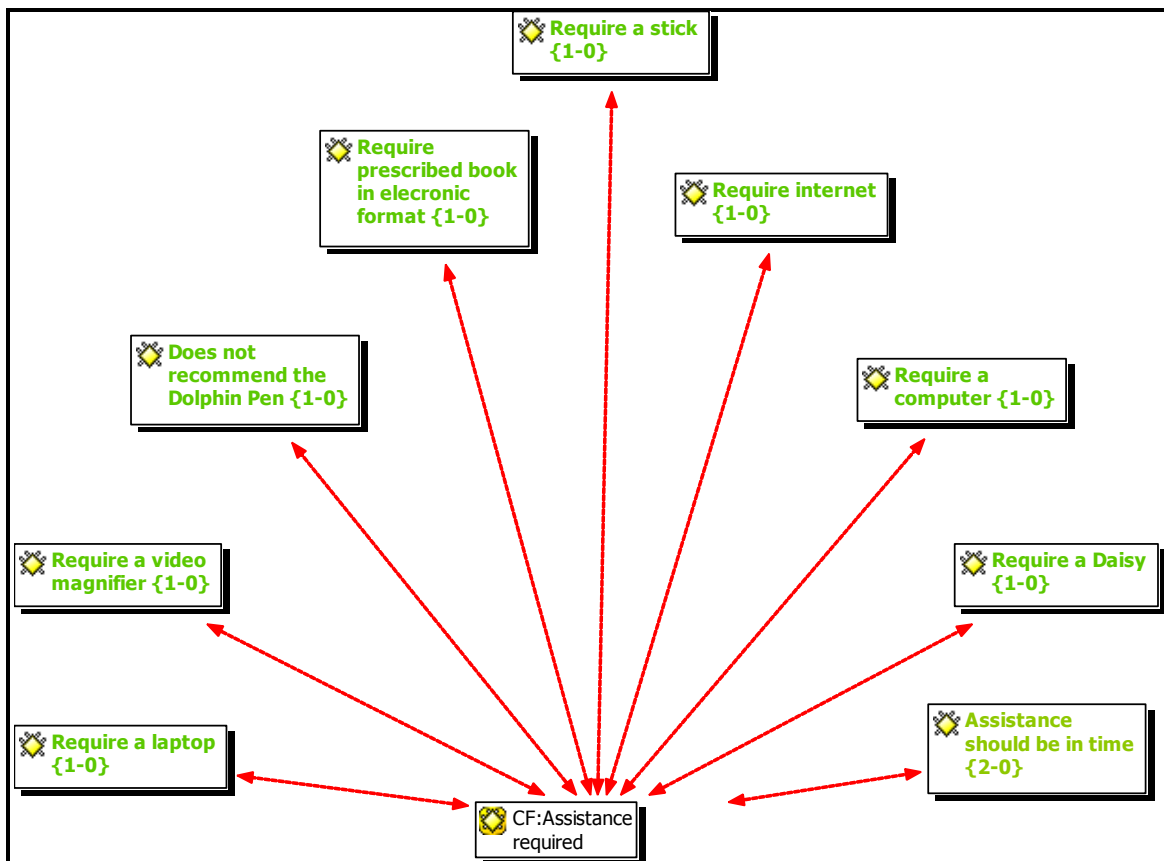
Figure 5.18 illustrates that during the focus group discussion, the students indicated that they also required additional special assistance from the University in respect of technology, including the following: a laptop, a video magnifier, prescribed books in electronic format, internet access, a computer and a daisy were mentioned.

5.4.3 The relevance of social support structures for disabled students' access

During the follow-up interviews, the researcher realised that the social support structure of the disabled student plays an enormous role in their lives. Responses relating to the University's social support structure and the disabled students' social support system are indicated in figure 5.19.

Figure 5.19: Social support structures identified in the follow-up interviews
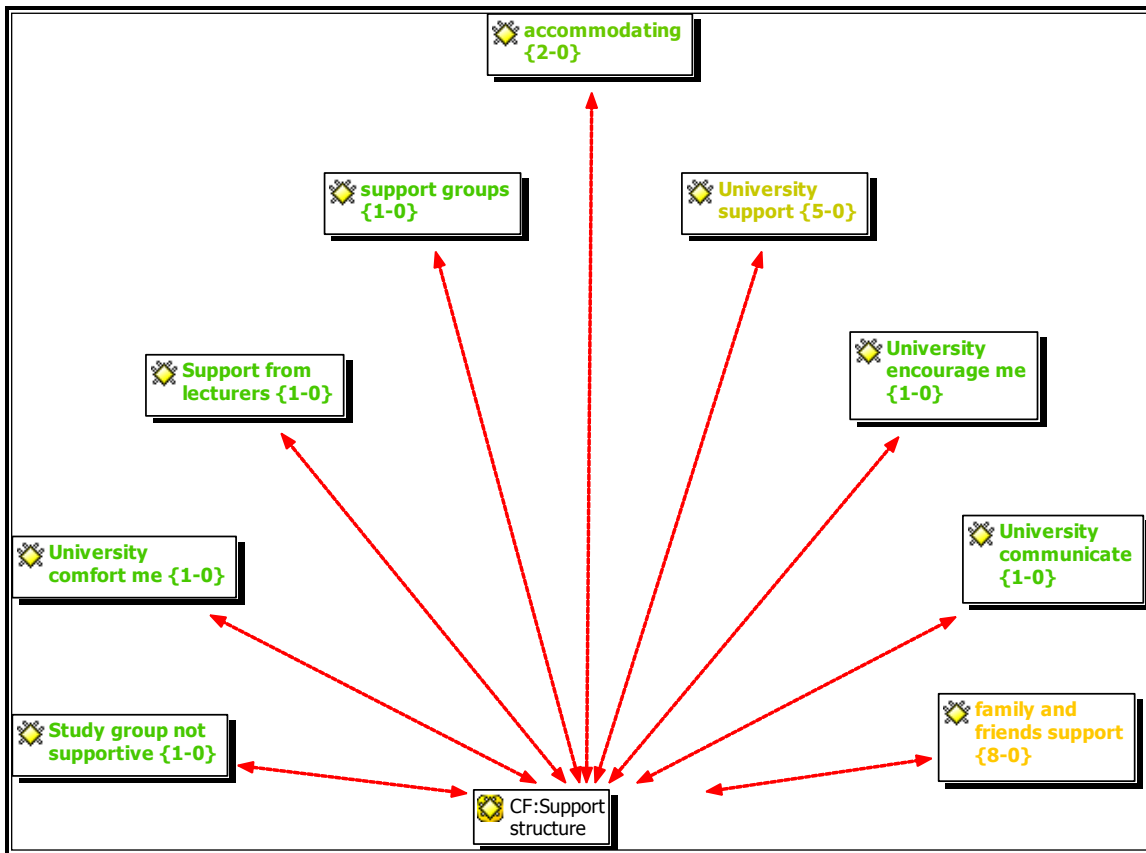
As indicated in figure 5.19, the students' support structures play a huge role in their studies. All of them receive a great deal of support, especially from their family and friends. Their own family and support are important, but the social support they receive from the University is also essential for success in their studies.

The disabled students' responses regarding the social support structures they require were as follows:

"Yes, I have my family and friends as a support source. They are very supportive; sometime I asked them to take me to the tertiary institution for my classes." (1:6)

"The tertiary institution is doing quite well in accommodating and supporting their students, you're always getting reminders that you must let them know if you need any special attention. Yes I think their doing a very good job". (4:14)

"University accommodates me." (2:13)

"University is supportive, comforted and encouraged me." (2:19)

"I stay with my two sisters, they are very supportive, they can even tell me when I take a bath, and your body is like this the kind of fill you have to put in yourself. I am happy about my elder sister. She is so wonderful to me. She can do anything to me, without any worry." (3:20)

"Firstly I can say my brother, my brother has completed his degree, so every time he asks me how I am doing with my studies and seeing him going well with his studies and having the job tells me to keep on doing until I finish. So he is the one that walks with me, and seeing other people who has done well with their studies, especially some of my friends." (4:12)

"Support groups." (4:15)

"My family, especially my dad." (5:22)

"When I did my BCom Degree I tried to join a study group here at the tertiary institution, so they agreed because at that time they did not see me. The day I met them I think it was that perception that I was disabled and mentally not able, because all of them just backed down and they didn't accommodate me and that gave me the experience that you know what, you have to show them that you can do it on your own. But the university itself, I would say, the support system overall is great." (5:22)

"The support that I got from them: when I did a program[me] in Financial Management through the Centre for Business Management, I completed my assignments and gave them to a friend to bring them through to university because I didn't have my car with me, then only to discover very late those assignments were not submitted. So what I did I wrote a letter to the lecturers in the centre explaining to them what happened and they accommodated me and marked my assignments." (5:18)

"My family is actually in KZN, I am staying alone in a flat, but I manage, I am very independent, putting my wheelchair in the car, driving to work, all of that. But I also have a lot of friends, when I desperately need help I always get it, so I wouldn't complain about support." (6:14)

"With the supporting structure from the university and the supporting structure at home, I constantly have someone that reads and writes for me. There was no way for me to read the 300 books in preparation for my Master's degree on my own. I have an incredible mother-in-law who reads for me day-in and day-out and a husband that proof reads all my documents to ensure no unwanted words go through. I have a laptop on which the

tertiary institution installed Jaws for [me] to work with. I received incredible support during my studies since I started with my Honours and it is still going strong." (7:6)

"I am really impressed with what the university has done for me to help me complete my studies." (7:9)

"The support structure of the university, from the examination department, they have an incredible special examination department. Family support is also very critical." (7:6)

"If a disabled student does not have the type of supporting structures I have, they will struggle a lot more." (7:7)

The results of the focus group discussion regarding the University's support are not presented, because this would mainly be a repetition of the previous findings.

5.5 FINDINGS REGARDING THE MOTIVATION OF DISABLED STUDENTS TO OVERCOME ACCESS CONSTRAINTS

The motivation of the disabled students to study or continue their studies at the University is of great relevance for the institution. This section therefore focuses on the students' motivation to do well and their goal-setting approach towards their studies.

5.5.1 Factors affecting motivation

The different factors that motivated the students living with a disability to complete their studies are presented in table 5.19.

Table 5.19: Factors that influence students' motivation

Who/what motivates you to do well in your studies?	Effect of motivation on behaviour
Respondent 1: My love to gain knowledge and skills motivates me to study.	I want to keep up to date with the latest information and trends.
Respondent 2: Seeing other disabled people holding a highly qualified position.	I do not feel sorry for myself.
Respondent 3: I want to achieve as much as I can in life. One thing that I strive for is that disabled students are [just] as gifted as anyone else. If given a chance, they can full realise whatever they need to achieve.	The ability to trust myself that I can do anything possible.
Respondent 4: Given chances like everyone. Lecturers need to be patient with disabled people as we sometimes learn very slow[ly] but with understanding.	Discussions with others give me time to say what I want and being open to myself. Sometimes I feel isolated if people are not open enough to us.
Respondent 5: The fact that I am disabled.	I've learnt in my life that a disabled person always has to do better, work harder to compete with able people.
Respondent 6: I have no choice but to do the best I can. I am 48 years old and all the career work types I did were of a hard physical nature, i.e., steel construction, building, commercial diving, Fire fighting, Paramedic, Long distance Hauler, Abnormal load hauler and others. After being left disabled after a robbery in 2004 and having lost a leg in March this year with complications of heart failure and multiple blood clots on the lungs, doing bookkeeping and auditing are about the only things left for me to do.	I have no other choice to do the best I can. I would really have liked to enrol to do prosthetics because I am very good with my hands and have worked with the materials used to manufacture prosthetics. I even have a complete workshop here at home. HOWEVER, I was informed that the applications for this course [were] full and closed when I wanted to enrol. I [did] not have maths or science as subjects in grade 12, which is a requirement. Pity the Industry just lost a very competent and needed person. So I have resigned myself to do Auditing.
Respondent 7: I motivate myself and because I am working in the work place of consulting engineers as a civil draftsman.	It motivate[s] me to focus on the end result.
Respondent 8: I motivate myself because I never give up on what I want.	Keep on trying and knowing I am not less important than other people. My dreams are also important and I will be a success.
Respondent 9: My kids, the company I work for motivate me.	By supporting me, believing in me. Taking me to classes or the examination halls because I don't have the transport. Encouraging me to study to develop myself.
Respondent 10: To get it over with.	
Respondent 11: It has been a lifelong ambition to achieve a law degree. I would have preferred to [study] on in my field of expertise, Maritime Law, but the course was not available.	Living in a retirement home, it is mainly self-motivation but some of the residents and staff are very encouraging.

