

**An Exploration of the Barriers, as Experienced by Visually
Impaired Students Studying at
the University of Natal**

by

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Matthew 6: 32-34

³² (For after all these things do the Gentiles seek) for your heavenly Father knoweth that ye have need of all these things.

³³ But seek ye first the kingdom of God, and his righteousness; and all these things shall be added unto you.

³⁴ Take therefore no thought for the morrow: for the morrow shall take thought for the things of itself. Sufficient unto the day is the evil thereof.

PREFACE

I, Muthukrishnan Shunmugam, hereby certify that this research project, conducted under the supervision of Dr. Ntombikile Mazibuko at the Faculty of Community and Development Disciplines, University of Natal Durban, is my own work and has not been submitted in any form for the acquisition of any degree or diploma at another tertiary institution. Where use was made of the work of others, these have been duly acknowledged in the text.

M. Shunmugam

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ABSTRACT

People with disabilities including people with visual impairments experienced severe forms of discrimination, isolation and separation. They were perceived as people with deficits and in need of help. They were separated from the society as they were considered to be inadequate people. The discriminative practices against people with disabilities and the doctrines of apartheid that contributed to discrimination and separation on racial differences resulted in black people with disabilities being doubly handicapped. The discrimination against people with disabilities is largely associated with the adherence to the medical model and deficit theory to disability.

However the current trends which support the Social Rights model to disability which is consistent with the Constitution of the Republic of South Africa and its Bill of Rights (Constitutional Court, 1996), adopts an inclusive approach and promotes equal rights and equal opportunity for all people, including people with disabilities. This commits the University to enrolling students with disabilities and providing equal education opportunities for them. The late commitment, which was guided by the Constitution (Constitutional Court, 1996), resulted in the lack of resources. Lack of support services and stereotypical attitudes contributed to academic barriers to learning by students with visual impairment and students with disabilities. This study explores the barriers encountered by students with visual impairments studying at the University of Natal.

A qualitative case study approach was adopted in this study, whereby eight subjects who were visually impaired at the University of Natal were interviewed using a semi structured questionnaire, exploring the barriers they encountered with their academic studies. The findings reveal that there are numerous barriers which students with visual impairments encountered with their studies at the University of Natal. However, acknowledgement is made on the commitment by the University to address these special needs of students with visual impairments. Recommendations are made to address the academic barriers encountered by visually impaired students.

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CHAPTER 1: INTRODUCTION

1.1. Statement of the problem

There is a growing number of students with visual impairment at the institutions of higher learning in South Africa, including the University of Natal. Historically access to and responsiveness to learning needs of students with visual impairment has not been easy nor a priority of the pre-1994 government and educational institutions in the country (Vaughan, 1979; Office of the Deputy President, 1997; Department of Education, 2001). The current students with visual impairments at the University of Natal have access to technology and other forms of assistive devices that enhance their learning and experience in an institution of higher learning. However, there are other concerns, which are barriers in the learning experience of students with visual impairments. The study therefore is an effort to gain more insight about the profile of this student population at the University of Natal, the support systems they receive from this university, barriers they still experience as students with visual impairments and their views on how the available support can be sustained and how gaps can be addressed by the University through the Disability Unit.

There is a significantly high prevalence of people with disabilities globally and in South Africa. According to the White Paper on an Integrated National Disability Strategy (Office of the Deputy President, 1997), it is estimated that 5.2% of our world population experience moderate to severe disabilities. With reference to the South African context, and according to the Central Statistical Service (CSS), cited in the White Paper on an Integrated National Disability Strategy (Office of the Deputy President, 1997), there is a prevalence of 5% of the country's total population that experience some type of moderate to severe disability.

The World Health Organisation calculated that between 2.2% and 2.6% of learners in any school system could be identified as disabled. An application of these percentages to the South African context would project an upper limit of four hundred thousand learners with disabilities. Available statistics reveal that only sixty four thousand two

hundred (64 200) learners with disabilities or impairments are accommodated in about three hundred and eighty (380) special schools. This implies that there are approximately three hundred and thirty five thousand eight hundred learners with disabilities that are not accounted for (Department of Education, 2001). The statistics released by the World Health Organisation suggest that there should be a bottom limit of approximately 2.2% of learners with disabilities, at tertiary or higher educational institutions, since this percentage ought to be prevalent at mainstream schools. In South Africa there has been a serious disparity between the expected enrolment of learners with disability and the current enrolment of learners with disabilities at higher educational institutions. However, there is a lack of information on learners with disabilities studying at higher educational institutions due to the lack of research in the field of disability. Other factors which compromised and constrained disability were race and exclusion. These constraints were entrenched in the pre 1994 policies on disability. A brief history on the educational facilities for learners with visual impairments is given to emphasise this point (Department of Education, 2001).

Until the early 1990s, persons and learners with disabilities were systematically and institutionally marginalised, isolated, discriminated against in all facets of life, that is, socially, educationally and in the employment sector. In South Africa, during the nineteen sixties and nineteen eighties it was the goodwill of individuals and organisations that provided basic education and social support for persons with disabilities. It was during the 1980s that the Division of Special Education of the Department of Education and Training established schools for learners with visual impairment. Khanyisa School in Port Elizabeth admitted its first learners in 1984 and established a division for learners with visual impairment in 1986. Letaba for the physically handicapped started admitting blind children in 1980. Filadelfia Secondary School was established in 1985. During 1986 a division of deaf-blind children was established at the Thiboloha School for the Deaf and Blind in Qwa Qwa. Furthermore a separate facility for partially sighted pupils was provided at Siloe School in the province now known as Limpopo. New Horizon School for the Blind was established in Pietermaritzburg around 1983 and gave serious attention to career-orientated education to learners with visual impairment. Other schools established earlier on in 1927, were Athlone School for the Blind, which catered primarily for white blind and

partially sighted learners and the Pioneer School established in Worcester in 1881 (Vaughan, 1979). Overall, there have been limited and selective initiatives to provide educational and vocational opportunities to the visually impaired.

These schools were established partly because of the advocacy of organisations such as the National Council for the Blind and individuals who had disabilities or visual impairments. The primary aim of these schools were to enrich the pupils life experience, prepare them for integration into community life and to create a climate for the visually handicapped to venture into the sighted world (Vaughan, 1979). These were positive intentions, which were undermined by the racial segregation institutional culture, social policies of the time and lack of outreach. Although there are positive policy environmental changes in the education system in the post 1994 period and subsequently in tertiary institutions, the entrenched historical effects of discrimination, marginalisation and isolation still present barriers and limitations to persons with disabilities. This study intends to identify and develop a better understanding of such barriers and limitations as perceived and experienced by persons with disabilities.

The limited information on disability is also due to the fact that in the past disability was perceived, in a narrow sense as a health and welfare issue. It is only within the post 1994 South Africa that disability is recognized as a human rights issue and the exclusion of vulnerable groups in society as immoral and discriminatory (Department of Education, 2001; Department of Welfare, 1997; Office of the Deputy President, 1997). The other narrow perception about disability was that disability tended to be assessed on the basis of physical impairment and not putting into account that persons with disabilities have potential and can live a productive and fulfilling life despite the disability. In addition there is limited evidence of systematic efforts to understand how people with disabilities experience disability.

In summary, the exclusion and lack of reliable information on disability, especially learners at higher institutions of learning, can be attributed to a number of factors such as the socio-political realities of the apartheid system, the social attitudes and stereotypes about disability, discriminatory legislative and institutional frameworks which entrenched negative valuations and reinforced barriers to the full development

of persons with disabilities in South Africa (Vaughan, 1979; Office of the Deputy President, 1997; Department of Education, 2001).

Prior to South Africa becoming a democratic country in 1994, people with disabilities, including people with visual impairment, experienced severe forms of discrimination, isolation, separation and humiliation. People with disabilities were not given the same opportunities or equal opportunities to education, employment or social recognition as their able bodied counterparts. They were unfairly treated and seen as people with inferior status. They were not allowed to pursue their ambitions. They suffered the humiliation of being considered as incomplete people by society, and were prevented from obtaining education and employment.

Generally, people with disabilities were expected to remain at home and received handouts from their families or community. Before the new political dispensation, South Africa had various legislation such as the Bantu Education Act of 1953 (Office of the State President, 1953), the Coloured Persons Education Act of 1963 (Office of the State President, 1963) and the Indian Education Act of 1965 (Office of the State President, 1965), and separate education and discrimination according to racial differences, which contributed to discrimination of people with disabilities. This contributed to people with disabilities being doubly handicapped. They had to endure the physiological and physical consequences of their impairments. They also had to suffer the effects of societal norms, policies, attitudes and behaviour that were discriminative towards them.

It was the doctrine of apartheid and the discriminating laws and policies in South Africa that contributed to the fragmentation and inequitable distribution of resources in the education system. "Learners with disabilities and special needs education" was one of the sectors where the ravages of apartheid remained most evident. Segregation of learners according to race was also extended to incorporate segregation on the basis of disability. Special needs education during the apartheid was organized according to two segregating criteria, race and disability. In accordance with the doctrines of apartheid special schools that accommodated white disabled learners were extremely well resourced, while the few schools for black disabled learners were under resourced. The three hundred and eighty special schools only accommodated

approximately 15% of the total population of learners with disabilities, the majority being white learners with disabilities. Therefore rigidly applied criteria were used to admit learners with disabilities. Eighty five percent of learners with disabilities did not gain access to education. The black learners with disabilities that gained access to education were admitted to special schools which were extremely under resourced. Hence the majority of them were unable to continue with higher education. The education system and more especially higher educational institutions did not accommodate the needs of learners with disabilities, hence they experienced severe barriers to education (Department of Education, 2001).

Disability only received full recognition in South Africa as a human rights issue since 1994 (Constitutional Court, 1996; Department of Education, 1998, Office of the President, 1998; Department of Education, 2001). Prior to this it was primarily the disability organisations that took the initiative to reinforce positive valuations and perceptions about disability and amongst persons with disability.

In reality, there has been limited funds and resources dedicated to learners with disabilities or special needs education, in higher educational institutions. Currently, there is still great disparity regarding educational resources for students with disabilities and more especially to visually impaired students studying at tertiary institutions (Department of Education, 2001). It was only in the late 1970's and early 1980's that tertiary institutions such as the University of Durban Westville, University of Natal, University of the Witwatersrand, The University of Cape Town started enrolling students with disabilities and with visual impairment. The tertiary institutions provided limited resources such as Perkins brailier, braille printer, a few tape recorders, and a part-time co-ordinator, in an attempt to address the special educational needs of the students with visual impairment. At the University of Natal, it was in 1999 that the institution made a stronger commitment to addressing the needs of visually impaired students and students with physical disabilities. For the first time, a full time co-ordinator was appointed to attend to the special needs of students with disabilities (University of Natal, 1999). Funding was also dedicated to providing facilities such as computers with specialized software, a Perkins brailier and tape recording for visually impaired students (Disability Unit, University of Natal, Durban, 1999-2000).

Until the late 1990's, students with disabilities depended on the goodwill of colleagues, friends or family members to support them in their studies (Student Services Forum, 2002). Prior to 1994, there were isolated numbers of students with visual impairments studying at selected tertiary institutions who funded their own resources. Those who were unable to fund their studies received funding from the state or from private institutions. However, these funds, in the form of bursaries, were allocated under very strict criteria (assessment was based on mainstream student evaluation), with the result that a large percentage of those students who applied for these bursaries did not qualify (National Commission on Special Needs in Education and Training, and National Committee on Education Support Services, 1997 [hereafter referred to as NCSNET & NCESS, 1997]).

The South African tertiary institutions, by not accommodating or addressing the special needs of students with disabilities, made the institution inaccessible and unfriendly. Historically, the majority of people with disabilities did not access or benefit from tertiary education (NCSNET and NCESS, 1997). This prevented them from entering the employment sector and they were unable to pursue their career opportunities or ambition in life. They were seen as people with deficits and totally dependent on others. They were deprived of the fundamental values of life such as human dignity, respect and self worth. In addition, access, responsiveness to need and support systems were lacking in the educative environment.