Respondent 12: It is the desire to achieve so as my special friends who understood me well so they also understand the inconveniences I am experiencing as their colleague but which doesn't apply to them since they are disability free, in that way they were also prepared to assist. Without their help, I was not in a position to get my junior qualification. I personally know a number of my colleagues due to their characters and the inconveniences we [are] facing they were not strong enough to achieve their dreams even though they had the potential.	I told myself that I am not on campus to stay; I am only there to achieve something and then leave. Therefore, after analysing everything that can stand on my way, the accessibility issue due to disability came on top of the list automatically it was high on the priority list of discouragements to be aware of. In that way I managed to overcome it. In some instances, my friend had to physically carry me to attend classes that I could not access on my own.
Respondent 13: Self-motivation.	
Respondent 14: My family and friends.	My family and friend support and help me.
Respondent 15: My disability makes me to want to prove a point that my being physical disabled has nothing to do with my being.	Encourage me to always strive to be the best at all times.
Respondent 16: The background I am from, not a rich family.	To improve on my own circumstances.
Respondent 17: No one but myself.	By learning what I get.
TOTAL 17	17

The statements in table 5.19 indicate that the participants were generally motivated by themselves, their family, friends and other disabled persons.

Table 5.20 focuses on how much the students living with a disability enjoyed their studies and whether or not they set goals for themselves.

Table 5.20: Work and goal setting

Question		Yes		No	TOTAL
Do you enjoy difficult work?	12	63.2%	7	36.8%	19
Do you set goals for yourself in terms of your studies?	20	100.0%	0	.0%	20

According to table 5.20, almost two-thirds (63.2%, n = 12) of the 19 respondents who responded to the first question indicated that they enjoyed a work challenge. In addition, all of the 20 respondents who answered the second question indicated that they set goals for themselves in their studies.

The goals of the students living with a disability are indicated in table 5.21, together with the actions they take to achieve them.

Table 5.21: What are your goals and what actions do you take to attain them?

My goal is to	What actions do you take to achieve your goals?
complete my MBL, do a DBL, become a researcher, consultant and knowledge resource.	I study a few modules each year until I complete it.
get a degree and a good job.	Working hard on my studies and using all the help I can get.
obtain my degree and play a meaningful part in society in the area of my field of study.	Make myself familiar with everything that I must learn and try to apply it as practically as possible
... complete my course. To show the world that we can also do it. And to get a better job and to improve in life.	Study hard, listening and not to take thing[s] persona[ly]l because of my disability.
achiev[e] the highest level.	Try to prepare my studies upfront.
do the best I can.	
... empower myself to take up a new career which [will] enable me to work for a good salary and build up enough finances to retire. I will have to work late past my retirement year to make for the lost time and finances because of the robbery which left me with nothing.	I enrolled last year to start my studies but these had to be broken off because of the mentioned medical problems I experienced this year. I will just have to start from square one again next year.
... complete my studies in becoming a civil engineer	To ask [for] help when I need it
never give up on what is important for me.	I work hard and have no fun time. But it is worth it in the end.
be an Account Manager	I am studying Marketing, planning my studies well. I am learning as much as I can in my current job to get where I want to be, got myself a coach at work who is an Account Manager. I am applying for a driver's licence in order to qualify as an Account Manager.
... complete my LLB degree.	Dedicating sufficient time to study effectively. Having Multiple sclerosis, sometimes affects my retention of facts plus having the occasional senior moment.

motivate and encourage disabled people not to be discouraged by a lot of inconveniences that we face when working towards trying to improve their lives. Clearly all the way we are facing inconveniences it can be transport system, academic institutions, public areas and workplaces, therefore we really had to have a strong character and determination in order to overcome all that I have mentioned above. Therefore the road to success is more challenging to us than our able bodied colleagues since we must overcome the above mentioned before facing the general problems they are also facing as students so as in social life.	I must first achieve my personal goals which can put me in a position to be relevant to their lives since I am like them, facing the same problems they faced and if I managed to overcome them that means they can also do it. If I can have a successful career and life that means they can also live their dreams provided they possess a strong character and in that manner they won't fall victim of circumstances. I am saying so because a number of disabled people are not successful in life because of the circumstances they are faced with when trying to improve their lives or to be active in life. But in a long run it comes to public as if we are not successful or we cannot succeed in life. If more disabled people can succeed through proper support structures that can change the perception of the way disabled people pursue life so as they way the public look at us. I also need a massive network of disabled people nationally in order for my goal to be effective in disabled people lives [be]cause my goal is to make difference in their lives and the major change I believe they can achieve is to develop positive attitude and definitely they will achieve in whatever they do in life, i.e. socially, academic and business.
succeed.	Try to think positive[ly].
complete my degree and go into the line of work which I am studying.	Work hard at my studies.
complete my BCom Strategic Sourcing by the first semester of 2010 then embark on my Master in Business Leadership with SBL.	Studying very hard and forming study groups to assist each other.
become the best student in the country.	Study hard, read and do research
get my diploma.	I try to learn /study.
TOTAL 17	17

Table 5.21 indicates that the majority of the respondents had set clear goals. Most of their goals were specific, measurable and realistic.

Table 5.22 focuses on the question of whether students living with a disability would consider studying at the tertiary institution again.

Table 5.22: Would you consider studying at the tertiary institution again?

	Frequency	Percentage	Cumulative percentage
Yes	16	88.9	88.9
No	2	11.1	100.0
Total	18	100.0	
Missing	5		
TOTAL	23		

According to the data in table 5.22, almost 90% (88.9%, n = 16) of the 18 respondents who answered this question would consider studying at the tertiary institution again after completing their current studies or if they had to enrol again.

The reasons why the respondents would consider studying at the tertiary institution again are set out in table 5.23.

Table 5.23: Yes/no responses to studying at the University again, with reasons

After completing your studies (first degree/diploma/ certificate) at the tertiary institution, would you consider studying at the tertiary institution again?	Give reasons for your answer
Respondent 1: Yes	Distance learning makes me more independent and disciplined.
Respondent 2: Yes	I g*et al.*l the support I need.
Respondent 3: Yes	Obviously, [because] you study at your own pace and time.
Respondent 4: Yes	Yes, I owe the tertiary institution so much.
Respondent 5: Yes	
Respondent 6: Yes	Apart from all the difficulties like accessibility, I think the tertiary institution is a[n] outstanding institution.
Respondent 7: Yes	There is always room for improvement in oneself and work wise.
Respondent 8: Yes	Yes, because I am working towards my goal.
Respondent 9: Yes	I work here and get a good discount. But I can also study at my own time and pace. That is nice!
Respondent 10: Yes	I have confidence in the education system of the University. I need to develop myself. I work full time and the tertiary institution understands this and give[s] me enough resources and time to juggle these two important aspects of my life.
Respondent 11: No	I have completed my post grad so I am not interested in studying any further.
Respondent 12: No	I hold a BCom and an MBA. I believe at my age I will have completed enough plus being unable to put the qualification to good use. Referring to Q.17. Never at any time do I consider myself in competition with either disabled or fully fit students. I am selfish in that that I do for myself and without fixed classes; there is no one to compare yourself against.
Respondent 13: Yes	The tertiary institution is trying its utmost best to accommodate people with disabilities that are recognised through the number of students with disabilities enrolling. I think there are other things that can be done internally to improve their service to the disabled in the tertiary institution community and they can work in the favour of the university.
Respondent 14: Yes	There is no other option.
Respondent 15: Yes	The tertiary institution makes it convenient to study at your own pace. But they really need to upgrade their corresponding.
Respondent 16: Yes	Already [done] some research with continuing with SBL.
Respondent 17: Yes	The tertiary institution is a good distance educational intuition.
Respondent 18: Yes	To achieve my goal.
TOTAL 18	18

Most of the reasons mentioned in table 5.23 relate to the sound reputation of the institution.

5.5.2 Students' perceptions of critical personality-related factors for successful completion of studies

The students' perceptions of the critical personality-related factors required for academic success are highlighted in figure 5.20.

Figure 5.20: Students' perceptions of critical factors for academic success
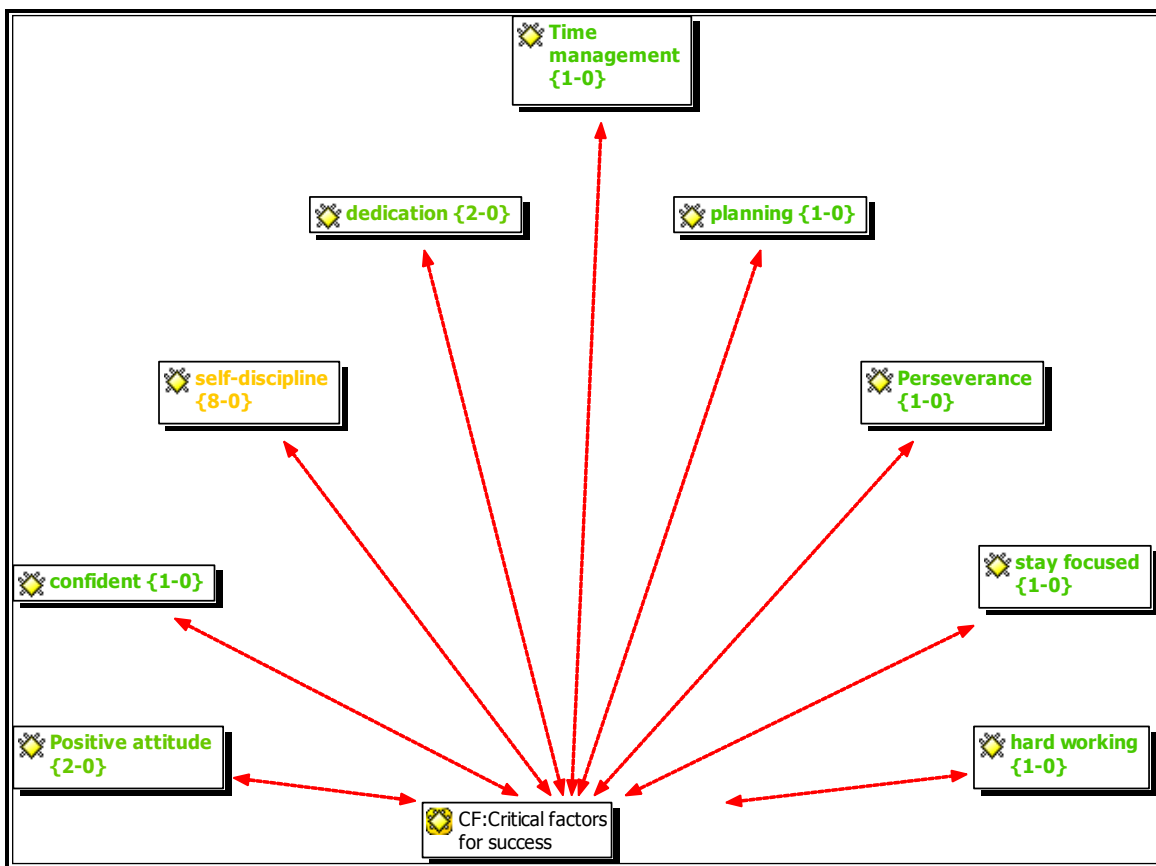
All of the students mentioned that self-discipline is critical for success. One student stated: "... most of us disabled students do have good self-discipline. If you come to this point where you register for a degree, you know what you are letting yourself in [for], in spite of all your shortcomings." Besides self-discipline, some students also mentioned the need to "stay focused", "time management", "planning", "dedicating myself" and "hard working." The critical factors for academic success of disabled students are summarised

in figure 5.20. This figure indicates that the critical factors required to successfully complete their studies were identified as confidence, focus, dedication, self-discipline, a positive attitude, planning, perseverance, time management and the will to work hard. If disabled students have these characteristics, it would appear that access constraints in this regard do not influence their motivation to complete their studies. Students who make the most of these personality-related attributes should be more successful than students who do not.

Figures 5.21 and 5.22 indicate more specifically the influence of time management and goal setting on academic success.

Figure 5.21:Time management
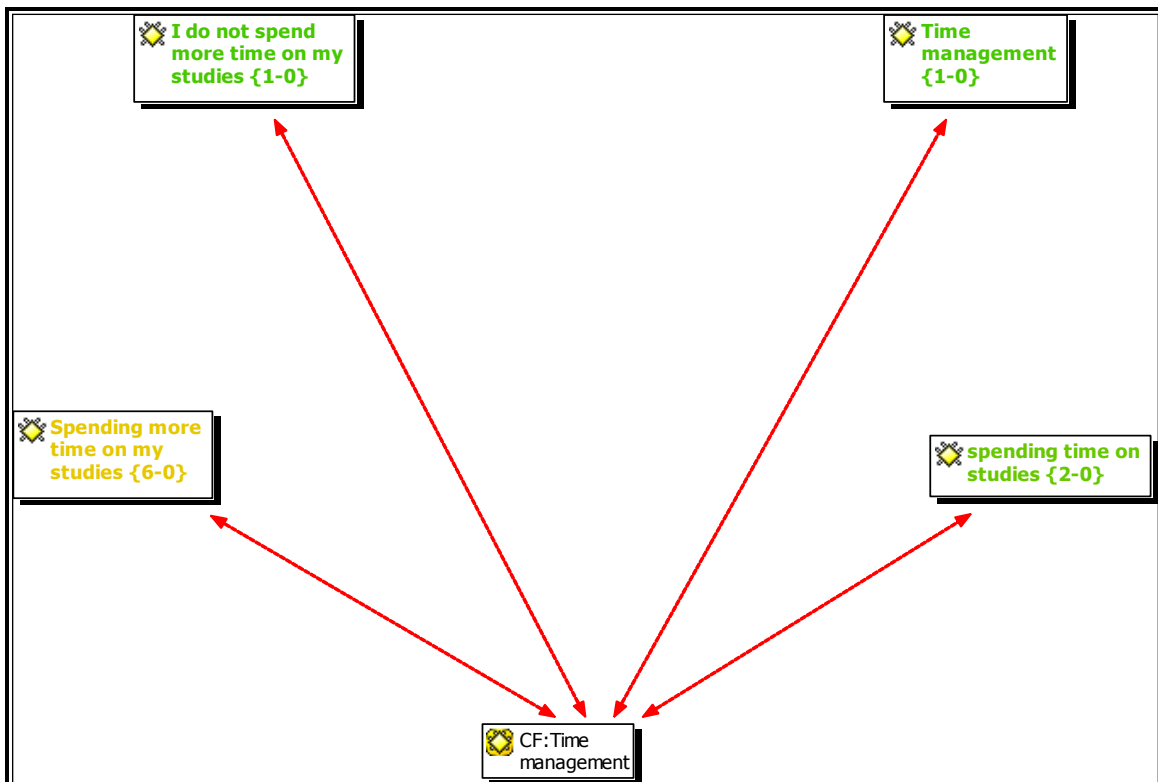
Owing to the fact that time is often a concern for students, the way in which disabled students manage their time is of vital importance. The researcher asked the students if they feel that they spend more time on their studies than students without disabilities.

The students responded as follows:

"No, I don't spend more time in my studies because I don`t have enough time to study. And I receive my study material late, so I don't think I spend more time on my studies that other students without disabilities." (2:10)

"Because the time of the exam and the assignment are the same, that's why I am saying I don't have enough time." (3:13)

"Yes, I spend more time on my studies." (4:15)

"More time spen[t] on studying." (5:20)

"I have to work extra time to accommodate my studies." (1:15)

"No, other [than] the fact that I am in a wheelchair, I am just normal, but I do everything that a normal human does, go out, I do almost everything in normal ways." (6:8)

"Dedicating time to your studies." (7:10)

"As a disabled student it is very important to put in an extra effort." (8:9)

Most of the students complained that they do not have enough time to study and they do need to make more of an effort to achieve good results than students without disabilities.

Figure 5.22: Goal setting
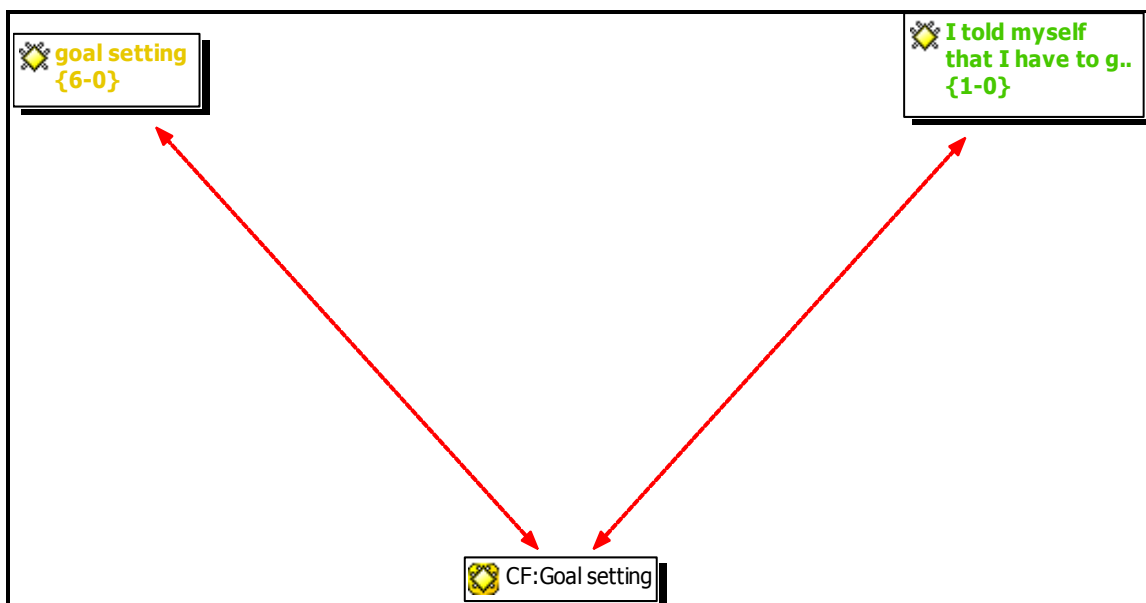
According to figure 5.22, seven participants emphasised goal setting as vitally important for academic success.

The students responded as follows:

"I do set goals for myself, because when I receive my tutorial letters, I always check the dates to find out which assignment is due when. So I actually make sure that those assignments are submitted before the due date." (1:17)

"I told myself that I have to get this degree. What will make me not get it? I have to try by all my means to get it." (2:19)

"I am doing my diploma, and after my diploma I want to do my degree. After that, I will see [about] do[ing] Master's. (3:18)

"There was a time in my life I thought that I am not going to finish this, but you know when the people are around and they encourage you, then I said to myself I won't give up, I will just keep on doing it until I finish. When I fail something, I always ask myself: do I admit I give up? My disability is not something that will make me give up anything in life." (4:25)

"Well, I do but sticking to them is another story. I do, I try but at times some of them just fall of the wheel and I go back, but I try." (5:15)

"I definitely do have goals and I want to achieve them." (6:15)

Setting goals is also part of critical factors for success and all the students in this study declared that they do set goals for themselves. However, one respondent mentioned that actually achieving the goals is more challenging.

5.5.3   The disabled students motivation to complete their studies

The disabled students motivation to complete their studies is depicted in figure 5.23.

Figure 5.23: The disabled students' motivation to complete their studies
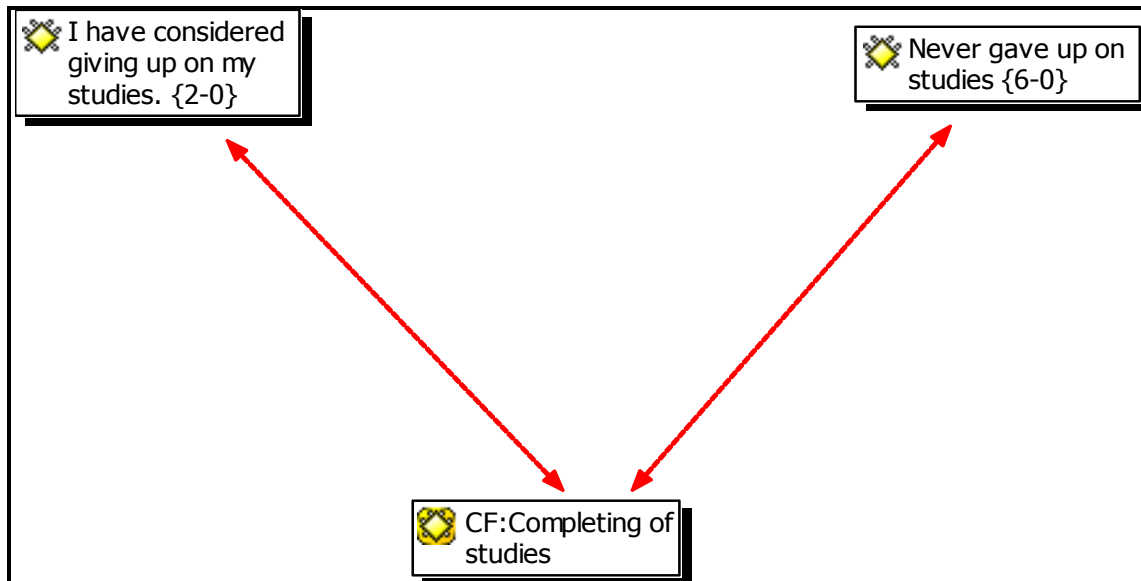
In the individual interviews, six of the eight students declared that they would never give up on their studies, while two of them admitted that there were times when they had considered dropping out. They responded as follows with regard to completing their studies:

"Yes, actually last year I was not studying, because I was thinking I can't attend classes and I didn't do well in 2008. So last year I decided I don't want to register and this year I registered." (1:21)

"No never. Because as a blind person, I know where can you ever work without studying." (2:11)

"No I have not, because of the support that I do have." (3:26)

"My disability is not something that will make me give up anything in life." (4:39)

"Yes, once, but that was out of pure exhaustion and problems at work and then I could not marry my studies to my work. It was just one of those years but given my mood, where ever I go I always walk around believing never give up, you know, no matter how many obstacles you come across. You must just find your way around and move on." (5:30)

"My studies, I have just started, no because I am planning on moving on and maybe do my M.Tech, on completion of my B.Tech. I think I am now even more motivated after today's presentation that I would have a certificate coming." (6:31)

According to Tinto (1975:94), the process of dropping out of university/college can be viewed as a longitudinal one in which the interactions between the disabled student, the academic and social systems of the college/university continually modify the student's goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout. It became evident in this study, that the integration of students into the academic and social systems of the institution was directly related to students' either dropping out or persevering with their studies.

The results of this study also indicate that eight respondents who saw themselves as independent (75%, n = 6) believed that they would definitely complete their studies.

One can therefore infer that there is a close link between students who see themselves as independent and their motivation to complete their studies.

5.6 SUMMARY

This chapter discussed in detail the results of the analysis of the qualitative and quantitative data. The access constraints were investigated by the application of three methods (a questionnaire, individual interviews and a focus group discussion).

Constraints were identified according to the following criteria: an area was considered a constraint if it was difficult to access. The main constraints experienced by students with disabilities in gaining access were as follows:

- the architectural environment
- parking
- the lack of visible information
- the library
- the study material
- the annual request for medical certificates

Levels of accessibility were classified as follows:

- inaccessible

- accessible with minor assistance
- fully accessible

The tertiary institution involved in the study, can be classified as accessible with minor assistance.

The following levels of independence of students were identified:

- I can help myself, but need the support of others.
- I see myself as independent.
- I rely totally on the help or support of others.

Most students can help themselves, but still need the support of others.

The results of this study also indicated that there is a close link between students who see themselves as independent and their motivation to complete their studies. The disabled students in this study were mostly motivated by themselves, their family, friends and other disabled persons. The majority of these students had set clear goals, and most of their goals were specific, measurable and realistic. The disabled students' perceptions of the critical personal factors required for academic success were discussed as well as the influence of time management and goal setting on academic success.

The findings indicate that the University's support structure and the disabled students' social support structure are crucial and play an enormous role in their lives.

The research questions will be discussed in more detail in chapter 6. The results will then be summarised and explained and a number of recommendations made.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The research results were presented and discussed in chapter 5. In this chapter, conclusions will be drawn on the research questions in the study and guidelines suggested. Recommendations for further research will also be made.

6.2 RESEARCH QUESTIONS

The research questions and conclusions relating to each research are discussed below.