The departure from the doctrines of apartheid and the discriminative policies support a development approach to disability. The development approach can be understood within the conceptual framework of the social justice model (also referred to as the social rights model) to disability. The social justice model to disability recognizes individuals' potential and capabilities. It recognizes the fundamental values of human dignity, self worth and the respect of humanity. The social rights model demands changes to the environment or the institution in accommodating the special needs of people with disabilities. From a social rights perspective, the deficit does not necessarily exist with the individual but with the institution or the system. If the necessary changes are made to the environment or institution, people with disabilities can function and perform according to their potential and capabilities. The principles

of the social rights model are consistent with the principles of the constitution and the Bill of Rights of the Republic of South Africa (Constitutional Court, 1996), The Employment Equity Act (Office of the President, 1998) and The Education White Paper 6 (Department of Education, 2001).

The history of disability in South Africa can be separated into three key phases or periods. Firstly, the historical trends of education for students with disability highlighting, the inequality and the immense barriers they encountered in the education system during the period 1948 to 1994. (Office of the State President, 1953; Office of the State President, 1963; Office of the State President, 1965; NCSNET and NCESS, 1997; Department of Education, 2001).

Secondly, public funding was provided to develop special schools with hostel facilities and provide training of specialist staff for white learners while there was growing deprivation among black learners. This deprivation saw churches and missions in the mid 1920s getting involved in providing education for a small number which was less than two percent of the total population of students with disabilities among the black population. While the churches and private organizations with their limited resources got involved in providing education for black learners with special needs, the state with its funding got more involved in providing education for white learners with special needs. The separate education contributed to the massive inequalities in education and the entrenched racial disparities (Vaughan, 1979; National Education Co-ordinating Committee, 1992). The area of special education was doubly fragmented and discriminated against which forced separation between learners with special needs and mainstream learners.

Thirdly, the separation between learners with special needs and mainstream learners contributed to further inequalities in the provision of education. The state, seeing learners with special needs being a smaller number, did not provide them with the same educational opportunities as the mainstream learners. This resulted in the larger population of black learners with special needs not meeting the minimal requirements to pursue further higher education (National Education Co-ordinating Committee, 1992).

Since the introduction of education for learners with visual impairments, there have been barriers presented, particularly by the policy environment and the perception of disability. The policy environment of the pre-1994 period and the discouraging perceptions of disability generally made access and full engagement in education difficult for persons with disabilities. The minority of special needs students that continued with tertiary studies found their studies to be extremely stressful and frustrating due to the lack of resources and support services to accommodate their special needs. Thus, many of them discontinued their studies. This system of separate education between mainstream learners and special education contributed to particularly negative stereotypical behavior and marginalization of learners with disabilities, as it saw them as helpless and in need of assistance (National Education Co-ordinating Committee, 1992; Department of Education, 2001).

Another discriminative trend was the development and administration of Intelligence Tests for students with special needs. These Intelligence Tests were used to assess intelligence and learning potentials of learners with special needs. The test labelled and categorized learners into special programmes, classes and schools (NCSNET and NCESS, 1997). These tests were not appropriately designed or administered, as its results could not objectively be measured seeing that learners with special needs, especially visually impaired learners, were not exposed to early infant stimulation like their sighted counterparts. These rigidly used criteria prevented visually impaired students progressing to higher education. The lack of visually impaired students enrolling at tertiary institution implied that there was no need for provision of support services and technological resources (NCSNET and NCESS, 1997).

These historical trends within the educational system in South Africa, showed that the inequalities resulting from apartheid have had a profound negative impact on education for learners with special needs.

1.2 Rationale

The University of Natal and all other education institutions, should be guided by the Constitution and its Bill of Rights of the Republic of South Africa (Constitutional

Court, 1996), The Education White Paper 4 (Department of Education, 1998) and The Education White Paper 6 (Department of Education, 2001) in being an accessible and responsive institution of higher learning to all categories of students; with and without disabilities. In essence the constitutional and policy frameworks require that the educational institutions enrol all students who meet the entrance requirements, including students with disabilities. In April 1997, the University of Natal officially established the Disability Office. Prior to 1997 there were no formal structures or support services to students with visual impairment. Although the Disability Office was established in 1997, it was managed on a half a day position. The coordinator managed the Disability office on a five-hour day pay basis. It was in September 1999 that the University appointed a full time coordinator for the Disability Office. Since the developments in the area of disability commencing in 1999 implies that it is still in its initial stages and that there are limitations and gaps to the support services to students with visual impairment. Hence the purpose of the research study was to identify the limitations, gaps and barriers experienced by visually impaired students studying at the University of Natal, Durban and Pietermaritzburg campuses.

Specific curriculum and institutional barriers to learning of students with disabilities have been identified. Some of these are the language or medium of instruction, methods and processes used in teaching, the learning materials and equipment used and assessment (Department of Education, 2001). The research study identified the barriers as experienced by students with disabilities at the University of Natal.

The study investigated resources and other forms of support that students with disabilities receive or expect the University to provide to reduce the barriers. One of the limitations faced by learners with disabilities are negative perceptions, social attitudes and stereotypes by society. Through this study, students with disabilities will identify some of their experiences within the university community such as other students, instructors such as lecturers and tutors.

As the coordinator of the Disability Office at the University of Natal, Durban and being directly involved in planning and developing the support services for students with disabilities, some barriers and constraints had been noted. However, it was important to ascertain these from the perspective of the students with visual

impairments. This inspired me to carry out a research study on barriers encountered by visually impaired students who are totally blind studying at the University of Natal, Durban. Should the students with visual impairment encounter barriers to their studies, due to their visual impairment, it will imply that the support services are inadequate and are not addressing the students' special needs. This will mean that the University is not providing equal educational opportunities to students with visual impairment. This could create the false impression to the students with visual impairment, that they are producing poor results due to their poor academic potentials. The barrier could also prevent students with visual impairment from achieving results that are in accordance to their potential.

1.3 The significance of the study

The study aims to identify barriers encountered by visually impaired students studying at the University of Natal, Durban. The information obtained from the study will guide the Disability Office and the institution in providing the necessary support services, which will eliminate existing barriers to learning. The study will also inform the academic staff, the support staff and the university population on the special needs of students with visual impairments and the support services they require. The elimination of barriers encountered by students with visual impairment will assist in providing more equitable education opportunities for the students. The provision of support services and the necessary technological services will also contribute to the increase in the enrolment of visually impaired students knowing that the University is sensitive to their needs. The increase in enrolment will contribute to greater career and employment opportunities for students with visual impairment. The study will provide valuable information, which will serve as a foundation for future research on disability and higher education.

1.5 Research Questions

The research questions of interest that were addressed in this study, were broadly categorised as follows:

1. What are the profiles of students with disabilities at the University of Natal (Durban and Pietermaritzburg).
2. What are the support systems and technical resources essential to facilitate the learning of persons with visual impairments at the University of Natal?
3. What are support systems provided by the University of Natal and gaps as perceived by the students with visual impairment?
4. What are the perceptions of the Disability Office by students with visual impairments?
5. How do students with visual impairment rate the services provided by the Disability Office?
6. Identify perceptions, stereotypes and other social attitudes that are experienced by students with disabilities within the community of the University of Natal.

1.6 Conclusions

For higher education it is essential to be cognisant of the fact that students with disabilities and visual impairments in particular are continuing to be part of the student demographic profile. The current national policies for higher education and the University of Natal's policies promote and enhance inclusion, access to all, non-discriminatory practices and education for all. The questions addressed in this study will highlight some of the barriers experienced by the section of the University of Natal student population with visual impairments. The barriers as identified by students with visual impairments, can be utilised as building blocks for corrective interventions and ongoing strategic planning, to ensure full access and productive learning. Additional questions for future research may arise from this study.

CHAPTER 2: LITERATURE REVIEW

This chapter explores literature on the past educational system which fostered separate education for learners with special needs and ideologies of people that learners with disabilities are dependent and need to be cared for. It also gives an overview of the medical model and deficit theory which were commonly applied to explain and define disability and the functioning of persons with disabilities within society. The functionalist theoretical framework is presented in relation to the deficit theory. Within these theoretical frameworks, persons with disabilities were defined as having specific deficits which determined their role and status in society. In addition the social rights model is discussed as a framework that informs the current education policies and national integrated disability strategy.

Current literature reveals that there has been discrimination and marginalisation of learners with special needs (Vaughan, 1979). There has been inadequate resources, especially in higher education for learners with special needs. Some of the barriers are the language or medium of instruction, the learning materials and equipment that is used, management of classroom or lectures, insufficient learner support services, lack of collaboration in the utilisation of support services (Vaughan, 1979; Department of Education, 2001).

2.1 Theoretical Framework

In addressing the barriers, problems and difficulties experienced by learners with special needs or learners with disabilities, a theoretical perspective is necessary to understand the insights that are grounded in ideologies and cultural practices towards persons with disabilities.

This study draws on two theoretical models that characterizes the educational trends for learners with special needs and special education in South Africa, the medical model and deficit theory, which illustrates the limitations and disadvantages

experienced by learners with special needs, and the second model, the social rights model, which is the current political and developmental approach that supports a single integrated educational system.

2.1.1. The Medical Model and Deficit Theory

According to Stone (cited in Fulcher, 1989), the initial association with disability from a medical perspective was the clinical concern with the body and therefore with the individual. The focus was on physical changes to the body and its effects on the individual (Fulcher, 1989). The medical model is relevant in so far as it helps to diagnose and classify disability (Marschke, 1997). The language that is closely associated with disability from a medical perspective is impairment, disability and handicap. Malls (cited in Fulcher, 1989) effectively summarized the meanings, which were attached to the terms impairment, disability and handicap, as follows:

- Impairment from a medical perspective is anatomical loss or loss of bodily function.
- Disability is considered to be a measurable functional loss, which results from impairment.
- Handicap is social consequences resulting from environmental and social conditions which prevents a person from achieving the maximum potential they seek. (Fulcher, 1989).

In applying the medical model to understand potentials and capabilities of persons with disability, disability is seen as "what people cannot do." The emerging themes on disability from a medical perspective provides a discourse on loss and deficits to individuals. Disability is socially constructed which is relative to social practices. In theorizing disability, disability has been categorized into social relations. Categorizing is seen as a part of social relations and occurs in many aspects of the society (Fulcher, 1989). Categorising enables us to continue with our daily activities. It is therefore believed that there is nothing wrong with categorizing disability. It is through categorizing disability that it is seen as a sector of our community. However the limitation or problem arises when disability is used to exclude rather than include and to oppress rather than enable (Fulcher, 1989).

Also consistent with ideologies and assumptions of the medical model is the sociological theory of functionalism. According to the functionalist perspective, people are allocated to their places in society according to their abilities. Selection involves two components, labelling and separation.

Parsons, Dreeban and Inkeles (cited in Peters, 1993) suggest that the separation process is the preparation of individuals for competencies as adults (Peters, 1993). These attributes of the medical and functionalist perspectives tend to label learners as diseased and separated them on the basis of these diagnoses into separate programmes, where they are made functional for their place in society as handicapped people. This approach concentrates on the individual in relation to their social interaction. People and professional practices that subscribe to these ideologies, assumed that pathological symptoms may be objectively assessed. It is also believed that labelling a person to abnormality reduces ambiguity. By ascribing physical or mental characteristics to a person one can foreclose knowledge about the person's history, knowledge, self-image, character and social status. When applying the medical model and the deficit theory in defining persons with disabilities, disability becomes the paramount characteristic of an individual. The focus and emphasis is on negative valuations and inadequacies (Fulcher, 1989; Peters, 1993).