6.2.1 Research question 1: What constraints do mobility or visually disabled students experience with regard to accessibility at the tertiary institution's main campus?

The main constraints that disabled students experience with regard to accessibility at the institution's main campus are the following:

- archictectural access barriers
- study material
- the library
- parking

It is clear from the results of the study that mobility or visually disabled students do experience accessibility constraints at the tertiary institution's main campus. Most of the constraints relate to the architectural environment of the campus, which has a bearing on parking and access to the library. Various researchers have found that the physical accessibility of institutions constitutes a major barrier to participation at tertiary education institutions (Dowrick *et al.,* 2005; Fuller *et al.,* 2004; Tinklin & Hall, 1999; Halloway, 2001) confirm these results. South Africa's public transport system also poses a challenge for disabled students. Most taxi drivers regard disabled people as a nuisance because such

passengers require more space and assistance. Those disabled students who do have their own transport experience the lack parking for the disabled on campus as a constraint. This constraint is exacerbated by the lack of visible security guards to assist these students.

Another constraint is associated with study material. Timeous access to study material and in the appropriate format poses another challenge for students with disabilities. During the focus group discussion and the individual interviews, the University's requirement that disabled students have to submit a medical certificate annually was mentioned as a financial burden for disabled students.

The main conclusions regarding the constraints and their frequency are summarised in table 6.1.

Table 6.1:   Frequency of constraints experienced

QS = questionnaire survey; FG = focus group; II = individual interviews

CONSTRAINTS EXPERIENCED	QS	FG	II	TOTAL
Architectural access barriers	18	3	2	**23**
Study material	4	5	2	**11**
Library: difficult to access	4	1	4	**9**
Parking	5	0	3	**8**
Medical certificate	0	4	2	**6**
Lack of transport	1	0	3	**4**
Lack of visible information	4	0	0	**4**
Rude/invisible security guards to assist	0	0	3	**3**
Access to exam venues	2	0	0	**2**
Lack of awareness training	1	1	0	**2**
Lack of communication between faculties, schools and sections of the University	1	1	0	**2**
Lack of support from lecturers	0	0	2	**2**
Registration problems	0	0	2	**2**
Numerous other obstacles	2	0	0	**2**
ARCSWiD not well marketed	1	0	0	**1**
Customer service	1	0	0	**1**

Lack of information	1	0	0	**1**
Stereotyping persons with disabilities	1	0	0	**1**
TOTAL	**46**	**15**	**23**	**84**

6.2.2 Research question 2: What categories of difficulty levels of accessibility (fully accessible, moderately accessible and inaccessible) exist when measuring accessibility and what is the relationship between the levels of accessibility and the motivation of these students?

Conclusion

The following categories of accessibility were evident (fully and moderately accessible and inaccessible):

- Of the respondents, 11.8% were able to fully access the main campus.
- Of the respondents, 70.6% were able to access the main campus with minor assistance.
- Of the respondents, 17.6% were unable to access the main campus (i.e., it was inaccessibly to them).

On the basis of the above findings, it is evident that students with a mobility or visual disability regarded the tertiary intuition's accessibility as moderately accessible.

The following conclusions were drawn about the students' levels of independence and their motivation to complete their studies:

- Eight students saw themselves as independent.
- Of the respondents, 75% believed that they would definitely complete their studies.
- Of the respondents, 12.5% thought that they would complete their studies, but possibly not in time.
- Of the respondents, 12.5% thought that they would not complete their studies.

It can therefore be inferred that there is a close relationship between students who see themselves as independent and their motivation to complete their studies.

Although there is a close link between students who see themselves as independent and their motivation to complete their studies, it would seem that the constraints have a

limited influence on their levels of motivation to further their studies. Almost 90% of the students indicated that they would study at the tertiary institution again.

The sample size was too small to generalise the findings with confidence and to determine any relationship between levels of accessibility and their influence on the students' motivation to complete their studies. However, based on the small sample, the findings imply that disabled students' motivation to complete their studies is less influenced by the levels of accessibility at the institution. Their motivation to complete their studies is influenced more by themselves, their family, friends and other disabled persons.

It was further noted that the characteristics that may influence the motivation of disabled students to further their studies can be summarised by means of Tinto's (1975) student dropout model. This model highlights the fact that that the higher degree of interaction of the individual with the institution, the greater his or her commitment will be to the specific institution and the goal of graduating. It is thus the interplay between the three variables – the background characteristics and attributes determining goal commitment, the level of institutional integration and the level of social integration – that will ultimately determine whether or not a student graduates.

6.2.3 Research question 3: What support structures do students with disabilities require from the tertiary institution?

Conclusion

The support that students with disabilities require from the tertiary institution is discussed in sections 6.2.4.1 to 6.2.4.6 below.

6.2.4 Research question 4: What guidelines can be provided to improve accessibility in areas where access is unsatisfactory?

Although the students were all mobility or visually disabled, each was unique. They all saw themselves differently, with different experiences and needs. What was regarded as a major obstacle for one disabled student was irrelevant to someone else. Owing to the

fact that the students' needs differ, the University should not only consider satisfying the needs of the majority of disabled students, but also make an effort to meet each disabled student's needs as soon as he or she requires support.

The University should focus on improving the following areas:

- architectural access
- study material
- the library
- parking
- medical certificates
- lack of transport

Specific guidelines for improvement are suggested for each of these areas.

6.2.4.1 Guidelines on architectural access

- The University should endeavour to make all the architectural changes to enable disabled students to move in and out of buildings safely and independently. All disabled students should have easy access to restrooms, cafeterias, classrooms and other areas of the University and community.

- The University should consider making a few minor adjustments to the following, which would greatly improve the accessibility of disabled students:
    - Some of the springs on heavy doors should be released.
    - Door and lift door sensors should be checked so that they can open properly for disabled students.
    - Ramps should be installed in the Senate Hall because, understandably, no wheelchair-bound individual enjoys being carried around in public.
    - Some of the toilets and doors are not wide enough for mobility disabled people to manoeuvre around.

- The Americans with Disability Act (ADA) has provided standards for uniform accessibility of public and private accommodation. The Accessibility Guidelines for

Buildings and Facilities specified by the US Architectural and Transportation Barriers Compliance Board (US. ATBCB, 1998) provides regulations for the design and placement of many items to ensure informity. Examples include the height of drinking fountains, the slope of ramps, the height of handrails, the width of doors and walkways, the installation of door levers and modifications in restroom facilities such as the height of basins.

- Contingency plans should be made in advance for problems with architectural accessibility, including emergencies and building evacuation. For example, an elevator failure could mean that students on crutches and even a few who generally use wheelchairs would need to safely manoeuvre themselves by sitting down and sliding down stairs. The procedures for various types of emergencies should be specifically defined for individuals with mobility impairments. Everyone at the University should be informed of the evacuation procedures, including all the lecturers and paraprofessionals, rescue companies and students.

Owing to the geographical location of the main campus of the University there will always be some architectural constraints. The hill on which the campus is situated will always be dangerous for wheelchair-bound students. However, the University could encourage students to rather visit the Sunnyside campus or to meet them at the Sunnyside campus and arrange transport for them to the main campus.

6.2.4.2 Guidelines on receiving the study material on time

- The University should make an effort to provide disabled students with their study material when they register. This will limit the time students need to wait for their study material. Although the University does provide the study material on the website for students to access, in CD format, most of the disabled students still appear to favour the paper format.

- The study material should be processed and sent in the correct format. The most common types of limitations for students with a visual impairment are intensity, frequency and field loss (Cook & Hussey, 1995). Intensity relates to the size of the object, which is too small for a person to see and it therefore needs to be magnified

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in some way. This may be with glasses, a magnifying glass or enlarged print. The second limitation, frequency, may mean a lack of contrast between the figure and the background or a problem discriminating colour. This may require filters or overlays to vary the colours in order to produce greater contrast. Thirdly, a field loss may be partially accommodated with special lenses. Once the sensory loss is significant and there is no useful input of information via that channel, it is necessary to provide input via a different channel in the form of Braille.

- Two of the major problems experienced by students with visual impairments are accessing print materials and moving about safely in their environment (orientation and mobility). For students with poor vision who require assistive technology to access print, there are devices such as optical or electronic magnifiers, hand-held or spectacle-mounted magnifiers or telescopes, large print books and closed-circuit television (CCTV). CCTV is a device that is used to enlarge the print on existing books and papers. The print material is placed under the camera eye that magnifies the print and displays it on a screen or monitor. Computer-based tools include screen enlargers, software that changes the colour of text and the colour of background to enhance the contrast, and screen-reading software that reads the text aloud using synthesised voice.

- Assistive technology such as the following are available for individuals who cannot read print at all because of their vision impairment: Braille materials, screen-reading software, optical character-reading software, reading machines, Braille writers and electronic note-taking devices. Other assistive technology for individuals who are blind or have limited vision include beeping balls, talking watches and clocks, talking and large display calculators, talking thermometers and thermostats, talking money identifiers, talking rulers and dice, large-print or Braille keyboards and large key illuminated remote controls for operating televisions and VCRs.

6.2.4.3 Guidelines on access to the library

- The University should introduce more mobile libraries, especially in remote regions. There is no doubt that the University is committed to serving its students and is ready to tackle issues around accessibility. Hence two libraries on wheels were established in November 2010. This is the first academic library in sub-Saharan Africa to introduce mobile services to its clients. The mobile libraries will take the library to its clients in remote areas in Limpopo and the Cape coastal regions. These libraries will provide essential reading materials to students, no matter how remote their location. The mobile libraries are fully equipped with selected book collections, future satellite communication facilities and computers to access prescribed and recommended articles, over 30 000 e-books, 70 000 e-journals, 300 electronic databases as well as e-reserve materials.

6.2.4.4 Guidelines on parking

- The University needs to provide more parking spaces for disabled students near all the important buildings on campus. The limited number of parkings for the disabled is a constraint that requires urgent attention. One of the reasons why there are so few parking spaces for the disabled is that the few that there are, are reserved for the institution's disabled employees. The University probably does not expect that many disabled students to visit the campus. Converting ordinary parking spaces into parking for the disabled basically requires that each parking needs to be wide enough for a disabled person to manoeuvre, and it needs to be marked as parking for the disabled.

- The University should instruct the security guards to assist students the moment they arrive on campus.

6.2.4.5 Guidelines on medical certificates

- The University should arrange for students with disabilities to obtain their medical certificates from the clinic on campus. The study shows that students really struggle to comply with the University's requirement to submit medical certificates every year because of the financial implications. A clinic is available on campus and fully equipped with the relevant staff. However, before the University can consider this, it would first need to look at and sort out the clinic's accessibility.

6.2.4.6 Guidelines on lack of transport

- The University should consider introducing a shuttle service from the Sunnyside campus to the main campus for students with disabilities. As long as students are forced to rely on public transport, this constraint will remain.

6.3 LIMITATIONS AND STRENGTHS OF THE STUDY

The researcher encountered several limitations in conducting the study.

- The main limitation was to secure enough visually or mobility disabled students living in Tshwane to participate in the study. This was largely because of the type of participant required for a study of this kind.
- The sensitive nature of the topic could have been one of the reasons why some students declined the invitation to participate. Also, attendance of the focus group discussion was restricted on account of the physical difficulty of gaining access to the institution's campus.
- The focus group discussion and interviews were time consuming for the students to attend and the researcher had difficulty making arrangements for the students to attend. Although different data collection methods were used at different times, they did give the researcher a deeper understanding of the access constraints experienced by visually and mobility disabled students.

- The researcher had to rely on the students' willingness to participate –hence their availability and time constraints did limit their participation. However, the fact that the researcher explained the importance of the study to the students and informed them that the results of the study would assist the institution to improve and expand accessibility barriers, did to a certain extent overcome this limitation.
- An unavoidable obstacle was the actual time that it took the researcher to collect the data. Owing to the fact that three data collection methods were used (i.e., self-administered questionnaires, a focus group discussion and interviews) the data collection took seven months to complete. The whole research process was time consuming because the questionnaire data first had to be analysed. The researcher then had to transcribe the focus group discussions and interviews and also familiarise herself the qualitative analysis software package, ATLASti.
- Although the results of the study are institution specific and cannot be generalised to apply to other institutions, there may be a certain amount of overlapping.

6.4 RECOMMENDATIONS

Recommendations for possible application in practice were discussed above under the guidelines for improvements.

The aim of this study was to determine the access constraints experienced by visually and mobility disabled students of the relevant tertiary institution. Future research could include the following:

- a larger sample of disabled students
- more instititions
- additional categories of disability

Further research could also be conducted at other universities to limit the number of types access constraints experienced by students with disabilities. This could involve the creation of a model for successfully accommodating students with disabilities. More research could also be done on students' perceived attitudes to motivation and the impact of the access constraints experienced.

6.5 SUMMARY

Disabled people make up about 5% of the total South African population, which basically implies that one out every 20 people can be classified as disabled. As indicated in chapter 2, on average, the percentage of disabled students who enjoy primary and secondary education is 10% lower than that of nondisabled persons. A comparison of the levels of education of disabled students with those of the total population indicate that about 30% of disabled persons have no schooling, compared with 15% of the total population – this is unacceptable.

Chapter 3 focused on various constraints experienced by visually and mobility impaired students. Five categories of constraints were identified, namely physical, information, transition to tertiary education, assumptions of normality and levels of awareness. Even though the disabled students in this study experienced access constraints, their situation did not significantly influence their motivation to further their studies. Reasons for this could be the large-scale support they receive from the institution and their family and friends as well as the fact that all the students showed high levels of goal commitment.

The basis for all learning and development should be the creation of enabling and stimulating teaching and a learning environment that promotes learner access, participation and success. The University should therefore continue to focus on the needs of students with disabilities and make an effort to reduce the access constraints. Guidelines were formulated above that the University could consider following in order to overcome some of the constraints.

In conclusion, the study succeeded in achieving its objectives, but the University still needs to do a great deal to eliminate the constraints identified and ensure that each and every disabled student ultimately graduates.. This would not only have a positive effect on the students' ability to improve their own life chances, but also contribute meaningfully to the broader agenda for social and economic development.

REFERENCES

American heritage dictionary of the English language 2004. 4th edition. Boston: Houghton Mifflin.

Amerman, T. 2007. Teaching methods and interventions, in *The Praeger handbook of special education,* edited by AM Bursztyn. Westport, Conn & London: Praeger.

Ames, C. 1992. Classrooms: Goals, structures and student motivation. *Journal of Educational Psychology* 84:261-271.

Anderman, EM & Midgley C. 1997. Changes in achievement goal orientations, perceived academic competence, and grades across the transition to middle-level schools. *Contemporary Educational Psychology,* 22:269–98.

Andreon, D & Durocher, J.S. 2007. Evaluating the college transition needs in individuals with high-functioning autism spectrum disorders. *Intervention in School and Clinic* 42(5):271-279.

Archer, J. 1994. Achievement goals as a measure of motivation in university students. *Contemporary Educational Psychology* 19:430–46.

Archer, E. 2008. *Introduction to ATLAS.TI.* 2nd edition. Pretoria:UP

Atkinson, JW. 1957. Motivational determinants of risk-taking behavior. *Psychology Review* 64:359–72,

Atkinson, JW. 1964. *An introduction to motivation.* Princeton, NJ: Van Nostrand.

Austin, J & Vancouver, J. 1996. Goal constructs in psychology: structure, process and content. *Psychological Bulletin* 120:338-375.

Babbie, E. 2007. *The practice of social research.* 11th edition. Belmont, Calif: Wadsworth.

Babbie, E & Mouton, J. 2006. *The practice of social research.* Cape Town: Oxford University Press.

Badat, S. 2003. *Transforming South African higher education, 1990-2003*: goals, *policy initiatives and critical challenges and issues*, No. 4. Pretoria.

Barnes, C, Mercer, G & Shakespeare, T. 1999. *Exploring disability: a sociological introduction*. Cambridge: Polity Press.

Baruch, Y. 1999. Response rate in academic studies: a comparative analysis. *Human Relations* 52:421-438.

Becker, PH. 1993. Common pitfalls in published grounded theory research. *Qualitative Health Research* 3:254-260.

Berg, BL. 2009. *Qualitative research methods for the social sciences.* 7th edition. Boston: Allyn & Bacon.

Bernstein, B. 1999. Vertical and horizontal discourse: an essay. *British Journal of Sociology of Education* 20(2):157-173.

Bernstein, B, 2000. *Pedagogy, symbolic control and identity: theory, research, critique.* Revised edition. London: Lanham, Rowman & Littlefield.

Black, TR. 1999. *Doing quantitative research in the social sciences: an integrated approach to research design, measurement and statistics.* London: Sage.

Bloor, M, Frankland, J,Thomas, M & Robson,K. 2001. *Focus groups in social research.* London: Sage.

Borland, J & James, S. 1999. The learning experience of students with disabilities in higher education: a case study of a UK university. *Disability and Society* 14(1):85–101.

Bornman, J. 2004. The World Health Organisation's terminology and classification: application to severe disability. *Disability and Rehabilitation* 26(3):182-188.

Burchardt, T. 2004. Capabilities and disability: the capabilities framework and the social model of disability. *Disability and Society* 19(7):735–751.

Burns, BR. 2000. *Introduction to research methods.* London: Sage.

Campbell, J & Oliver, M. 1996. *Disabling politics: understanding our past, changing our future.* London: Routledge.

Carley, K. 1992. Coding choices for textual analysis: a comparison of content analysis and map analysis. Unpublished working paper. http://www.writing.colostate.edu/research/content.cfm. Accessed on 4 July 2010.

Charmaz, K. 1990. "Discovering" chronic illness: using grounded theory. *Social Science and Medicine* 30:1161-1172.

CHE, *vide* Council on Higher Education.

Chiriboga, JA. 2007. Specific disabilities, in *The Praeger handbook of special education*, edited by AM Bursztyn. Westport, Conn & London: Praeger.

Clark, G. 2007. Going beyond our limits. *Journal of Geography in Higher Education* 31(1), January:211-218.

Cook, RE, Tessier, A & Klein,MD. 1992. *Adapting early childhood curricula for children with special needs.* 3rd edition. Columbus, Ohio: Merrill.

Cook, AM & Hussey, SM. 1995. *Assistive technologies: principles and practice.* St Louis, Mo: Mosby Year Book.

Cook, CD & Stulting, AA. 1995. Impact of a sightsaver clinic on the prevalent blindness in northern KwaZulu. *South African Medical Journal* 85:28-29.

Corker, M. 1996. *Deaf transitions: images and origins of deaf families, deaf communities and deaf identities.* London: Jessica Kingsley.

Council on Higher Education. 2001. The state of higher education in South Africa, Annual Report 2000/2001. Pretoria: CHE.

Council on Higher Education.. 2005. South African higher education responses to students with disabilities: equity of access and opportunity? *Higher Education Monitor* (3).

Covington, MV. 1992. *Making the grade: a self-worth perspective on motivation and school reform*. New York: Cambridge University Press.

Covington, MV. 1998. *The will to learn: a guide for motivating young people*. New York: Cambridge University Press.

Covington, MV. 2000. Goal theory, motivation and school achievement: an integrative review. *Annual Review of Psychology* 51:171–200.

Covington, MV & Beery, RG. 1976. *Self-worth and school learning.* New York: Holt, Rinehart & Winston.

Covington, MV & Wiedenhaupt, S. 1997. Turning work into play: the nature and nurturing of instrinsic task engagement, in *Effective teaching in higher education: research and practice,* edited by R Perry& JC Swart. New York: Agathon:101-114.

Creswell, JW. 2003. *Research design: qualitative, quantitative and mixed methods approaches,* 2nd edition. Thousand Oaks, Calif: Sage.

Darlaston-Jones, D, Cohen, L, Haunold, S, Pike, L & Young, A. 2003. The retention and persistence support (RAPS) project: a transition initiative. *Issues in Educational Research* 13(2):1-12.

Denzin, NK & Lincoln, YS. 2000. *Handbook of qualitative research.* 2nd edition. Thousand Oaks, Calif: Sage.

Department of Education. 1997. Education White Paper 3: a programme for the transformation of higher education. Pretoria: DoE.

Department of Education. 1998. Quality education for all: overcoming constraints to learning and development. Report of the National Commission on Special Needs in Education and Training and National Committee on Education Support Services (NCSNET/NCESS). Pretoria: DoE.

Department of Education. 2001. National plan for higher education. Pretoria: DoE.

Department of Education. 2010. *Education statistics in South Africa 2008.* Pretoria: Government Printer.

Department of Health. 2001. Guidelines for cataract surgery in South Africa. Pretoria: DoH.

Disability Awareness in Action. 1997. *Life, death and rights: bioethics and disabled people* Special supplement. London: Disability Awareness in Action.

Disabled People South Africa. 2001. *An empowerment tool: pocket guide on disability equity.* Cape Town: DPSA Parliamentary Office.

Disabled People South Africa. 2003. Disabled people marginalised in Census 2001. Press statement. Available at http://www.dpsa.org.za. Accessed on 19 May 2009.

DoE, *vide* Department of Education.

DoH, *vide* Department of Health.

Dowrick, PW, Anderson, J, Heyer, K & Acosta, J. 2005. Postsecondary education across the USA: experiences of adults with disabilities. *Journal of Vocational Rehabilitation* 22(1):41-47.

DPSA, *vide* Disabled People South Africa.

Duquette, C. 2000. Experiences at university: receptions of students with disabilities. *The Canadian Journal of Higher Education* 30(2):142.

Dweck, CS. 1986. Motivational processes affecting learning. *American Psychologist* 41:1040–1048.

Dweck, CS & Leggett, E. 1988. A social cognitive approach to motivation and personality. *Psychological Review* 95:256-273.

Dweck, CS. 1986. Motivational process affects learning. *American Psychologist* 41:1010-1018.

Edmonds, LJ & Peat, M. 1996. Community based rehabilitation and health reform: timely and strategic. First Mediterranean Conference on Physical Medicine and Rehabilitation, May, Herzliyya, Israel.

Elliot, A & Harackiewicz, J. 1996. Approach and avoidance achievement goals and intrinsic motivation: a meditational analysis. *Journal of Personality and Social Psychology* 70:968-980.

Elliot, A. 1997. *Integrating the "classic" and "contemporary" approaches to achievement motivation: A hierarchical model of approach and avoidance achievement motivation,* in *Advances in motivation and achievement*, vol 10, edited by ML Maehr & PR Pintrich. Greenwich, Conn: JAI Press:143-179.

Elliot, AJ & Harackicvicz, JM. 1996. Approach and avoidance achievement goals and intrinsic motivation: a meditational analysis. *Journal of Personality and Social Psychology* 80:501-519.

Elliot, AJ & Murayama, K. 2008. On the measurement of achievement goals: critique, illustration and application. *Journal of Educational Psychology* 100(3):613-628.

Elliot, AJ & McGregor, HA. 2001. A 2 X 2 achievement goal framework. *Journal of Personality and Social Psychology* 80(3):501-519.

Elliott, ES & Dweck, CS. 1988. Goals: an approach to motivation and achievement. *Journal of Personality and Social Psychology* 53:5–12.

Elliott, AJ & Church, MA. 1997. A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology* 72:218-232.

Elliott, AJ. 1997. Integrating "classic" and "contemporary" approaches to achievement motivation: a hierarchical model of approach and avoidance achievement motivation, in *Advances in motivation and achievement*, vol 10, edited by T Pintrich & M Maehr.Greenwich. Conn: JAI Press:143-179.

Elliott, AJ. 1999. Approach and avoidance motivation and achievement goals. *Educational Psychologist* 34:149-169.

Elliott, AJ. 2006. The hierarchical model of approach-avoidance motivation. *Motivation and Emotion* 30:111-116.

Emmons, R. 1986. Personal striving: an approach to personality and subjective wellbeing. *Journal of Personality and Social Psychology* 51:1058-1068.

Emmons, R. 1997. Motives and life goals, in *Handbook of personality psychology,* edited by R Hogan, J Johnson & S Briggs. San Diego, Calif: Academic Press:485-512.

Farmer, HS Vispoel, W & Maehr, ML. 1991. Achievement contexts: effect on achievement values and causal attributions. *Journal of Educational Research* 85:26-38.

Ford, ME. 1992. *Motivating humans: goals, emotions, and personal agency beliefs.* Newbury Park, Calif: Sage.

Fried-Buchalter, S. 1992. Fear of success, fear of failure, and the imposter phenomenon: a factor analytic approach to convergent and discriminate validity. *Journal of Personality Assessment* 58:368-379.

Fulcher, G. 1989. *Disabling policies? A comparative approach to education policy and disability.* Lewes, UK: Falmer Press.