Disability therefore becomes a term used to describe functional limitations that interfere with the persons ability to perform. In the disability movement the golden rule is that people with disabilities are people first and disabled second. Application of a medical and functional perspective to the education system revealed that learners with disabilities were separated and categorized according to disabilities. Learners were separated and placed in special schools, such as schools for the blind, schools for the deaf, schools for the physically impaired. Teachers in these schools were considered to be professionals in their training and had to ensure successful adaptation of learners to their disability. There were also stereotyped training and career goals developed for persons with specific disabilities, namely, blind people were switchboard operators and piano teachers (Peters, 1993). The consequences of the medical perspective to disability are two-fold: firstly, individual differences are collectivized, whereby individual differences in adaptability, motivation and interest

are ignored. Secondly, the fate of people with disabilities and their families, are determined by professionals. In fact people with disabilities are made to feel fortunate for receiving the services of these professionals. Teachers from these special schools, in their oriented limited capacity presented with strong resistance when they were challenged on the appropriateness or stereotyped nature of their services. Students with disabilities are denied choice and their roles in the society are prescribed. Limited in their ability to assume social roles, they were confined to a narrow future position in society (Vaughan, 1979; Peters, 1993). The interventions that attempted to enhance educational opportunities for persons with visual impairment during the late 1930s until the 1990s show elements of the medical model and the deficit theory (Office of the Governor General, 1936; Vaughan, 1979). A paradigm shift from these approaches is espoused in the post 1994 constitutional frameworks and policy documents (Constitutional Court, 1996; Department of Education, 2001).

The disability movement, in its advocacy for positive valuations and definitions of persons with disabilities, provided and used terminology such as the examples given below:

Table 2.1. Usage of terms in relation to disability issues

Avoid the use of ...	Rather use ...
the disabled the handicapped disabled people handicapped people the physically handicapped the physically challenged cripples the lame an invalid the deaf	people with disabilities people with disability people with disabilities people with disability people with physical disabilities a person with physical disability
the blind the vision impaired the visually challenged	a deaf person people who are deaf a blind person people with vision impairments
Victim an Aids victim A polio victim confined to a wheelchair wheelchair bound	a person who has or experienced ... a person living with Aids a person who had polio uses a wheelchair a wheelchair user a person who walks with crutches

People with disabilities do not like to be perceived as victims for the rest of their lives. Also, most people who use a wheelchair or other mobility devices regard them as liberating rather than confining. Most people with disabilities do not regard themselves as afflicted or suffering continually. Generally, persons with disability view themselves as human beings with potential to be unfolded and developed in particular context and within the social rights models as manifested in policy and

strategy documents, the nature of self-help initiatives they engage in and in the purpose and mission statements of their organisations.

2.1.2. The Social Rights Model

The rights model, popularly known as the social rights model in South Africa, is a more recent theoretical perspective to disability. The social rights model emerged as a political opposition to the medical discourse and challenges the themes, concepts and practices of the medical model (Peters, 1993). The themes of the rights model are self-reliance, independence and consumer wants. Its political concepts are discrimination, collusion and oppression.

Internationally, the institutional basis of the rights discourse vary. In the United States of America (USA) there is constitutional and legislation of disability rights. In other nations where constitutional and legislative conditions for disability rights are absent, and where other institutional basis for realizing rights are minimum as they are at a social level in Australia and England, such a model constitutes a moral stance to disability (Fulcher, 1989; Peters, 1993). In America the development of the themes of Rights to Equality for disability emerged with the civil rights movement in the 1960's, while in South Africa, the constitutional and legislative conditions for equal rights for disabled people received recognition with the new democratic constitution of South Africa in 1996. Llewellyn (cited in Fulcher, 1989) stated that the emergence of the rights model came from the contradictions and inequalities of the concepts of the medical model. The rights model helped to delineate the rights movement to independence, self care, maintenance, integration and normalization (Fulcher, 1989). According to Brisenden (cited in Fulcher, 1989), equality and equal rights means taking control of one's life.

The rights model is the most recent contender amongst the various models or perspectives on disability. It opposes the medical and functional theory in a number of ways. It presents an overt political position which contrasts with the covert hierarchical policies of the medical and functional models. The themes of the rights model are equality of citizenship and its strategy is one of confrontation and demand.

The rights discourse is seen as the most progressive and obvious strategy, for those excluded from full citizenship, including persons with disabilities.

According to Harris and Wideman, (cited in Peters, 1993) central to the political perspective to disability is that disability is a socially constructed and historically mediated category of experience (Peters, 1993) It is suggested that obstacles to education, employment and social relations exist, not because of individual incapacities but due to the physical and attitudinal barriers, socially and politically constructed by the environment. These socially imposed barriers begin at birth, carried through the centres of education, in the employment sector and in the social personal lives of people. It becomes the entrenched beliefs and ideologies of society (NCSNET and NCESS, 1997). However, the various manifestos, and legislations declare the rights of people with disabilities not only for education, but also for employment opportunities and access to public buildings and services. The rights of people with disabilities has not been gained without struggles and has been attained, largely through the efforts of disabled people themselves and their advocates who organized around political action and pressure groups (NCSNET and NCESS, 1997).

Opposition to the ideologies and themes of the Rights Perspective has been strongest within the educational community. Educators have viewed assertion of educational self-determination on the part of people with disabilities as an assault on their expertise and professional judgment. Proponents of the Rights Model reject the focus on deficits in favor of emphasis on abilities (NCSNET and NCESS, 1997). Its goals are full integration, equality of educational access and the opportunity to reach full potential. Students and their families are no longer passive recipients of educational welfare programmes, provided by professionals who believe they know best, but are themselves the expert. Their knowledge and input in educational decision-making is necessary and of paramount importance. This model insists on the social validation of disabled people's place in society. Although activism for equal rights contributed to legislation, it is important to note that legislation does not guarantee implementation. Attitudes of educators, professionals and society in general undermine efforts towards full integration and as a result many learners may be physically integrated with mainstream learners, but remain socially isolated and academically underachieve.

This is due to the lack of adopting different models of learning in the learning environment (NCSNET and NCESS, 1997).

2.2 Adoption of the medical model to education for learners with visual impairments in South Africa.

The history of education for learners with visual impairment and the support services, prior to 1994, reflects massive deprivation and lack of provision for the majority of learners. The inequities in the education for learners with special needs can be directly attributed to those social, economic and political factors which have characterized South African societies during the period of Apartheid. These factors had resulted in limited educational opportunities of visually impaired learners, hence the current barriers they encounter with their studies at the various centers.

The doctrines of apartheid contributed to inequitable education for learners with visual impairments and learners with special needs. The period of apartheid saw legislation being passed that contributed to separate education between white learners and black learners and separate education between learners with disabilities and mainstream learners.

The principal act of the Vocational Education and Special Schools Act no 43 (Office of the Governor-general, 1937) saw legislation being passed that contributed to the separation of learners with special needs or learners with disabilities from mainstream learners. The application of this Act saw learners with disabilities being removed from mainstream schools and admitted to special schools. Parents and guardians were obliged by law to enrol their children at specific special schools either in their province or elsewhere in the country that will provide education for a specific disability. This Act gave legal authority to the Minister, Director or Superintendent of Education of the respective Province to remove a child and have them placed at a special school.

Children with disabilities, their parents or guardians had no authority to decide which school or educational institution their child should attend. In many instances children attending special schools were not only removed from schools closest to their homes but also removed from their families and placed in special schools away from home or in other Provinces. During the period of Apartheid, Legislation such as the Vocational Education and Special Schools Act no 43 (Office of the Governor General, 1937) and the Separate Development Act (Office of the Governor General, 1948), saw isolated special schools being established for specific disabilities and separated on racial differences. In many instances, there was one school for a particular disability (such as schools for the deaf and schools for the blind) and for particular race groups in the entire country.

A particular school, which enrolled students with visual disabilities during the period of Apartheid was known as “ New Horizon School for the Blind “ and enrolled only Indian visually impaired learners throughout the country. It was the only school for Indian learners with visual impairments in the whole of South Africa. These isolated special schools were established by churches and private organizations. The implication of the legislation was that the majority of the Black learners and more especially African learners with disabilities were deprived of primary, secondary and tertiary education. Less than 1% of learners with disabilities who were identified were removed from their families and communities and placed in special schools which were inadequate to address their special needs. This resulted in the isolation and fragmentation of the educational system for learners with special needs.

Separate educational systems saw education for learners with special needs as being inefficient, fragmented and accommodated a limited number of learners with special needs. The specialized services, supported and funded by the government, were for white learners who were the minority population; while there was extreme deprivation among black learners and more especially African learners living in rural areas. The education system that was characterized by institutional racial segregation, labelled learners with special needs and separated them from their peers, which resulted in entrenched inequalities (Peters, 1993; NCSNET and NCESS, 1997).

Prior to the second half of the nineteenth century no provision existed for any type of special needs among learners in South Africa. They were treated with intolerance, separated and removed from society as they were considered to be different from the norm (NCSNET and NCESS, 1997). The discrimination resulted in learners with disabilities being excluded from the education system. Learners with visual disabilities required special support services, namely, academic staff with specialized training, specialized technology and assistive devices to access the curriculum and help them in their studies. No provision of special support services was made available for visually impaired learners.

The first schools for blind learners was started by churches in 1900. These churches in their limited capacity enrolled few learners (less than 10 learners) from urban areas. In 1900 the state recognized special white learners and made funding available to develop special white schools. Legislation was passed by the central government to fund special white schools which provided for the minority population. The state's racist policies saw growing deprivation among black learners and more especially among African learners living in rural areas (Schneider, Claasens, Kimmie, Morgan, Naicker, Roberts and McLaren, 1999).

The National Party's policy of separate development in 1948 further entrenched racial inequities in education for learners with special needs and educational support services. The formation of the homeland system, the promulgation of The Bantu Education Act (Office of the State President, 1953), The Coloured Person's Education Act (Office of the State President, 1963) and The Indian Education Act (Office of the State President, 1965), all entrenched racial disparities and contributed to the massive inequities in the educational system in South Africa. These inequities were highlighted in the "National Education Policy Investigation" (National Education Coordinating Committee, 1992).

The institutionalization of apartheid in every facet of South African life had a significant impact on the area of special needs and support services in education.

The education system for learners with special needs can be characterized into three trends as follows:

- Education for learners with special needs and the educational support services were separate according to racial differences. The racial differences contributed to strong discrimination and inequitable distribution of resources. The National Party supported the development of special white schools. It provided funding for the development of the special white schools with hostel facilities and special training for staff members. The racial discrimination contributed to immense deprivation in special education for black learners and more especially amongst African learners living in rural areas. The welfare services, churches and private organizations in their limited capacity provided basic education for black learners with special needs.
- The second trend in the education system was characterized by separate education among learners with special needs and mainstream learners. The area of special needs was doubly fragmented by legislation and policies that enforced separation along racial differences and separation between mainstream learners and learners with special needs. The system of separate education for learners with special needs in South Africa can be characterized as a large-scale adherence to a medical model particularly after 1948 with the National Party's policy on separate development. This model contributed to negative stereotyping, marginalizing and isolating as it saw them as helpless and in need of assistance. The White Paper on an Integrated National Disability Strategy for South Africa (Office of the Deputy President, 1997) argues that the medical model has resulted in an attitude in the education system and all other sectors that learners with disabilities need to be cared for. This undermines their status as productive and equal citizens in the society (Office of the Deputy President, 1997).

The medical model contributed to exclusionary practices towards learners with special needs in the field of education. This practice was strongly applied to learners with visual impairment due to the special support they required to access the curriculum. Application of the medical model to learners with visual impairment implied that these learners had deficits and were in need of help. Education for these learners

became the responsibility of welfare services and the state as the education system was no longer responsible for their education. This contributed to the immense obstacles and barriers they encountered in the education in all centers of education and more especially at higher educational institutions, due to limited or no provision for support services being made available to learners with visual impairments.

- The development and administration of intelligence tests, which started in 1920, was another disabling trend in the field of education. In 1921 the intelligence tests contributed to the institutionalization of learners with special needs. Based on the outcomes of these tests, learners with special needs were categorized and labeled for placement in special educational programmes, classes and schools. These tests which were used to categorize and place learners into special schools, programmes and classes was largely an adherence to the ideologies on the medical model which continued until late 1990's (Peters, 1993).

The trends in the education system in S.A. prior to 1994, was largely the adherence to the medical model of diagnosis and treatment of learners with special needs, This model often contributed to negative stereotyping and marginalisation of learners with visual impairment or learners with other disabilities, as it saw them as helpless and in need of assistance. This model has contributed to exclusionary practices in the field of education. Despite some significant moves away from the medical model of service delivery in the education system from a policy perspective especially since 1994, the dominance of the medical model in defining the nature of education support services in South Africa has resulted in a lack of attention being paid to how the education system is failing to provide for the needs of learners with special needs. The medical model focuses attention on what was seen as deficits in the learner rather than on the educational system. This has contributed to the immense barriers encountered by learners with visual impairment, which is covered in the latter part of this chapter.

2.3 Legislation and Tertiary Education Policy on Disability and Disabled Learners

An assessment of the available literature on government legislation and the policies of tertiary education institutions in South Africa show that there is, at present, a concerted effort to avoid and redress discrimination against students with disabilities and to actually facilitate the integration and learning of students with disability at higher education facilities.

In terms of current legislation in South Africa, the Constitution of the Republic of South Africa of 1996, especially the section on the Bill of Rights (Constitutional Court, 1996), the Employment Equity Act (Office of the President, 1998), the Promotion of Equality and Prevention of Unfair Discrimination Act (Office of the President, 2000), as well as other legislative documents such as the White Paper on Higher Education of 1997 (Department of Education, 1997) make it clear that discrimination on the basis of disability violates the right to equality. Moreover, such legislation requires educational institutions and employers to take active steps in addressing the disadvantages suffered in the past by people with disabilities.

The Bill of Rights (Constitutional Court, 1996) expressly states that “... *No person may unfairly discriminate directly or indirectly against anyone on one or more grounds in terms of subsection (3).*” Disability is explicitly included in the list of grounds contained within subsection 3, and the following subsection goes on to stipulate that “*Discrimination on one or more of the grounds listed in subsection (3) is unfair unless it is established that the discrimination is fair.*”

According to the Employment Equity Act (Office of the President, 1998; page 14), it is required that “*Every employer take steps to promote equal opportunity in the workplace by eliminating unfair discrimination in any employment policy or practise.*” As contained within the Bill of Rights (Constitutional Court, 1996), the Employment Equity Act (Office of the President, 1998) also stipulates a bar to discrimination on the grounds of disability, amongst other factors. Furthermore, this act requires that all employers with a staff of over fifty, must ensure that disabled

persons are equitably represented in the workforce. It can thus be argued that there will be a growing demand for qualified persons with disabilities. Hence, it is imperative that disabled students at institutions of higher education are empowered and enabled not only to graduate, but become self-supporting, independent and fully integrated members of society.

With regards to legislation dealing directly with higher education institutions, the White Paper on Higher Education (Department of Education, 1997; Principles: section 1.18) stipulates that *“The principle of equity requires fair opportunities both to enter higher education programmes and to succeed in them. Applying the principle of equity implies ... a critical identification of existing inequalities which are the products of policies, structures and practices based on racial, gender, disability and other forms of discrimination or disadvantage, and ... a programme of transformation with a view to redress. Such transformation involves not only abolishing all existing forms of unjust differentiation, but also measures of empowerment, including financial support to bring about equal opportunities for individuals...”*

The Promotion of Equality and Prevention of Unfair Discrimination Act 4 (Office of the President, 2000) addresses, among other issues, the concern of discrimination on the grounds of disability. In this regard, unfair discrimination is defined as any act, omission, requirement, policy, rule or practise, which has the effect of causing an unjust disadvantage to a person or group of people. In terms of the act, tertiary education institutions would have a legal obligation to provide access to and facilities to persons with disabilities, be they staff or student.

A similar study of American legislation with reference to the rights of disabled students shows that at least two laws have been passed in this regard, viz. Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA), cited in Milani (1996).

According to the Rehabilitation Act of 1973, *“no otherwise qualified individual with a disability ... shall, solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programme or activity receiving Federal financial assistance...”* (Milani, 1996; page 989).

Similarly, Title II of the ADA states that *“no qualified individual with a disability shall be excluded from participation in or be denied the benefits of services or activities of a public entity ...”*

This same prohibition is applied to private entities through Title III of the ADA, which bars the disability-based denial of the benefits of services, programmes or activities of “public accommodations”, including schools (Milani, 1996; page 990).

According to one commentator, the ADA is “based on the premise that disability is a natural part of the human experience and in no way diminishes the rights of individuals to live independently, pursue meaningful careers, and enjoy full inclusion in the economic, political, cultural and educational mainstream of American society.” (Milani, 1996). The decision as to whether colleges and universities have properly balanced the interests of the disabled students and the academic institution, is most often made by the Department of Education’s (DOE) Office for Civil Rights (OCR) which is charged with enforcing Section 504 and the ADA and investigating students’ complaints. The regulations prescribe minimum standards for colleges and universities in six areas: 1) admissions and recruitment, 2) treatment of students, 3) academic adjustments, including the provision of auxiliary aids, 4) housing, 5) financial aid and employment assistance, and 6) nonacademic services (Milani, 1996).

Based on the above legislation, there have been several cases where courts have found in favour of disabled students at American tertiary education institutions, in terms of allegations of discriminatory practices on the part of the university or college. One such case alluded to the failure and/or refusal of the university to make accommodations for the impaired student. In this particular case, the student, who was dyslexic, was removed from a doctoral programme and terminated from his employment as a part-time research associate. The student’s learning disability was only discovered after he failed his qualifying exam and he was only given the opportunity to re-take it after he successfully appealed to the school’s graduate council. The court found however, that by the time the student *“had ascertained that he had an objective reasonable basis for his test troubles, the faculty had formed an opinion from the effects of his disability that ... was a marginal student at best, and they refused to make a reasonable accommodation to his handicap. When required by*

outside pressure, they went through the motions of accommodation, while stepping up the pressure directly and indirectly. The actual accommodations were more than offset by the concomitant harassment.” Accordingly, the student was awarded monetary damages (\$ 24,000), reinstatement, attorneys’ fees and court costs (case cited in Milani, 1996; page 1004).

However, as stated earlier, legislation has to strike a balance between the interests of the student and those of the university. In this regard, a state court ruled against a blind medical school applicant to Case Western Reserve University School of Medicine (CWRU). Although the student proved that another blind student, previously, had successfully completed a medical degree specialising in psychiatry at Temple University School of Medicine, it was found that the number of adjustments and accommodations made for this student had been overwhelming, burdensome and had appeared to diminish the quality of his degree, as well the academic integrity of the institution. Hence, the court found that although the blind applicant was a remarkable student, the accommodations required to graduate her from CWRU would have been unduly burdensome on the university, and would have left her with far less than the full medical experience required of a graduate (case cited in Milani, 1996).

From a South African perspective, legislation protecting disabled persons against unfair discrimination has been passed since 1994. As a result, very few, if any case studies of students appealing to courts regarding discriminatory policies at higher learning institutes, have been found. However, under the auspices of the White Paper 6 of 2001 (Department of Education, 2001; page 31), higher education institutions are legally committed to “ ... *increasing the access of learners with special education needs.*” In this regard, institutions are expected to indicate in their plans, the strategies and steps, with the relevant time frames (short-, medium- and long-term steps, over a 20 year period), they intend taking to increase enrolment of special needs (Department of Education, 2001).

In addition, tertiary education facilities will receive recommendations from the Ministry of Education regarding “*minimum levels of provision for learners with special needs. However, all higher education institutions will be required to ensure that there is appropriate physical access for physically disabled learners*”

(Department of Education, 2001; page 31). With the understanding that specialised equipment for blind and deaf students is expensive, the White Paper 6 (2001) does make allowance for the fact that such resources cannot be provided at all tertiary education structures, and will therefore have to be organised on a regional basis.

A study of the policies on disability adopted by some South African universities (Disability Policy, University of Natal, 2001; University of Stellenbosch, 2001; University of Witwatersrand, 2000; University of South Africa, 2000), indicates that these institutions are generally, with few amendments and additions, following the guidelines as set out by legislation associated with disability. These academic learning centres agree that students with disabilities have a right to equal education, to be treated with respect and dignity, confidentiality of information regarding their disability, and the right to information reasonably available in accessible formats.

It is understood that although universities will not bar any student from applying or being accepted at the institution on the basis of their disability, it is the responsibility of the student to bring to the university's attention their particular needs in terms of being able to integrate and study effectively through the institution. Furthermore, within some policies, there are stipulations that said needs would be addressed within the current and future financial constraints of the academic institution. Additionally, although there is provision within policy documents for the structuring of recreational and sporting and other co-curricular facilities and activities with disabled students' needs in mind, this once again, has to be within the context of current and future financial constraints (Policy on Disability, University of Natal, 2001; University of Stellenbosch, 2001; University of Witwatersrand, 2000; University of South Africa, 2000).

Generally, it is recognised that it can be difficult to make reasonable accommodations for students with disabilities, depending on the nature of the course content, and perhaps more importantly, the nature of the student's disability. For the purposes of this research study, emphasis will be placed on students who are either blind or have visual impairments (Policy on Disability, University of Natal, 2001; University of Stellenbosch, 2001; University of Witwatersrand, 2000; University of South Africa, 2000).

2.4 Case Studies of Visually Impaired Students studying at Tertiary Institutions

An analysis of a few case studies of visually impaired and/or blind students studying at tertiary institutions revealed that they were able to overcome existing barriers and manage their academic studies fairly efficiently, with the appropriate support and intervention. Below, the following three case studies illustrate the limitations and difficulties experienced by visually impaired students studying at tertiary institutions:

2.4.1. Adam: Fieldwork Case Study (University of Washington 1, 2001)

Adam, a student who is blind, enrolled for Biology at the University of Washington and he was expected to do fieldwork. For a particular field exercise, Adam, together with his class, were to be taken by bus to a nearby mountain. The assignment was to mark off a square metre of soil on the north face of the mountain and identify and count the vegetation within the plot. This activity was to be repeated on the south face of the mountain. The plants were to be categorised and recorded, and the task was to analyse the data from the two plots and develop a hypothesis to explain any differences. Adam confronted access issues with his assignments, *viz.* to climb the mountain, mark off the area and count the vegetation.

The student consulted his professor and the Disabled Students Services Office, regarding this issue. By collaborating, they investigated what would comprise reasonable accommodation for Adam. In doing this, they established that the educational objectives of his study were to search for, sort and categorise raw data from the two separate plots and to use the data to create a hypothesis to explain the differences. Climbing the mountain and locating a plot were not educational objectives and could be adapted. Adam's special needs were accommodated whereby two tactile representations of the north and south face plots were created, with Braille symbols for the different types of vegetation found. Adam was expected to categorise, record and interpret the data to complete the assignment, as was expected of the other students.

This case is a good example of separating the physical task or actions associated with an educational activity from the educational objective itself. This can be achieved by asking the question “What must students learn from this experience?” The two important steps taken in this case study to solve the academic barriers or problems encountered by Adam, was to first identify what the educational objective of the field study required. Secondly, eliciting the support of the disabled students support office to convert study material in an accessible format and to advise where necessary.

2.4.2. Imke: Science Labs Case Study (University of Washington 2, 2001)

A first year graduate student, Imke was completely blind, and was studying atmospheric sciences as the University of Washington, which included a synoptic meteorology laboratory course. This entailed plotting meteorological data on weather maps and drawing contours, to facilitate the process of learning about the development and structure of mid-latitude weather systems. The student, Imke had to be able to participate in the class and learn the course material without having to draw and contour the weather maps.

Imke, being unsure of the best way to proceed, approached his lecturer, who already had several suggestions to address the issue. The lecturer proposed that, instead of attending the weekly class lectures, Imke visit him once a week, in his office at a convenient time for them both. In this way, the relevant course concepts could be explained to Imke, without the necessity of him attending every lecture. The student was also given the instructor’s class notes in an accessible format from the university’s Disabled Students Support Services Office. In this way, Imke was able to gain an understanding of the relevant concepts and techniques without having to participate in the map-drawing activities that were central to the course.

This case study illustrates that a student who is blind does not always have to access the visual material in a course. In situations where it is impractical for a visually disabled student to participate in an activity that demands visual participation and skills, it is still possible for accompanying concepts to be learned in a different

manner, with the cooperation of the lecturer and the student disability office, and creative approaches to making reasonable accommodations.