Fuller, M, Healey, M, Bradley, A & Hall, T. 2004. Barriers to learning: a systematic study of the experience of disabled students in one university. *Studies in Higher Education* 29(3):303-318.

Garcia, T & Pintrich, PR. 1994. *Regulating motivation and cognition in the classroom: the role of self-schema and self-regulatory strategies*, in *Self-regulation of learning and performance: Issues and educational applications.* Edited by D. H. Schunk & B. H. Zimmerman. Hillsdale, NJ: Lawrence Erlbaum.

George, D, & Mallery, P. 2003. *SPSS for Windows step by step: A simple guide and reference. 11.0 update* 4th edition. Boston: Allyn & Bacon.

Glaser, BG & Strauss, A. 1967. *The discovery of grounded theory*. Chicago: Aldine.

Glaser, BG. 1994. *Basics of grounded theory analysis: emergence versus forcing*. Mill Valley, Calif: Sociology Press.

Gliem, JA & Gliem, RR. 2003. Calculating, interpreting and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research to Practice Conference in Adult, Continuing, and Community Education.

Global University Network for Innovation. 2004. There are still constraints to overcome in the access of disabled people to university. Interview with Serge Ebersold, researcher and expert on disability, *Newsletter* (1), July. Available at: www.guni-rmies.net. Accessed on 19 May 2010.

Graham, S & Golan, S. 1991. Motivational influences on cognitive, task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology* 83:187-196.

Graham-Smith, S & Lafayette, S, 2004. Quality disability support for promoting belonging and academic success within the college community. *College Student Journal* 38(1):90.

Greene, JC, Caracelli, VJ & Graham, WF. 1989. Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis* 11(3):255-274.

Griesel, H. 2004. *Curriculum responsiveness in South African universities.* Pretoria: SAUVCA.

Gunawardena, CN. 1995. Social presence theory and implications for interaction and collaborative learning in computer conferences. *International Journal of Educational Telecommunications* 1(2/3):147-166.

GUNI, *vide* Global University Network for Innovation.

Hagan, FE. 2006. Research methods in criminal justice and criminology. 7th edition. Boston :Allyn & Bacon.

Haller, BA. 2006. Promoting disability-friendly campuses to prospective students: an analysis of university recruitment materials. *Disability Studies Quarterly* 26(2), Spring.

Health Professions Council of South Africa. 2000. *Ethical Code of Professional Conduct.* 18/5/B. 26/03/2000.

Health Systems Trust. 1999. Disability. *Update* 42, April.

Helander E. 1993. *Prejudice and dignity: an introduction to community based rehabilitation.* New York: United Nations Development Programme.

Hernandez, B, McCullough, S, Balcazar, FE & Keys, C. 2008. Accessibility of public accommodations in three ethnic minority communities. *Journal of Disability Policy Studies* 19(2):80-85.

Hertiz-Lazarowitz R, Kirdus VB & Miller N. 1992. Implications of current research on cooperative interaction for classroom application, in *Interaction in cooperative groups: the theoretical anatomy of group learning*, edited by R Hertz-Lazarowtiz & N Miller. New York: Cambridge University Press:253-280.

Hill, J. 1992. Accessibility: students with disabilities in universities in Canada. *The Canadian Journal of Higher Education* 22:48-83.

Holloway, S. 2001. The experience of higher education from the perspective of disabled students. *Disability and Society* 18(4):597–615.

Hostetter, C & Busch, M. 2006. Measuring up online: the relationship between social presence and student learning satisfaction. *Journal of Scholarship of Teaching and Learning*, 6(2):1-12.

Howell, C. 2005. South African higher education responses to students with disabilities. *Higher Education Monitor.* Pretoria: CHE.

HPCSA, *vide* Health Professions Council of South Africa.

IAU, *vide* International Association of Universities.

Inglis, J, 2005. Discourse of underpreparedness at the University of the Witwatersrand. Paper presented at the Spencer Summer School, March, Johannesburg.

Inspired. 2010. Official publication for Unisa students 6(1), May.

International Association of Universities. 2007. Notes on discussions and recommendations of the IAU Experts' Seminar on Higher education and education

for all: the case of two solitudes*? Maputo, Mozambique, 25-26 January 2007. Paris: IAU.

International Association of Universities. 2008. *Contribution of higher education and research to education for all (EFA).* February. Paris: IAU.

Ivankova, NV, Creswell, JW & Stick, S. 2006. Using mixed methods sequential explanatory design: from theory to practice. *Field Methods*18(1):3-20.

Johnson, WG & Baldwin, M. 1993. The Americans with Disabilities Act: will it make a difference? *Policy Studies Journal* 21:775-788.

Jones, MR (ed). 1955. *Nebraska symposium on motivation.* Lincoln, Nebr: University of Nebraska Press.

Kaplan, A & Midgley, C. 1997. The effect of achievement goals: does level of perceived academic competence make a difference? *Contemporary Educational Psychology* 22:415–35.

Kaplan, DL, Hernandez, B, Balcazar, FE & Keys, CB. 2001. Assessing and improving accessibility of public accommodations in an urban Latino community. *Journal of Disability Policy Studies* 12(1), Summer:55-62.

Klimoski, R & Donahue, L. 1997. HR strategies for integrating individuals with disabilities into the work place. *Human Resource Management Review* 7(1): 109-138.

Krippendorff, K. 1980. *Content analysis: an introduction to its methodology.* Newbury Park, Calif: Sage.

Lancaster, G. 2005. *Research methods in management: a concise introduction to research in management and business consultancy.* Amsterdam: Elsevier.

Leedy, P & Ormrod, JE. 2001. *Practical research: planning and design.* Englewood Cliffs, NJ: Prentice-Hall.

Lincoln, Y & Guba, E. 1985. *Naturalistic inquiry.* Beverly Hills, Calif: Sage.

Long,M, Carpenter, PG, & Hayden. 1995 *Graduating from Higher Education.* Canberra: Australian Government Publishing Service.

Losinsky, LO, Levi, T, Saffey, K & Jelsma, J.   2003.   An investigation into the physical accessibility to wheelchair bound students of an institution of higher education in South Africa. *Disability and Rehabilitation* 25(7):305-308.

Lytle, J. 1994. Making the workplace accessible to all. *Occupational Health and Safety Canada* 10(3):56-57.

Maart, S, Eide, AH, Jelsma, J, Loeb, ME & Ka Toni, M. 2007. Environmental barriers experienced by urban and rural disabled people in South Africa. *Disability and Society* 22(4):357-369.

Maehr, ML. 1998. Confronting culture with culture: creating optimum learning environments for students of diverse socio-cultural backgrounds. *Paper presented at annual meeting of the Educational Research Association. San Diego, California.*

Maehr, ML & Meyer, HA. 1997. Understanding motivation and schooling: where we've been, where we are, and where we need to go. *Educational   Psychology Review* 9:371–409

Maehr, ML & Nicholls, JG. 1980. Culture and achievement motivation: a second look, in *Studies in cross-cultural psychology*, vol 3, edited by N Warren. New York: Academic Press:221-267.

Maykut, P & Morehouse, R. 1994. *Beginning qualitative research: a philosophical and practical guide.* Washington: Falmer Press.

McClain, L, Cram, A, Wood, J & Taylor, M. 1998. Wheelchair accessibility - living the experience: function in the community. *The Occupational Therapy Journal of Research* 18(1):24-31.

McClelland, DC. 1955. *Some social consequences of achievement motivation*, in *Nebraska symposium on motivation,* edited by MR Jones. Lincoln, Nebr: University of Nebraska Press.

McClelland, DC. 1961. *The achieving society.* Princeton, NJ: Van Nostrand.

McInnis, C, James, R. & Hartley R. 2000. *Trends in the First Year Experience in Australia.* AGPS: Canberra.

McNamee, RC. 2001. California expands the definition of disability. *Corporate Counsel* 8(4):A15.

Merriam, SB. 1998. *Qualitative research and case study applications in education.* San Francisco: Jossey-Bass.

Mertens, D. 1998. *Research methods in education and psychology: integrating diversity with quantitative and qualitative approaches.* Thousand Oaks, Calif: Sage.

Middleton, M & Midgley, C. 1997. Avoiding the demonstration of lack of ability: an underexplored aspect of goal theory. *Journal of Educational Psychology* 89:710-718.

Midgley, C, Kaplan, A, Middleton, M & Maehr, ML. 1998. The development and validation of scales assessing students' achievement goal orientations. *Contemporary Educational Psychology* 23:113-131.

Moll, I. 2004. Curriculum responsiveness: the anatomy of a concept, in *Curriculum responsiveness: case studies in higher education,* edited by H Griessel. Pretoria: South African Universities Vice Chancellors Association.

Moore, MG. 1997. *Theory of transactional distance*, in *Theoretical principles of Distance Education,* edited by D Keegan. London: Routledge.

Morris, J. 1991. *Pride against prejudice: transforming attitudes to disability.* London: Women's Press.

Mouton, J. 2006. *How to succeed in your master's and doctoral studies.* Pretoria: Van Schaik.

Muller, J. 2006. On the shoulders of giants: verticality of knowledge and the school curriculum, in *Knowledge, power and educational reform: applying the sociology of Basil Bernstein,* edited by R Moore, M, Arnot, J, Beck & H Daniels. London: Routledge.

Mutchnick, RJ & Berg, BL. 1996. *Research methods for social sciences: practice and applications.* Boston: Allyn & Bacon.

Neufeldt, A. 2002. Ways of thinking about disability. Available at: http://www.gladnet.org. Accessed on 6 September 2009*.*

Neuman, WL. 2000. *Social research methods: qualitative and quantitative approaches.* 4th edition. Boston: Allyn & Bacon.

Nicholls, JG. 1984. Achievement motivation: conceptions of ability, subjective experience, task choice, and performance. *Psychology Review* 91:328–346.

Nicholls, JG. 1990. What is ability and why are we mindful of it? A developmental perspective*,* in *Competence considered,* edited by R Steinberg & J Kolligian. New Haven, Conn: Yale University Press:11-40.

Ochse, C. 2003. Are positive self-perceptions and expectancies really beneficial in an academic context? *South African Journal of Higher Education* 17(1): 67-73.

ODP, *vide* Office of the Deputy President.

Office of the Deputy President. 1997. *White Paper on an Integrated National Disability Strategy*. Pretoria: ODP.

Oliver, M. 1990. *The politics of disablement.* Basingstoke, UK: Macmillan.

Oliver, M. 1993. Disability and dependency: a creation of industrial societies? in *Disabling Barriers - Enabling Environments*, edited by J. Swain, V. Finkelstein, S. French,& M Oliver, M. Sage, London.

Oliver, M & Sapey, B. 1999. *Social work with disabled people.* 2nd edition. Basingstoke, UK: Macmillan.

Olsen, W. 2004. Triangulation in social research: qualitative and quantitative methods can really be mixed, in *Developments in sociology*, edited by M Holborn. UK: Causeway Press.

Ormerod, MG & Newton, RA. 2005. Briefing for accessibility in design. *Facilities* 23(7/8):285-294.

Patton, MQ. 2002. *Qualitative research and evaluation methods.* 3rd edition. Thousand Oaks, Calif: Sage.

Peat, M & Boyce, W. 1993. Canadian community rehabilitation services: challenges for the future. *Canadian Journal of Rehabilitation* 6(4):281-289.

Peat, M. 1997. Attitudes and access: advancing the rights of people with disabilities. *Canadian Medical Association* 156(5), March:657-659.

Peat, M, Dalziel, J & Grant, AM. 2000. Enhancing the transition to university by facilitating social and study networks: results of a one-day workshop. *Innovations in Education and Training International* 37(4):293-304.

Philpott, S & McLaren, P. 1997. Disability, in*South African health review*. Durban: Health Systems Trust.

Pierce, LL. 1998. Barriers to access: frustration of people who uses a wheelchair for full-time mobility. *Rehabilitation Nursing* 23(3):120-125.

Pintrich, PR. 1999. The role of goal orientation in self-regulated learning, in *Handbook of self-regulation: theory, research and applications*, edited by M Boekaerts, PR Pintrich& M Zeidner, San Diego, Calif: Academic.

Pintrich, PR & Schunk, DH. 1996. *Motivation in education: theory, research and applications*. Englewood Cliffs, NJ: Prentice-Hall Merrill.

Pintrich, PR. 2000. *An achievement goal theory perspective on issues in motivation terminology, theory and research*. Contemporary Educational Psychology 25: 92– 104.

Porter, LW, & Lawler, EE. 1968. *Managerial Attitudes and Performance*. Homewood, IL: Richard D. Irwin, Inc.

Punch, M. 1994. Politics and ethics in qualitative research, in *Handbook of qualitative research*, edited by N.K. Denzin & Y.S. Lincoln. Newbery Park, CA: Sage

QAA, *vide* Quality Assurance Agency for Higher Education.

Quality Assurance Agency for Higher Education. 1999. Code of practice for the assurance of academic quality and standards in higher education, Section 3: Students with disabilities, prepared in response to Reports of the National Committee of Inquiry into Higher Education (England) & Dearing and Garrick Reports (Scotland), United Kingdom, October, articles 15 & 16.

Reichardt, CS & Rallis, SF. 1994. *The qualitative-quantitative debate: new perspectives.* San Francisco: Jossey-Bass.

Renzeti, CM & Lee, RM. 1993. *Researching sensitive topics.* London: Sage.

Republic of South Africa. 1998. *Employment Equity Act 55 of 1998.* Gazette No. 19370. Pretoria: Government Printer.

Republic of South Africa. 1996. *The Constitution of the Republic of South Africa.* Gazette No. 108. Pretoria: Government Printer.

Republic of South Africa. 1997*. White paper on social welfare*. Pretoria: Government Printer.

Republic of South Africa, Department of Education. 1996. *Education Green Paper on higher education transformation.* (Notice 1196 of 1996). Pretoria.

Republic of South Africa, Department of Education. 1997. *Report of the national commission on special needs in education and training (NCSNET), national committee on education support services (NCESS): Quality education for all: Overcoming barriers to learning and development.* Pretoria: DoE.

Republic of South Africa, Department of Education. 2001. *Education White Paper No 6: special needs education; building an inclusive and training system.* Pretoria: DoE.

Republic of South Africa. 2000. *The Promotion of Equality and Prevention of Unfair Discrimination Act 4.* Gazette No. 20876. Pretoria: Government Printer.

Republic of South Africa. 2002. *Code of good practice on aspects of disability in the workplace*. Gazette No. 23718. Pretoria: Government Printer.

Republic of South Africa. 1997*. White paper on the integrated national disability strategy.* Cape Town: Rustic Press.

Republic of South Africa. 2001. *National skills development strategy.* Pretoria: Government Printer.

Richardson, JC & Swan, KS, 2003. Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks* 7(1):68-88.

Ritchie, J & Lewis, J. 2003. *Qualitative research practice:. a guide for social science students and researchers.* Thousand Oaks, Calif: Sage.

Roberts, GC. 1992. Motivation in sport and exercise: conceptual constraints and convergence, in *Motivation in sports and exercise*, edited by GC Roberts. Champaign, Ill: Human Kinetics:3-29.

Roeser, RW, Midley, C & Urdan, TC. 1996. Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: the mediating role of goals and belonging. *Journal of Educational Psychology* 88:408-422.

RSA, *vide* Republic of South Africa.

RSA, DoE, *vide* Republic of South Department of Education.

Sacharowitz, HS, 2005. Visual impairment in South Africa: achievements and challenges. *The South African Optometrist*, December:139-149.

SAHRC, *vide* South African Human Rights Commission.

SANCB, *vide* South African National Council for the Blind.

SAQA,*vide* South African Qualifications Authority.

Schneider, RJ, Ackerman, PL & Kanfer, R. 1996. To ''act wisely in human relations'': exploring the dimensions of social competence. *Personality and Individual Differences,* 21:469–481.

Schuetz, P. 2005. Campus environment: a missing link in studies of community college attrition. *Community College Review* 32(4):60.

Scott, I, Yeld, N & Hendry, J. 2007. *Higher education monitor 6: a case for improving teaching and learning in South African higher education.* Pretoria: CHE.

Secretariat of the African Decade of Disabled Persons. 2000–2009. Background and Status Report, April 2001. Available at: http://www.dpsa.org.za. Accessed on 9 November 2009.

Shakespeare,T, Bickenbach, JE, Pfeiffer, D, & Watson, N. 2005 "Models." *Encyclopedia of Disability*. SAGE Publications. Available at http://www.sage-ereference.com/disability/Article_n547.html. Accessed on 9 Sep. 2010.

Shakespeare, TW, Gillespie-Sells, K & Davies, D. 1996. *The sexual politics of disability.* London: Cassell.

Shakespeare, TW. 1994. Cultural representation of disabled people: dustbins for disavowal? *Disability and Society* 9(3):283–299.

Shakespeare, TW. 1996. Disability, identity, difference, in *Exploring the divide: illness and disability*, edited by C Barnes & G Mercer.Leeds: Disability Press.

Shakespeare, TW. 2006. *Disability rights and wrongs?* London: Routledge

Shaughnessy, JJ. 2008. *Research methods in psychology*. 8th edition. New York: McGraw-Hill.

Shevlin, M, Kenny, M & McNeela, E. 2004. Participation in higher education for students with disabilities: an Irish perspective. *Disability and Society* 19(1):15–30.

Shumway-Cook, A, Patla, A, Steward, A, Ferruci, L, Ciol, MA & Guralnik, JM. 2003. Environmental components of mobility disability in community-living older adults. *Journal of the American Geriatrics Society* 51(3):393-398.

Skaalvik, E. 1997. Self-enhancing and self-defeating ego orientation: relations with task and avoidance orientation, achievement, self-perceptions and anxiety. *Journal of Educational Psychology* 89:71-81.

Smith, ER. 1998. Mental representation and memory, in *The handbook of social psychology,* vol 1, edited by B Gillbert,S Fiske & G Lindzey 4th edition. New York: Oxford University Press:391-445.

South African Human Rights Commission. 2002. Towards a barrier-free society. *SAHRC Report*, November.

South African National Council for the Blind. 2002-2003. Biennial Report 36.

South African Qualifications Authority Act 58 of 1995 Pretoria: Government Printer.

Stanford, P, Falk-Palec, D & Spears, K. 1999. Return to school after spinal cord injury. *Archives of Physical Medicine and Rehabilitation* 80:885-888.

Statistics South Africa. 1996. *The people of South Africa population census, 1996.* Report No. 1:03-01-11. Pretoria: StatsSA.

Statistics South Africa. 2003. *Census 2001: census in brief.* Report number 03-02-03. Pretoria: StatsSA.

Statistics South Africa. 2005. *Census 2001: prevalence of disability in South Africa.* Pretoria: StatsSA.

StatsSA, *vide* Statistics South Africa.

Stern, PN. (1994). Eroding grounded theory, in *Critical issues in qualitative research methods,* edited by JM Morse. Thousand Oaks, Calif: Sage:212-223.

Stopford, V. 1987. *Understanding disability: causes, characteristics and coping.* London: Edward Arnold.

Strauss, A & Corbin, J. 1990. *Basics of qualitative research: grounded theory procedures and techniques.* Newbury Park, Calif: Sage.

Strauss, AL. 1987. *Qualitative analysis for social scientists*. New York: Cambridge University Press.

Swain, J & French, S. 2000. Towards an affirmation model of disability. *Disability and Society* 15(4):569–582.

Tashakkori, A & Teddlie, C. 2003. *Handbook on mixed methods in the behavioural and social sciences.* Thousand Oaks, Calif: Sage.

Taylor, R. 2005. Can the social model explain all of disability experience? Perspectives of persons with chronic fatigue syndrome. *American Journal of Occupational Therapy* 59(5):497–506.

Terre Blanche, M & Durrheim, K. 1999. *Research in practice: applied methods for the social sciences.* Cape Town: University of Cape Town Press.

Thomas, JW, Bol, L & Warkentin, RW, 1991. Antecedents of college studies study deficiencies: the relationship between course features and student study activities. *Journal of Higher Education* 22:275-296.

Thompson, T, Davis JA & Davidson, JA. 1998. Attributional and affective responses of impostors to academic success and failure feedback. *Personality and Individual Differences* 25:381-396.

Thorkildsen, TA & Nicholls, JG. 1998. Fifth graders' achievement orientations and beliefs: individual and classroom differences. *Journal of Educational Psychology* 90:179–201.

Tinklin, T & Hall, J. 1999. Getting round obstacles: disabled students' experiences in higher education in Scotland. *Studies in Higher Education* 24(2):183–194.

Tinto, V. 1975. Dropout from higher education: a theoretical synthesis of recent research. *Review of Educational Research* 45(1):89-125.

Tinto, V. 1993. *Leaving college: rethinking the causes and cures of student attrition.* 2nd edition. Chicago: University of Chicago Press.

United Kingdom. 1995. The Disability Discrimination Act 1995: a guide for everybody. Available at: www.disability.gov.uk. Accessed on 9 November 2009.

UN, *vide* United Nations.

UNESCO, *vide* United Nations educational Scientific and Cultural Organisation.

Union of Physically Impaired against Segregation. 1975. *Fundamental Principles of Disability.* London:UPIAS

United Nations Educational, Social and Cultural Organisation. 1997 *International Standard Classification of Education (ISCED-97).* Paris: UNESCO.

United Nations Educational Scientific and Cultural Organisation. 1998. *Higher education in the twentieth century: vision and action.* Paris: UNESCO.

United Nations. 1983. World Programme of Action Concerning Disabled Persons. New York: UN.

United Nations. 1993. Standard rules on the equalisation of opportunities for persons with disabilities. Adopted by the United Nations General Assembly, 20 December, Resolution 48/96.

United Nations. 2001. World programme of action concerning disabled persons. Available at: http://www.un.org/esa/socdev/enable/diswpa00.htm. Accessed on 19 May 2009.

UPIAS, *vide* Union of Physically Impaired against Segregation.

United States of America. 1990. *Americans with Disabilities Act.*

United states of America. Architectural and Transportation Barriers Compliance Board. 1998. ADA Accessibility Guidelines for Buildings and Facilities (ADAAG). Access Board; Washington

University of the Witwatersrand. 2003. Undergraduate success at the University of the Witwatersrand: preliminary report of the working group on retention and throughput, September. Document S2003/1797. Johannesburg: University of the Witwatersrand.

University of Witwatersrand. 2004. *Policy on Disability.* Johannesburg:

U.S. ATBCB, *vide* United states of America Architectural and Transportation Barriers Compliance Board.

Urdan, TC & Maehr, ML. 1995. Beyond a two-goal theory of motivation and achievement: a case for social goals. *Review of Educational Research* 65(3):213–243.

Urdan, T. 1997. Achievement goal theory: Past results, future directions. in *Advances in motivation and achievement,* vol 10, edited by ML Maehr & PR Pintrrich. Greenwich, Conn: JAI Press:99-141.

Van der Ploeg, HP, Van der Beek, AJ, Van der Woude, LHV & Mechelen, W. 2004. Physical activity with disability: a conceptual model. *Sports Medicine* 34(10):639-649.

Veroff, J. 1969. Social comparison and the development of achievement motivation, in *Achievement-related motives in children*, edited by CP Smith.New York: Sage:46-101.

Vito, GF, Kunselman, J & Tewksbury, R. 2008. *Introduction to criminal justice research methods: an applied approach*. Chicago, Ill: Charles Thomas.

Vogel, S & Adelman, P. 1992. The success of college students with learning disabilities: factors related to educational attainment. *Journal of Learning disabilities* 25(7):430-441.

Vroom, VH. 1964. *Work and motivation.* New York: Wiley.

Watson, N. 1998. Enabling identity: disability, self and citizenship, in *The disability reader: Social Science Perspectives*, edited by T. Shakespeare. London:Cassel.

Weber, RP. 1990. *Basic content analysis.* Newbury Park, Calif: Sage.

WHO, *vide* World Health Organisation.

Willig, C. 2001. *Introducing qualitative research in psychology: adventures in theory and method.* London: Open University Press.

Witt, PL, Wheeless, LR & Allen, M. 2004. A meta-analytical review of the relationship between teacher immediacy and student learning. *Communication Monographs* 71(2):184-207.

Woodworth, RS. 1918. *Dynamic psychology*. New York: Columbia University Press.

World Education Report. 1995. Oxford: UNESCO.

World Health Organisation. 2000. Global initiative for the elimination of avoidable blindness. World Health Organisation Prevention of Blindness and Deafness Report. WHO/PBL/97.61.

World Health Organisation. 2001. Elimination of avoidable visual disability due to refractive errors. World Health Organisation Prevention of Blindness and Deafness Report. WHO/PBL/79.