2.4.3. Derek: A Case Study on Low Vision and Specialised Software Support (University of Washington 3, 2001)

Derek is a new student with very limited vision, studying Japanese and political science at the University of Washington. He uses large print text and a computer with enlarged images, and a large screen with reduced glare to access his study material.

Derek made contact with the Disabled Students Support Services advisor and an assessment of Derek's needs was conducted. The Disabled Students Support Services advisor contacted Derek's professors two months in advance of the upcoming semester. Derek was able to obtain reading lists for three out of four courses. These texts were then produced in large print prior to the classes. Further accommodations included the provision of a large monitor, screen magnification software, glare guard and a talking, grammar, spelling software for his computer in accessing his study material. In addition, the student's instructors also received written guidelines from Disabled Students Support Services advisor regarding Derek's individual needs, *e.g.* handouts in large print. Moreover, Derek had preferential seating in the front of the class and was permitted to tape record his lectures.

This case study reveals that the provision of technology and simple accommodation such as providing reading lists in advance, text materials in large print and seating arrangements, allowed Derek to integrate and participate fully in the class discussions and activities. Similarly, the timely provision of technology, and large print text material was only possible through the early intervention, close liaison and networking with the Disabled Students Support Office.

The above case studies revealed interesting insights with regards to the reasonable accommodation of students' special needs. An acceptable resolution to addressing barriers to academic studies for students with visual impairments was possible only with the cooperative and networking efforts of the student, faculty member and

Disabled Student Support Services. There was provision of resources such as computer technology and specialised software, as well as simple arrangements such as large print text, extra tuition after hours, and seating arrangements, as well as assistive devices and personal assistance where necessary. Students also registered for courses which are generally perceived as visually demanding and inaccessible to blind students, such as biology and meteorology. These accommodations allowed students who were visually impaired to enrol for a wide range of courses, to access their studies, enhance their academic performance and enjoy equal education opportunities, which is after all, the primary aim of the relevant legislation and policies on disability for students and higher education centres.

The significance of this in light of the present research study, is that the barriers to students with visual impairments at this university have to be identified before they can be adequately addressed. The purpose of this study is to identify these barriers. The suggestions of the student respondents to addressing some of the gaps in support and resources will also be noted and put forward as steps in the path to redressing. The aim is to reach a point where a student approaching the university should be able to network with the lecturer, the disability unit and any relevant or necessary department on or off campus, so that the student's needs can be identified, resources allocated and reasonable accommodations made which are mutually agreeable to all parties involved.

CHAPTER 3: METHODOLOGY

3.1 Research Design

For the purposes of this study, it was decided that a qualitative method would be most appropriate. The qualitative evaluation shares similar features or principles with the case study approach, which is the strategy that was utilised in this study. Further, this strategy was adopted, since a small pool of respondents was studied, with the aim of gaining some valuable in-depth insights into each case. In this regard, the use of the qualitative method of case study analysis seemed most appropriate since it dealt with a small sample size whilst yielding comprehensive and in-depth information pertinent to the research question. This information could also be extended to generalisations (Neumann, 1997).

Taking into consideration that the whole aim of the study was to research the perceptions and experiences of the students *in situ*, the qualitative method again proved a more attractive option since it tends to provide a more realistic view of the world, since people are researched in their natural settings, in this case, the environment of the University of Natal. The case studies, which formed the basis of this research, were situations that already existed naturally, and were not artificially generated for the purposes of the study (Denscombe, 1998). Moreover, the exploratory, descriptive characteristics of the research had to be considered, as well as the fact that some of the issues raised during the study were of a sensitive nature, involving living, feeling people. Hence, it was decided that, since qualitative case study research was more likely to lend itself to a more flexible, but comprehensive and humane approach to obtaining the necessary information, it would prove a better option (Sarantakos, 1993; Neumann, 1997). In all this, however, boundaries to the case studies had to be set, so that the cases would not lead to social phenomena and lose their distinctive identities. This was important because it ensured that the researcher was able to see what was contained within the case and hence, what needed to be incorporated into the investigation (Denscombe, 1998).

3.2 Sampling Plan

Qualitative studies usually employ a form of non-probability sampling, such as accidental or purposive sampling, as well as snowball sampling and theoretical sampling (Sarantakos, 1993). Since the researcher, in this study, had opted for a qualitative case study approach, a non-probability sampling plan seemed best since it was less strict and made no claim to representativeness (Sarantakos, 1993).

Of the various methods that could have been applied within the scope of non-probability sampling, the researcher adopted the purposive or judgmental sampling strategy for this study. This seemed the most appropriate method, in terms of this study, since it allowed the researcher, a “specialist” in the field of disability, to use his judgment in identifying and selecting the respondents, in this case, students with visual impairments, to form the sample group. This method of non-probability sampling was also deemed most suitable, since it enabled the researcher to select unique cases that were especially informative for the research questions, members of a difficult-to-reach, specialised population, in this case, a sub-population within the general student populace – blind or visually impaired students at the university. It also facilitated the identification of particular cases for in-depth investigation; in this regard, the researcher needed blind or visually impaired students studying at the University of Natal, who could discuss in-depth, their experiences and perceptions of, as well as suggestions for, the campus learning experience (Sarantakos, 1993; Neumann, 1997).

3.2.1 The Selection and Characteristics of the Subjects

Students who were to form the sample group were selected, on the researcher’s judgment, based on certain criteria:

- They were either totally blind or severely visually impaired
- They were registered students at the University of Natal, and were currently studying at the institution

- They were known to the Disability Office of the university and registered as blind, including those that had very limited sight), and
- They utilised or required one or more of the specialised support services made available through the disability office, to facilitate their learning and integration at campus.

The basis of selecting students who had very limited sight, was that they would require similar, if not the same, support services to those students who were totally blind. The rationale behind selecting students who were totally blind or students with severe visual impairment as opposed to other students who were partially sighted, was that by establishing and understanding what the problems, difficulties and limitations were of the students who were totally blind/severely visually impaired, one would have covered the special needs of those students with less severe visual impairment.

Although the University of Natal has four campuses (Howard College, Pietermaritzburg, Edgewood College, Medical School), the researcher found his studies restricted to the Howard College campus, since it seemed that blind or visually impaired students were concentrated here, and further, it was noted that there were no students who were totally blind studying on the other campuses at the time of the study.

The researcher, being the co-ordinator of the Disability Office at the University of Natal, Durban, was able to approach the students who fit the criteria, outlined above, since they frequented the office on a regular basis. Having explained the details of the study and the information required and the purposes behind the exercise, interviews were conducted at the time most suitable to the respondents and the interviewer. All the interviews were held at the office of the disability unit.

3.3 Data Collection Plan/ Instrumentation

Two forms of data collection were employed in this study: verbal (interviews), and literary (documentation). Interviewing is a form of questioning characterized by the fact that it employs verbal questioning as its principal technique of data collection.

The decision to use an interview to obtain salient data in this research study stems from the need for an in-depth probe into the perceptions and experiences of students with visual-impairments with reference to their studies at the university. In this regard, interviews were preferable to the use of questionnaires, so that the emotions, experiences and feeling of the respondents could be adequately explored and captured, rather than just being reported in a word or two (Denscombe, 1998). In addition, interviewing in this study, was controlled by the researcher to avoid bias as far as possible and could be tailored to answer the research question posed (Sarantakos, 1993).

It was anticipated that the interviews would yield sensitive information, and that during the course of obtaining the data from the respondents, they might become discomforted when revealing personal information. Hence, during the interview, the researcher was more able to incorporate careful handling and even some detailed examination to encourage openness and honesty, whilst maintaining a relaxed, non-stressful atmosphere. In addition, more useful data was obtained during a one-on-one discussion with the students. The interviewer had certain issues that had to be addressed but was able to be flexible in terms of the order in which questions were considered, and more importantly, was able to let the respondent develop ideas and speak more widely on the issues raised (Denscombe, 1998).

In this study, semi-structured interviews were employed, with a leaning to the structured end of the spectrum, in that the interview was conducted according to a formulated set of questions, rather than formulating the questions during the progress of the interview. However, the questions being open-ended, they invited the discussion of experiences, opinions, ideas, suggestions and comments on the part of the respondent (Sarantakos, 1993).

The broad structure of the interview could be summarised under four sub-headings, as follows, namely, Section A: Profile of student with disability; Section B: Support system and technical resources essential to facilitate learning of persons with disabilities at the University of Natal; Section C: Gaps in the services provided by the Disability Unit; D: Identify perceptions, stereotypes and other social attitudes experienced by students with visual impairments among the university population.

Having secured the agreement of the students to the conditions in the consent form, the interviews were conducted. The questions and the responses to the questions were tape-recorded for later analysis. The recorded interviews were subsequently transcribed into a written format, and were analysed, details of which will be dealt with in the following section (section 3.4).

Documents have always been used as a source of information in social research, either as the only method or in conjunction with other methods, and are usually referred to as secondary material, hence their analysis is called secondary analysis (Sarantakos, 1993). With regards to the use of documentation within the context of this study, the researcher made use of documents dealing with the equipment, resources and facilities available to visually-impaired students, disability office records, student personal records, which deal with the student's adjustments to studying on campus, academic records detailing academic performance. Proceedings from meetings dealing with matters pertaining to disability would yield information relating to the development of student needs, and support services, the limits of support services as experienced by university staff and the problems encountered. Information on the progress, commitment and strategy to address needs of disabled students was obtained from policy documents relating to disability. Minutes and proceedings from meetings with other staff relevant to the research study were also used.

Being the co-ordinator of the Disability Unit, the researcher was also able to make general long-term observations of visually-impaired students and their difficulties, their adjustments and integration as well as their membership of co-curricular societies to obtain a deeper and more detailed perspective over a period of time, and collate this with the data collected from the interviews and other sources.

3.4 Data Analysis and Presentation

Qualitative research is based on the theoretical and methodological principles of interpretive science. As a result, qualitative analysis contains a minimum of

quantitative measurement, standardization and mathematical techniques (Sarantakos, 1993).

In this study, one of the first steps in analysing the vast quantities of information obtained during the data collection phase, entailed transcribing the taped interviews so that the data could be approached in an objective, unbiased manner on the part of the researcher, so that specific meanings and themes could be picked out (Hycner, 1985).

This data was then summarised, coded and categorised to reduce the bulk into smaller units of relevant information that could be more easily understood (Sarantakos, 1993; Kvale, 1996). In this study, Kvale's (1996) "meaning categorization" approach was employed. The interview was coded into categories. Long statements were reduced to simple categories such as "+" or "-", indicating occurrence or non-occurrence of a phenomenon; or to a single number along a scale of numbers e.g. 1 to 5, to indicate the strength of a phenomenon. In this manner, the large bulk of information was reduced to a few tables and figures, whilst still maintaining the important aspects of the data (Kvale, 1996).

Data were then organised around central themes and points, categorized in more specific terms and the results are presented in some form, e.g. text, graphs etc. (Neumann, 1997; Sarantakos, 1993). Data was interpreted by making it understandable, with reference to the point of view of the subject (Neumann, 1997).

On a final note, with reference to the summarizing and analysis of interview data, the researcher developed a table/matrix into which the themes extracted from each interview question for each subject were entered. This allowed the researcher to visualize, at a glance, the common themes arising from the different case studies, and hence to draw conclusions and extend these conclusions from the small pool of blind/partially sighted students interviewed to generalizations that were representative of the majority of visually impaired students at the university.

3.5 Protection of the Human Subject

The social science researcher is guided by a code of ethics, but the choice is ultimately up to the individual regarding the application of these ethics and researchers have a moral and professional obligation to behave ethically.

With regards to the application of ethical research practises in this study, the researcher undertook to ensure that the participants were in a safe environment when answering questions.

3.5.1. Anonymity

The names of the respondents were withheld and not used in the final analysis, and the linkage of personal information for understanding responses in each case study, was effected such that an association between such information and a specific individual would not be made. Although the researcher taped each interview, respondents were assured that the data would remain with the researcher, data would be used only for the purposes of this study and for publication and that their anonymity would be preserved. This information was also included in the detailed consent agreement, which contained all relevant points (Appendix B).

3.5.2. Informed consent

The respondents in this study were students, and as such could be considered a “captive group” that could be taken advantage of. However, in accordance with ethical principles of research, none of these respondents were forced to participate, nor were they coerced with the promise of some benefit upon agreement. They were made aware of the researcher’s identity, the nature of the research and the motivation behind it. Their right to agree to or decline participation without victimization as well as the option to terminate their interview at their discretion was also made clear at the outset. The students were also assured that their identities would be withheld from public knowledge, and that their names would not be used in the research. The

information revealed would only be used within the parameters outlined in the research project, and not for public consumption or commercial gain.

3.6 Possible Limitations of this Study

A possible limitation in this study was that the researcher is the co-ordinator of the disability unit and the support services to students with disabilities. The students with visual impairment who formed the sample group were familiar with and had a working relationship with the researcher. This relationship could have biased the students' responses. However, the researcher attempted to minimize this limitation by emphasizing that the research was intended to inform and develop the support services for students with visual impairment. Here true and objective responses will keep improving services and the students with visual impairments will benefit from this study.

Chapter 4: Analysis and Discussion

In the analysis of this study, which was an exploration of the barriers experienced by visually impaired students studying at the University of Natal, the information was obtained from the interviews of the eight student subjects that participated in the interviews. Other documents and general observations by the coordinator were used as secondary information.

In analysing the data through the approach of meaning categorisation, there were four distinct sections which yielded prominent themes arising from the semi-structured questions presented to the subjects, namely, student profile, support systems and resources to facilitate study of visually impaired students at the university, gaps and limitations in services provided by the Disability Unit and the University, and stereotypes, perceptions and social attitudes amongst the university community of visually impaired students. The researcher found it productive and informative to discuss the findings under these themes.

4.1. Profile of the respondents

Eight students participated in the study, four female and four males. All participants are registered students at the University of Natal, Durban campus. Their ages ranged between nineteen and twenty nine years. Five of the participants were totally blind while three had visual impairments that resulted from other conditions. Causes of visual impairments were injury, nystagmus and optical atrophy (Table 1). The injuries included a head injury, a car accident and a gunshot injury. Four of the respondents stayed at the University residences. The other four participants stayed with family. The reasons given for staying at home were that family provides support, and it is easier to travel independently from home.

Table 4.1. Causes of visual impairments amongst the respondents

Cause	Frequency	Percentage
Injury	5	62.5
Nystagmus	2	25.0
Illness	1	12.5
Total	8	100.0

Five students were registered for the Bachelor of Social Science degree, two for a Bachelor of Law and one for a Bachelor of Arts qualification. Out of the eight participants two were doing postgraduate studies, in Psychology and in Political Science. Participants indicated that they chose to study at the University of Natal because of close proximity to families, good reputation, catering of their needs and convenience for independent travelling. However, the participants made specific suggestions and recommendations that can be considered for improving existing facilities and introducing new forms of support. The participants attended secondary school both at special schools and at mainstream schools. Six attended special high schools which catered for their needs. One respondent indicated that the psycho social needs were not catered for at high school. Two respondents attended mainstream high schools (Table 2).

Table 4.2. Secondary school education received by respondents. (NB. Arthur Blaxall School was previously known as New Horizons School).

School	Frequency	Percent
New Horizons	1	12.5
Open Air Special School	1	12.5
Arthur Blaxall	4	50.0
Durban High School	1	12.5
Albans Girls High School	1	12.5
Total	8	100.0

In addition, the participants expressed a range of other social and recreational interests such as reading, movies, public debates, ballroom dancing, blind cricket, swimming and other sports. Overall, the profile of the participants showed that they were keen to integrate into the university community, and engage in academic and social life with

maximum independence. Students with visual impairments tend to perform well in educational institutions which provide the necessary support and learning environment.

4.2 General problems, limitations and difficulties encountered in the learning activities at the university, as a result of students' visual impairment

There were numerous problems and difficulties reported by the subjects with visual impairments in their academic studies at the university, although some isolated subjects reported that they encountered few problems with their learning activities at the university.

The reported problems encountered by the subjects were as follows:

- There were severe limitations in obtaining text and study materials provided by the schools and programmes in the appropriate accessible format. The subjects reported that there was a significant delay in obtaining material in the accessible format. In emphasising the problem with accessing the text and study material in the accessible format, some students enumerated the steps and procedures they followed in making study information more accessible to them, *viz.* they first had to tape record their lectures, then transcribe the lectures to individual modes of study (either braille or converting it to electronic format), supplement this with additional information requested by the lecturers. This procedure for the visually impaired students required more processing to convert information to an accessible format and also took far more time.
- Other reported problems that contributed to limitations in obtaining study information, was that lecturers would provide study materials to visually impaired students after they had completed lecturing on the subject and after the other students had received them in the class. Often, lecturers requested for the visually impaired students to see them in their offices periodically after a sequence of lectures, however, one student said that this was difficult to

arrange, in terms of convenient times for the lecturers and themselves. Similar situations arose in case studies of blind and visually impaired students studying at the University of Washington. A blind student studying atmospheric sciences at the University of Washington, Imke, was required to attend daily lectures and draw and contour weather maps, however, a suitable compromise was reached by arranging weekly sessions at the lecturer's office at the convenience of both the lecturer and the student. In this way, the student was able to cover the work from lectures (University of Washington 2, 2001). Alan, a visually impaired student, taking first year mathematics at Suffolk College, was provided with an extra one hour of tuition, usually by the same lecturer after the main lesson of the week. This was funded by the university from special needs funding (Bowers, 2001).

One student also reported that she found her lectures to be ineffective, especially when continuous reference was made to visual aids, such as transparencies, graphs, diagrams and the black board. This student stated that "Some lecturers... forget that they have a blind student. They explain maybe the tables, you see this, you see that ... whereas you don't know, so you feel like you're lost... you're just paying for the lectures ... you're not benefiting..."

As discussed earlier in Chapter 2, such statements lend credibility to the fact that the medical model has negatively impacted learning for visually impaired students. Because the medical model focused on the deficits in the learner rather than the educational systems, there has been a failure in addressing the shortfalls in reasonably accommodating these students' special needs, in this case lecturing techniques (Parsons, Dreeban and Inkeles, cited in Peters, 1993). It was felt that it was not the onus of the institution to accommodate these students, which led to the legacy of "non-accomodation" evident in these and other statements (discussed later) made by the subjects.

A similar experience was cited by a blind student studying at Open University, in Great Britain (Open University, 2002). According to this student, one of the course requirements was an assignment based on video footage, and she felt in

danger of missing out vital information which was manifested by visual means. Furthermore, another assignment was also based on video footage on speech difficulties. Although subtitles had been provided, no transcript was available to the student. The student experienced a drop in academic performance for these two assignments, and continued to experience difficulties with video material, tabulated data and statistical data, especially scatter diagrams, right up to the end of the course (Open University, 2002).

Another student, Alan had fairly severe visual impairment and had registered for a course in an A level mathematics at Suffolk College. The lecturer himself admitted that the first few weeks of the course were a challenge, not only for Alan, but for the lecturers, who had had no experience of teaching students with Alan's kind of disability. They quickly realised shortfalls in their lecture technique, in that mathematics was a highly visual subject, relying on the visual identification of terms. As the lecturer said *"Simple algebra operations such as the two step transposition ... rely as much on visual identification of the terms and pattern recognition as on a breakdown of the composite functions and their inverses, Try explaining to students with no prior knowledge how to go about solving equations ... without waving your arms about, pointing to the negative signs, underlining like terms in different colours ... All this would have been a distant blur to Alan... Who has ever listened to an audio tape of their own maths teaching ? ... Rarely is a sentence fully formed, and there is continual use of words such as "this", "that", "here", "down there" etc. as reference is made to written statements or diagrams... Equally worrying, we felt, was our own inconsistency in reading mathematical expressions. We tend to use alternatives which we consider equivalent ... and rely on the students looking at what we have written to make sense of our utterances..."* (Bowers, 2001; page 1).

- The Disability Unit at the University of Natal utilises a volunteer programme to assist in the reading of text material or studying material in audio format or to convert in electronic format. Although the volunteer programme is extensively utilised, the subjects reported that the volunteer programme does not allow for efficiency, as it is dependant on the goodwill and availability of

people (in this respect, largely students on campus). Some of the students' comments in this regard were:

"It takes long ... like the notes ... you only get your notes two days prior to writing the test..."

"Despite it being structured as it is right now, and you have some sort of programme in place, it's very difficult to say how long it can be taken... you have different people coming and reading different... so you have sort of a accent problem..."

- The limitation of obtaining text material in accessible format was a consistent prominent theme that was reported by all eight subjects. The strong reference to this problem, and by all subjects, seems to suggest that access to information in accessible format to students with visual impairment is the most serious and limiting factor in their learning activity.
- The subjects, when addressing the limitations regarding accessing information, were intimately and emotionally involved in the discussion. It was evident to the researcher that the problem was a current serious barrier to their studies. One subject reported that "accessing information is a nightmare". Another student stated "due to limitations ... not being able to read it immediately...just sometimes... maybe feeling depressed a bit." The subjects tended to respond to the problem of accessing information with much frustration.
- Another recurring problem experienced by the subjects was orientation and mobility on and to the campus. Although structured orientation and mobility training is provided by professional orientation and mobility instructors, visually impaired students found the huge campus extremely disorientating with a fair amount of obstacles on the pathway. Students reported being often confronted by obstacles such as concrete pillars, branches from trees, or building materials on their pathways. The students said that their first year experience with regard to orientation and mobility on the campus was extremely stressful and an anxiety-inducing one. This contributed to their

delay in adjustment and integration to the University. Closely associated with the problem of orientation and mobility, was the feeling of isolation and marginalisation of the subjects by the student population. One student expressed the feeling of “isolation and marginalisation from the student population.” Some of the subjects reported that the students were not helpful and out of fear of being an imposition, they did not approach students for help. Another student reported that she had difficulties in that “ even if I need help, I find it hard because I feel like they been keeping a distance for so long, if I ask, I’m a trouble.” The application of the medical model to education has left a lasting heritage in terms of the manner in which people interact with those who have visual impairments. It has contributed to their separation from general society and thus made it doubly difficult for their integration back into that society. Since disabled people were categorised and segregated, the general population has had little or no experience in terms of interaction and is thus uncomfortable and uninformed in relating with them.

- Subjects reported that they had to adapt to alternate modes of study and adjust to the University’s systems of lecturing, doing assignments and taking exams. They further stated that they were encouraged to undertake their tests and exams using the computer whereas they were more comfortable using the medium of braille. Here they had to adapt to the lecturers’ requirements, rather than utilise the methods they were comfortable with. In this regard, one of the subjects said that during tests and exams, he was currently required to use the computer, which was a “second best” option for him, and that he preferred using Braille. Herein lies another example of the results of the medical model. Students’ individual differences have been collectivised and their individuality and preferences have been ignored, even sacrificed, in favour of convenience for the educational authority, in this case, the lecturer. In a case study of a blind graduate student of Psychology at Washington University, the student was currently being provided with a reader and scribe for exam purposes. However, while these provided access to exams, they were cumbersome and time-consuming, especially with regards to writing out essays. The student requested the use of a computer with screen reading software, a speech

synthesiser and the exam in electronic format, however, the examiner was reluctant to allow this accommodation, because he was concerned about test security (University of Washington 4, 2001).

- A more unique response from one student was her perception that the University population tended to identify and categorise people according to their disability. This became evident to her when people constantly mistook students with visual impairments for each other. She stated “They tend to confuse Alan, Fred and Tom [not their real names] just because they use dark glasses. I take them as very ignorant because I don’t see how can these three people look alike...” Once again, this is consistent with the medical model and functionalist theory. As previously discussed (Chapter 2), these models have resulted in the categorisation of disability as a matter of course (Fulcher, 1989). People, in this particular case, the visually impaired students on campus, were allocated their place in society according to their disabilities. They were labelled accordingly to reduce ambiguity and in this case, certain physical characteristics were ascribed to them and they were categorised together, resulting in people mistaking them for one another.