World Health Organisation. 2003. Disability and Rehabilitation Team (DAR). Available at: http://www.who.int/ncd/disability/. Accessed on 19 May 2009.

Zimmerman, BJ, Greenspan, D & Weinstein, CE. 1994. Self-regulating academic study time: a strategy approach.

Zimmerman, BJ. 1990. Self-regulated learning and academic achievement: an overview. *Educational Psychologist* 25:3–17.

APPENDIX A

University of Pretoria

Louise Engelbrecht
(previously Sutherland)
Tel: 012 429 4673

Dear Disabled Student,

ACCESS CONSTRAINTS EXPERIENCED BY STUDENTS WITH DISABILITIES

I am currently a master's student at the University of Pretoria and work at Unisa's Centre for Business Management as a programme assistant. You are invited to take part in my research project, which forms part of my master's thesis.

My research project focuses on possible access constraints experienced by students with disabilities and visually and mobility disabled students in particular. I invite you to participate in this exciting project where I need your input as a student in an effort to make a difference in your life. The research results could lead to changes that will make the campus more accessible to students with disabilities.

The questionnaire is merely phase 1 of a two-phase data collection process, the second phase being a focus group whereby a sample of students with disabilities will be invited to participate in order to provide more in-depth opinions. I will be phoning you in September, during disability month, and requesting you to participate in the focus group, where five to 12 students will meet to talk and interact about any constraints they experience.

The information you provide in the questionnaire and the interview will be kept strictly confidential. Only the researcher will see the completed questionnaire. No other employee of the University of Pretoria or Unisa will have access to the information you provide, and it will be used strictly for research purposes. Strict anonymity will be observed in any ensuing publications.

I hope that you will be interested in participating in this vital research project.

Your valuable contribution to this significant research would be greatly appreciated.

Best wishes

_____
Louise Engelbrecht (Sutherland)
(Researcher)

QUESTIONNAIRE: ACCESS CONSTRAINTS EXPERIENCED BY STUDENTS WITH DISABILITIES AT A SOUTH AFRICAN UNIVERSITY

SECTION A: ACCESS CONSTRAINTS INFORMATION

1. How often do you visit the Pretoria Main (Muckleneuk) Campus? (Once a week)

    _____

2. Does your disability prevent you from attending classes/activities?

Yes	No

3. If "yes", explain the constraints that prevent you from attending classes/activities?

    _____

    _____

4. How do you see yourself in terms of independence?

1	I see myself as independent	
2	I can help myself, but need the support of others	
3	I rely totally on the help or support of others	

5. Please indicate which of the following areas are the most difficult to access:

	Easily accessible	Not so easy	Undecided	Difficult to access	Extremely difficult/not at all accessible
Aisles	1	2	3	4	5
Clinic	1	2	3	4	5
Doors	1	2	3	4	5
Drinking fountain	1	2	3	4	5
Entrance	1	2	3	4	5
Examination venues	1	2	3	4	5
Library	1	2	3	4	5
Lifts	1	2	3	4	5
Parking	1	2	3	4	5
Ramps	1	2	3	4	5
Restrooms/toilets	1	2	3	4	5
Lecture halls	1	2	3	4	5
Senate Hall	1	2	3	4	5
Signage	1	2	3	4	5
Telephones	1	2	3	4	5
Other:	1	2	3	4	5
Other	1	2	3	4	5

6. Which of the following statements best describes your experience of Unisa's overall level of physical accessibility?

Inaccessible	1
Accessible with minor assistance	2
Fully accessible	3

7. In your opinion, please indicate the five most frequently occurring constraints (obstacles) experienced when accessing the University. Place them in order from most difficult to overcome to least difficult to overcome.

1 _____

2 _____
   _____
   _____

4 _____
   _____

5 _____
   _____

8. How do you feel when you cannot access all the facilities at the Unisa Campus?

_____

_____

_____

9. What do you think Unisa could do to accommodate or eliminate the constraints mentioned above?

1 _____

_____

2 _____

_____

3 _____

_____

4 _____

_____

10. What efforts known to you has the University made to overcome social constraints such as stereotyping?

_____

_____

_____

SECTION B: YOUR MOTIVATION TO STUDY

11. Who/what motivates you to do well in your studies?

_____

_____

_____

12. How does he/she/it motivate you?

_____

_____

_____

13. Do you enjoy difficult work?

Yes	No

14. Do you set goals for yourself in terms of your studies?

Yes	No

15. Complete the following sentence: My goal is to

_____

_____

_____

16. What actions do you take to achieve your goals?

_____

_____

_____

17. Please indicate how strongly you agree with each of the following statements which may describe your personal approach to the course for which you are currently registered:

		Strongly disagree	Disagree	Disagree slightly	Neither agree nor disagree	Agree slightly	Agree	Strongly agree
1	My aim in my studies is to completely master the material presented	1	2	3	4	5	6	7
2a	I am striving to do well compared to other students WITH disabilities	1	2	3	4	5	6	7
2b	I am striving to do well compared to other students WITHOUT disabilities	1	2	3	4	5	6	7
3	I want to learn as much as possible	1	2	3	4	5	6	7
4a	My goal is to obtain better marks than other students WITH disabilities	1	2	3	4	5	6	7
4b	My goal is to obtain better marks than other students WITHOUT disabilities	1	2	3	4	5	6	7
5	I worry that I may not learn all that I possibly could in this course	1	2	3	4	5	6	7
6a	My goal is to avoid performing poorly compared to other students WITH disabilities	1	2	3	4	5	6	7
6b	My goal is to avoid performing poorly compared to other students WITHOUT disabilities	1	2	3	4	5	6	7
7	I am striving to understand the content of this course as thoroughly as possible	1	2	3	4	5	6	7
8a	My goal is to perform better than other students WITH disabilities	1	2	3	4	5	6	7
8b	My goal is to perform better than other students WITHOUT disabilities	1	2	3	4	5	6	7
9	My goal is to avoid learning less than is possible to learn	1	2	3	4	5	6	7
10a	I am striving to avoid performing worse than other students WITH disabilities	1	2	3	4	5	6	7
10b	I am striving to avoid performing worse than other students WITHOUT disabilities	1	2	3	4	5	6	7
11	I am striving to avoid a poor understanding of my course	1	2	3	4	5	6	7
12a	My aim is to avoid doing worse than other students WITH disabilities	1	2	3	4	5	6	7
12b	My aim is to avoid doing worse than other students WITHOUT disabilities	1	2	3	4	5	6	7

18. Do you think you will complete your studies/degree/diploma?

I do not think I will be able to complete it	1
Maybe I will complete it	2
I think I will complete it, maybe not in time	3
I will definitely complete my studies	4

19. Do you worry about what others might think of you, if you fail to complete your studies? Why?

_____

_____

_____

_____

20. After completing your studies (first degree/diploma/certificate) at Unisa, would you consider studying at Unisa again?

| Yes | No |

21. Give reasons for your answer.

_____

_____

_____

_____

22. Does Unisa provide bursaries/grants to study?

| Yes | No |

23. Do you make use of these bursaries/grants?

| Yes | No |

24. If "yes", please specify.

_____

_____

_____

_____

25. Do you know anything about the service offered by the Advocacy and Resource Centre for Students with Disabilities?

| Yes | No |

26. If "yes", describe your experience.

_____

_____

_____

_____

27. Does your study material reach you in the format that considers your disability (eg Braille/CD/Electronic)?

| Yes | No |

28. Does it reach you in time to complete your assignments?

| Yes | No |

29. Do have any further comments about your study materials?

_____

_____

_____

_____

SECTION C: BIOGRAPHICAL INFORMATION

Please indicate which categories are applicable to you by making a tick √ in the relevant space.

30. Your age in years

1	Younger than 19	
2	19-24 years	
3	25-30 years	
4	31-35 years	
5	36-40 years	
6	41-45 years	
7	46-50 years	
8	51-55 years	
9	56-60 years	
10	60+ years	

31. Your gender

Male	1		Female	2

32. Your ethnicity

Black	1		Coloured	2		Indian	3		White	4

33. Your study programme (eg BCom Human Resource Management)

_____

34. Your type of disability (visual, mobility, etc)

_____

35. Do you require a wheelchair to move around the Unisa campus?

Yes	No

36. Can you operate the wheelchair independently on the Unisa Campus?

Yes	No

37. What support do you need for your visual disability?

Stick	1
Dog	2
Person	3
Other (please specify)	4

38. Year of study

1	2	3	4	5	6 or more

39. What qualification(s) do you currently have?

	Yes	No
Matric		
Certificate		
Diploma		
BTech		
Bachelor's degree		
Honours degree		
Master's degree		
Doctor's degree		

40. Your type of study

Full time	Part time	

41. Optional personal details (if you are interested in participating in the focus group discussion)

Name:	
Student number:	
Cell no.:	
Email:	

THANK YOU FOR PARTICIPATING IN THIS STUDY.

Should you require any further information or clarity on the questionnaire/study, do not hesitate to contact the researcher, Louise Engelbrecht on 072 5322 572 or email engell@unisa.ac.za

The information you supply will remain confidential.
WISHING ALL THE BEST FOR YOUR STUDIES AT UNISA.

APPENDIX B

Focus group discussion guide

1. **Introduction of facilitator**

2. **Informed consent**

3. **Ground rules and expectations**
   a. Respect each other, specifically if you disagree on a point.
   b. Only one person should speak at a time.
   c. Protect the privacy of everyone in the group.
   d. Keep the matters discussed strictly confidential.

4. **Icebreaker: participant introduction**
   a. Tell us about yourself (What you are studying? What is the nature of your disability? Is there something unique you would like us to know?)

5. **Questions**
   a. I would like to invite you all to share your experiences when you were accessing the main campus this morning. (What constraints do mobility or visually disabled students experience with regard to accessibility to the University's main campus?)
   # Barriers relating to the buildings and natural environment, such as stairs, lifts, ramps, doors, door handles and ablution blocks
   # Lack of information in accessible formats such as Braille and sign language
   # Equipment barriers
   # Perceptions and attitudes of people who are not disabled, including professionals
   b. Do you think the University is fully accessible, moderately accessible or inaccessible?
   (What levels of accessibility [fully, moderately or inaccessible] exist between the levels of accessibility and the motivation of these students?)
   c. How does the fact that you find it difficult to access the University make you feel? Do you think it affects your motivation to study? (If constraints are encountered, how do they constraints influence your levels of motivation to further your studies?)
   d. What do you think the University could do to minimise these barriers and increase accessibility? (What guidelines could be provided to increase accessibility in areas where accessibility is unsatisfactory?)

6. **Thank you and debriefing**
   We sincerely thank you for participating in this focus group and value your contributions, which will truly enrich this research project.
   We understand that some of your personal experiences during this focus group may have caused your discomfort. If you are interested in speaking further to a professional about these issues, you are most welcome to contact the Counselling Centre.

APPENDIX C

Interview guide/questions

1. How would you describe yourself as a disabled student?

2. Do you think you spend more time on your studies than students without disabilities?

3. What kind of extra assistance do you require as a disabled student?
   a. Extended time for exams
   b. Slow processing or reading
   c. A notetaker
   d. Inability to copy quickly
   e. Would prefer to write exams alone
   f. Extensions for assignments
   g. Alternative means of evaluation
   h. Placing the mandatory reading on tapes
   i. Permission to tape lectures

4. Do you feel comfortable in the social milieu of the University?

5. Do you have your own source of support?
   a. Family
   b. Friends
   c. Lecturers

6. Have you ever considered giving up on your studies?
7. What do you think are critical factors for academic success?
   a. Self-discipline
   b. Self-drive
   c. Goal commitment
   d. Self-determination

APPENDIX D

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of south africa

Student Affairs

To: Ms Louise Sutherland
        Academic assistant
        Centre for Business Management

From   Mr Convy Baloyi
        ED: Dean of Students
        University of south Africa

15 July 2009

Dear Ms Louise Sutherland

I am delighted that you have selected to conduct your research in the field of disability, with emphasis on access constraints for specific categories of students with disabilities. I am confident that the findings of your research would provide invaluable information that would contribute to improving access for students with disabilities at UNISA.

In view of the potential benefits of your research, I have no hesitation in supporting your proposal defence to conduct your research using identified students of UNISA.

I therefore take this opportunity to wish you success in your proposal defence.

Yours faithfully

Mr MC Baloyi
Dean of Students