4.3. Services of the Disability Unit

Questions that facilitated discussions on the services of the Disability Unit focused on the subjects’ familiarity with the services of the Disability Unit, services they personally utilized, and their evaluation of the services.

The issues covered included effectiveness, accessibility of the services and resources and suggestions from the subjects on what required services or resources are not currently being provided. The graph below, Figure 4.1, based on questions 20 and 21 (see Annexure A – Interview Questions) illustrates the services offered by the disability unit, which the students were aware of, compared to the listed services they actually utilised.

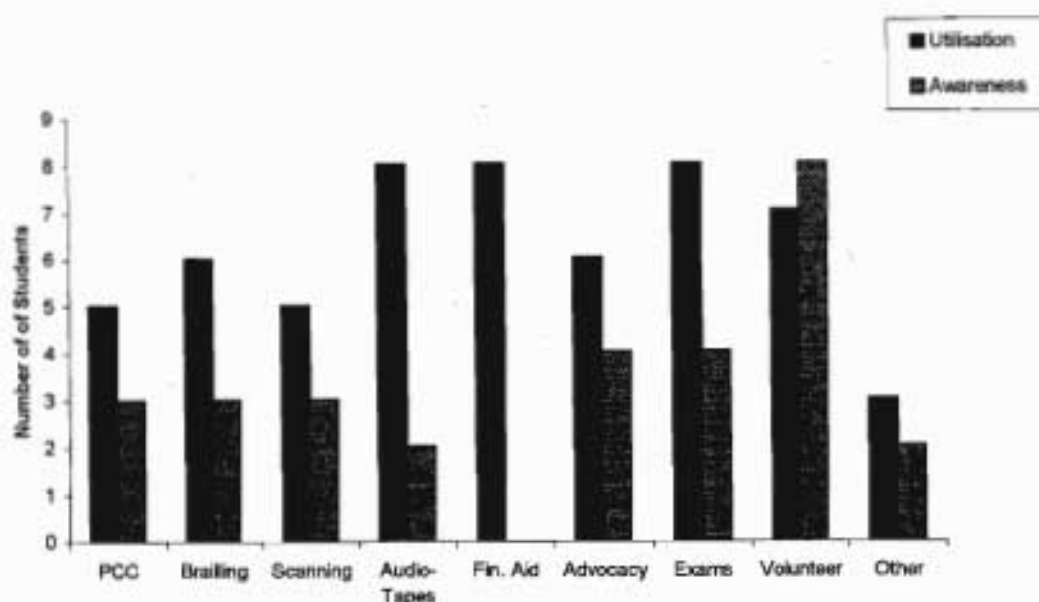


Figure 4.1 A comparison of support services, provided by the Disability Unit, which interviewed students were aware of and those which they utilised

With respect to the familiarity with the services of the Disability Unit, students' responses ranged from approximately 2 to 5 different types of services that they were aware of as being provided by the Disability Unit. However, when informed of the 8 different services provided by the University Disability Unit and when asked which of these services they utilized, their responses were higher. On average, the subjects utilized between 5 to 7 different services provided by the Disability Unit.

The possible lower response in terms of their familiarity of the services as opposed to the higher response in terms of their utilization could be attributed to certain services being related, combined or categorised together by the subjects: for example, audio recording, scanning of information and the volunteer service could have been grouped together in the students' minds, due to these different services being administered by the volunteer programme, whereas they were actually separate under the section of the services utilized.

Figure 4.1, based on the responses of the eight respondents, shows that generally, the utilisation of available support service appears to be higher than the student's actual

awareness of these services. For example, none of the interviewed students stated any awareness of assistance with financial aid applications as a service provided by the disability unit, yet, all eight students stated that they utilised this service. Although the subjects appeared to utilize a wide range of services (see question 21 in the questionnaire annexure- for the range of services), there existed a core of services that received strong focus and prominence among all the subjects, *viz.* the volunteer programme, audio-taping of text materials, coordination of tests and exams, advocacy of students' needs with the university and, in terms of utilisation only, assistance with financial aid applications.

Also when the subjects evaluated the services of the Disability Unit, they stated that it was good and effective, but made particular reference to the volunteer service, stating that there must be more commitment, or appointment of permanent support staff dedicated to assisting the subjects with accessibility of text material. Specifically, some students felt that the volunteer programme was useful and helpful, but suggested paying volunteers to ensure greater commitment and motivation. One such student, David (not his real name) recommended that "If the university could provide some sort of incentive so people would be encouraged to partake in reading for us...."

However, other students that were interviewed were of the mind that the volunteer programme was limiting in that students committed themselves to short hours, ranging from 1-3 hours per week. Hence, subjects had to wait a longer period of time before they received study material in an accessible format. Thus, it was suggested by these students that the volunteer programme be substituted in favour of the appointment of a greater number of permanent staff at the disability unit. Some of the statements to this effect were :

"I believe that this office is understaffed ", making reference to the Disability Unit.

" Too much responsibility relies on two people ... "

"As long as we continue on the volunteer basis, you're gonna have this impression of disabled people needing handouts continuing on and on... otherwise you're having the 'help the blind' issue continuing... and then people don't see us as equal, they see us as people who need to be helped..."

4.4. Accessibility of Technological Resources

The questions and discussion around provision and accessibility of resources for visually impaired students yielded positive responses from the subjects, with some limiting factors.

All the subjects stated that the university has made adequate provision of resources in terms of technology and equipments for visually impaired students. Particular reference was made to computer facilities and specialised software (JAWS for Windows), stating that there are good facilities at the university for visually impaired students. Whilst these are assistive, they can only be used outside the classroom setting, in dedicated rooms. In case studies of students studying at other universities, it has been shown that the inclusion of computers with specialised software in the classroom for visually impaired students had improved their ability to follow a lesson, and increased their participation in the lecture itself. Alan, the visually impaired student of mathematics at Suffolk College, was able to bring a laptop computer into classes, and was able to take notes directly. Specialised software allowed parts of the screen to be magnified, allowing him to read and refer back to his notes comfortably, as well as contribute to class discussions more freely and most importantly, concentrate on the lesson rather than on taking notes. (Bowers, 2001).

However, there were concerns and limitations raised by subjects, regarding easy access in using the specialised computer facilities. The computer facilities have been strategically placed within the university, to maximise usage by visually impaired students. Some computers were placed in the library, as this venue is conducive for studying and is also used as an examination venue for students with visual impairment, and other computers were placed in the post-graduate computer laboratory, which is called "Superbowl". For the purposes of security, the computers in the library are in a separate venue, which is specifically for visually impaired students. This venue is usually locked and the keys are kept in the Disability Unit, which is in a separate building near the library. When students need to use the computers in the library, the keys to the venue must be collected and returned to the disability unit. This arrangement was problematic to students, as not all students kept to the arrangement. Some students retained the keys and attended lectures while other

students needed to use the venue. One student, in relation to this issue, stated “access to the library computers needs to be improved. There should be better access to keys for the computer rooms...”

The library also closes at night and over weekends, which does not permit continuous twenty-four hour access. While access to computers in the post-graduate computer laboratory (called Superbowl) is allowed over twenty-four hours, the subjects found this venue to be limiting, it being a noisy venue and they having to depend on listening to and studying text material via an audio programme (JAWS for Windows). In this respect, there was a preference for a more private venue.

“...the one in Superbowl... I don't think we're comfortable with using that... there are students using the computers, you find that they are talking and that they make a lot of noise...”

“...should have 24-hour access to computers in a visually-impaired student user friendly environment”

Another issue is that of the secret password, which allows for access to these computers strictly by visually impaired students. The students with visual impairment can only gain use of the computer and activate “JAWS”, the voice activation software, once the secret password has been entered. Small errors in entering the password, renders the computer inaccessible. Hence, the subjects found the security measures, which have been adopted, actually contributes to the limitations in accessibility of these facilities.

“The secret password makes access difficult...”

“This part about putting the password in and all. It is a problem for us...”

“The secret code in the LAN makes access a problem ...”

4.5. Gaps in the services of the Disability Unit and the University for students with Visual Impairments

The subjects identified a number of gaps in the services for visually impaired students. Some were identified as general problems by all visually impaired students while other problems were more personal in nature and experienced by individual

students or by the subjects themselves. The problems that were more general in nature were frequently raised by the subjects as a gap in the services for students with visual impairment.

One of the gaps that received strong responses from the subjects is the lack of communication or close liaison and networking between the faculties, programmes, schools and departments with the disability unit. This was a significant limitation as it resulted in a lack of understanding amongst the lecturers in the various faculties on the special needs of students with visual impairments and how best their needs could be accommodated. Their lack of awareness also resulted in ignorance of the specialised services that are available for students with visual impairment. Other consequences were that there were inconsistencies amongst the various faculties, programmes and schools on the support services for visually impaired students. In several of the case studies reviewed, it was found that only by close cooperation among the student, the faculty office or lecturer, and the disability services unit, were acceptable arrangements reached to facilitate the student's learning experience. In many cases, collaboration between the student and the lecturer was sufficient to reach a suitable arrangement which would assist the student, for example, in the case study outlined in Chapter 2, Adam the biology student was able to accomplish his otherwise visually-intensive assignment, only after consultations with his professor and the disabled student services office. This resulted in a creative approach to the assignment without compromising the educational objectives of the exercise (University of Washington 1, 2001).

Another case study which illustrates the necessity of close collaboration between the various parties involved, is that of Alan, a totally blind student at Royal Melbourne Institute of Technology University, Australia, who wanted to undertake a small business course (RMIT, 2002). It was determined that several accommodations would have to be made for this student, including a computer with specialised software (JAWS for windows), different access to online material provided through the learning system, and study materials and text in electronic format. With the aid of the Disability Liaison Unit, the Programme Coordinator and the University Information Technology Manager, reasonable technological accommodations were made for Alan. In addition, through the Disability Liaison Unit, Alan was able to network with the

Royal Victorian Institute for the Blind to arrange orientation and mobility training and even lifts to campus (RMIT, 2002).

A blind student of atmospheric sciences, Imke, at the University of Washington, was able to work with another seeing student on assignments involving certain computer software programmes, after consulting with both his professor and the Disability Student Services Officer. The professor proved very receptive to the idea, and the Disability Officer was then able to hire another student taking the same class to help Imke in his work (University of Washington 5, 2001).

In the present study, another common limitation is that the university does not have textbooks in electronic format and the library does not have information in a format accessible for visually impaired students. Closely related to the above problems is the lack of staff that could provide individual assistance to students. The subjects reported that there is a general ignorance among there university population on disability and among the faculties, schools and programmes on the needs of visually impaired students, hence they do not accommodate their needs.

It was also reported that the university environment does not include the needs of visually impaired students. The huge campus with clustered buildings is disorientating to visually impaired students. There is no tactile or dark coloured contrast for identification of stairs, pillars or pathways to buildings. There is no Braille identification of lifts or at bank ATMs. Related to this is a recent study by first year civil engineering students at the University of Cape Town. These students gained practical insights into the barriers encountered by disabled students, including those who were blind, in mobility and orientation around the university campus. This was accomplished by assigning several tasks for the students to accomplish within a specific time-frame. The students discovered that some of the access problems included poor signage, very narrow doorways, inadequate lifts, uneven surfaces and uneven or deep steps (University of Cape Town 1).

One of the subjects further stated that in terms of mobility around the residences, they were forced to cross roads and busy intersections, which proved a danger to them. A similar study on mobility for visually impaired people in Great Britain, conducted by

Parry (1995), partially sighted herself, showed that transport and mobility provisions for visually impaired persons in developing countries in generally poor or non-existent. Whilst the study deals with transport issues in an urban setting, it addresses several points that were raised by the subjects in this present study and is certainly pertinent in these respects, such as the provision of signage in large and clear print, e.g. large black letters on a white background, the rarity of Braille information points on commuter routes, the difficulties associated with judging distances between vehicles when crossing a road, congested, narrow or poorly surfaced pavements, with obstructions like randomly positioned seats, trees and bins. The author states "People and street furniture combine to make an obstacle course for the blind and partially sighted, and collisions with other pedestrians are more common ..." (Parry, 1995: p.27). With this understanding, the university has, within its disability policy, made provision for the improvement and restructuring of the university environment, over time, to make it more accessible and navigable for students with disability, including those who are visually impaired.

4.6. Attitudes of the University Population

When asked about the attitude of the general student population, the subjects responded that there is ignorance amongst the student population on the capabilities, potential and independence of visually impaired students. They are perceived as students with deficits or incomplete people.

One respondent, John (not his real name) stated "They do not know why you are here. Some, they think you are here for a medication ... was saying, these doctors, they experiment on these blind people..."

"they're not aware that we're here to study. They're not sure if we're writing the same exams. They think we're given softer questions..."

The subjects stated that it is only the few students who are their friends or those who get to know them that understand their capabilities. The reluctance or fear as expressed by one subject of the student population to interact with visually impaired students contributes to the isolation and marginalisation of students with visual impairments. In addition to the responses of mainstream students based on their

ignorance of disability and the potential of visually impaired or blind students, there were examples cited by some of the respondents of students who appeared to be deliberately malicious, by laughing at the subjects, attempting to trip them as they moved around the campus and another more deliberately vicious attack.

“ They just sit there when you have to walk the stairs, you don’t know where you’re going, you end up falling. I fell two times because they just sitting... they don’t want to move...”

“Somebody tried to kick my [guide] dog ...” (parentheses added)

“ They’ll stop talking... when you’ve just gone past, then they start laughing ...”

These attitudes and responses have arisen from a melting pot of factors, the primary one being the medical model’s segregation of disabled and mainstream students schooling activities. As discussed earlier, this has led to the feeling of isolation and marginalisation amongst visually impaired students. However, it has also led to difficulties of mainstream students in interacting with those who are impaired, because they have no experience in doing so, and are uninformed regarding the true potential and capabilities of these students. As some of the interviewed subjects vocalised, “people’s ignorance on campus, you can’t get rid of. It’s about not wanting to get informed...”

“ I think they don’t feel comfortable sometimes... they keep a distance...”

4.7. Attitudes of lecturers and staff to students with visual impairments

In respect of the attitudes of lecturers and staff, all subjects stated that there are varied responses from lecturers. They felt that the majority of lecturers are understanding and helpful while there are others that lack understanding and have unrealistic expectations. In this regard, one student stated “they placed unrealistic expectations on you... you must read three books by the end of the week, and some of them demand this...”

Three of the eight students that were interviewed stated that they enjoyed a close working relationship with their lecturers. Interestingly, these subjects forged these relationships on their own, without any intervention or assistance, and indicated that

their lecturers took time to understand their special needs and made reasonable accommodations to support them in their studies. Furthermore, these particular students consistently perform well in their studies. Related to this was the desire expressed by the other subjects, for a closer relationship with their lecturers, and for them to have a better understanding of their special needs. Based on this, there appears to be a positive correlation between developing a good relationship with lecturers and the subsequent understanding of the students' needs, and the performance of the student. As one subject, Carol (not her real name) stated "Some lecturers forget that they have a blind student..." It was also indicated by another student that developing a closer relationship with the lecturer would offer an incentive for the students to work harder and produce better results. In doing so, students would also feel included and more integrated within the programmes and courses. Although the subjects acknowledged that there are lots of lecturers that are helpful, especially those that know them personally, the attitudes of the university population is still a limiting barrier to their academic studies.

The disclosure that according to the students interviewed, some of their lecturers make no arrangements, have unreasonable expectations, and generally have little or no understanding of coping with visually impaired students, bears testimony to the fact that the application of the medical model to education in South Africa, has left a lasting legacy in institutions of education in this country. In these cases, the student is still seen as the individual with the deficit, in need of help and care, whilst the educational institution or lecturer does not attempt to make any arrangements with these students. Indeed, in some instances cited by the students, some programmes and lecturers flatly refused to accommodate them to any great degree, out of a concern of compromising their rigid policies and appearing biased towards these students.

In some cases, the lecturer is disorganised, and this can prove a major stumbling block to visually impaired students. A case in point is that of Alan Tu, a junior student in mathematics and computer science at a university in the United States of America (Bleakney, 2002). Alan has to take all his tests in braille, and in order for him to get a braille version, his instructor has to send the test to the text conversion laboratory. However, on several occasions, his instructors have either procrastinated in writing up

and sending the test, or forgotten to send it altogether, so Alan did not receive it on time or at all (Bleakney, 2002).

Whilst it is implicitly understood that visually impaired students or those students who are blind, have to develop as independent, socially and professionally integrated members of society, and they have to have the necessary experience and skills to function in that capacity, it must also be accepted that certain reasonable accommodations have to be made in order to allow such development in the first place.

4.8. General Comments, observations and themes

This section deals with points that arose during the interview process, which do not fall under the previously discussed themes, but that still hold some importance in terms of addressing deficits and barriers to the learning environment of students who are visually impaired.

As stated earlier, one of the most important issues that became clear during the interview process was the gross inequalities brought about by the application of the medical model and deficit theory perspectives in education. Already addressed were the facts that visually impaired students feel marginalized and isolated, and the shortfalls in the provision of an accessible, reasonably accommodating learning experience for these students.

However, another observation made by the researcher during the interviews, based on the innate perceptions of the students themselves, suggested that their very thought processes and responses had been “moulded” by the medical model and deficit theory. One student stated, when asked about shortfalls in the support services provided for visually impaired students, “...just be grateful for that, so we ended up not seeing any gaps...” Another student, when similarly questioned maintained that “...of which I wouldn’t blame anyone...”, repeating this and similar statements at regular intervals, in response to related queries about gaps in the services and resources for visually impaired students at the university.

As outlined in Chapter 2, according to the medical model and deficit theory, visually impaired or blind students are made to feel inadequate and as though they have a deficit, and that they have to be helped, further, that they should feel thankful for whatever services, resources or assistance they receive. Obviously this mindset has been indoctrinated within the learning experience of these students, who display a classic response in this regard. On a related note, these students also expressed the wish for a closer working relationship with their lecturers, so that they could elicit assistance when needed. This would suggest, and this has been supported by statements made by one of the subjects, that these students are “too scared or intimidated to approach the lecturers for help...” Perhaps since they are already grateful for the service they currently receive, it neither occurs to these students to complain, nor to actively elicit further assistance when they need it. Instead, as voiced by these subjects, they enlist the aid of close friends or family members in their studies.

It was interesting to note that almost all the subjects interviewed, cited their first year on campus as being their worst experience at the university. They had difficulty with reference to orientation and mobility, adapting to the different means of learning (braille, taking exams, not knowing the examiners’ requirements and criteria for writing, answering questions properly and marking exams. Based on these responses, it would appear that the students were ill-equipped for dealing with the rigors and difficulties associated with the transition from their secondary schooling to a tertiary institution. Moreover, based on the students’ profiles, it can be seen that for those students who had studied at mainstream schools, until they lost their eyesight, the difficult transition to university education as a student who was blind, was intensified, firstly by having to grow accustomed to being blind in their personal capacity, then adjusting to studying as a student who was blind, learning new methods of study, using new and unfamiliar technologies and resources to study, access notes, and take exams. One such student described his first year experience as being “quite scary”, and “intimidating” and even said that he had, at that time “hated campus” until he joined various social organisations, and began to feel more integrated. “When I first came to university, I knew nobody at varsity and I’d been blind for about a year... so when I came to university, it was a very horrible year for me ... I hated university! It was quite scary... I was by myself...”

Another student expressed “extreme frustration” due to her first year experience, attempting to do assignments and the associated technical problems in the use of the adapted computers as a means of accessing study material. A similar situation arose in the case of Ameenah Ghoston, a blind student of Spanish at a university in the United States of America due to problems in the screen reading software, JAWS, not recognising the Spanish department’s software for online assignments and tests. This resulted in her not completing any of her online assignments and consequently falling behind in her work, and her grades dropping (Bleakney, 2002).

Acceptance, recognition of potential and merit, as well as good academic performance held great importance for the subjects interviewed. As voiced by all the students interviewed, academic and/or co-curricular achievements and recognition appeared to form the basis for their positive experiences at the university. One student further stated that for her, being accepted by a small population of the university, raised her self-esteem and even improved her support and accommodation by lecturers.

One student raised the issue of awareness of the university community of visually impaired students studying at campus, saying that certain faculties on campus were not even aware of visually impaired students, e.g. the Science faculty. Related to this is the observation in this study, that none of the respondents interviewed, were registered for any science, engineering or computer degrees. This would account for the possible lack of awareness of these disciplines of visually impaired students studying on-campus. Whilst it is understood that these are visually intensive courses, there have been cases of blind students studying and successfully completing such degrees, and even degrees in medicine (Milani, 1996; University of Washington 1,2,4,5, 2001; Bleakney, 2002).

4.9. Accommodations for students that are blind or visually impaired

Authors and disability student services offices have offered several suggestions for accommodating students who are blind or visually impaired in science or computer based degrees (Thompson *et al.*, 1997; Caine and Orme, 2001; Howell, 2001;

University of Washington 2,3,4,5, 2001; Lomine, 2002). These have been successfully employed in facilitating the learning experience of these students, and includes designing more inclusive forms of assessment for impaired students, with a sound understanding of the challenges facing such students (Lomine, 2002). Designing online, interactive and web-based documents so that they can be easily accessed and understood by students who are blind and visually impaired is another important consideration, especially when considering the reliance of these students on computer-accessed information (Howell, 2001). Caine and Orme (2001) state that adaptations of computers, with specialised software, has reduced the barriers to learning for blind and visually impaired students.

Both high and low technology accommodations can be made for students who are blind or visually impaired. Such simple accommodations can include:

- preferential seating,
- tape-recording lectures,
- advance preparation of notes, course study material and texts in accessible formats,
- assistance of a sighted person in assignments and/or extended time to complete assignments,
- re-designing software to be fully accessible to blind/ visually impaired students,
- access to keyboard shortcuts and assistance where these could not be provided (Milani, 1996; Bowers, 2001; Caine and Orme, 2001; Howell, 2001; University of Washington, 1-6, 2001; RMIT, 2002)

With reference to accommodations for blind and partially sighted students, Washington University has set forth several recommendations. Although these were formulated with science students in mind, many of these can be creatively adapted for other course material. These are as follows (University of Washington 2,3,4,5, 2001):

4.9.1. Students who are Blind

- Tactile drawings, 3-d models, hands-on learning
- Using a glue gun to make raised line drawings

- Using a tactile syringe by making notches at 5ml intervals
- Braille labels
- Use different sandpaper textures to identify drawers, equipment areas
- Staples on a meter stick to label centimetres
- 3-D triangles or spheres to describe geometric shapes
- Styrofoam and toothpicks or molecular kits to exemplify atoms or molecules
- A tactile graduated cylinder for measuring liquids
- Use talking thermometers and calculators, light probes and tactile timers
- Implement auditory lab warning signals
- Verbal descriptions of demonstrations or visual aids

4.9.2. Students with Low Vision

- Create large print instructions
- Use large print reading materials, including those on signs and labels
- Enlarge images by connecting TV monitors to microscopes
- Use raised line drawings or tactile models for illustrations and maps
- Verbally describe visual aids

In the context of this study, the respondents made several suggestions as to how awareness of issues, resources and gaps in services relating to visually impaired can be addressed. These will be dealt with in greater detail in the following chapter.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

The case study approach with visually impaired students studying at the University of Natal provided quality in-depth information on their experiences and barriers they encountered with their academic studies.

An evaluation of the interviews of all eight subjects revealed that the subjects engaged intensely and intimately with the discussion regarding the barriers they encountered with their studies. At times when addressing a particular issue which was personal or closely associated to themselves, they discussed the issue with strong emotions and used terms such as “frustrating” and “depressing”, to express their feelings about the issue being discussed. This was evident that the issues were current experience to the subjects. The subjects were generally free and open when expressing themselves, as there were reasonable expectations that some of the problems will be addressed or will influence positive changes. The findings that emerged from this study revealed to the researcher that the students with visual impairment studying at the University of Natal are experiencing barriers to their academic studies.

The barriers that emerged from the analysis of the interviews which were strongly expressed by the subjects, were as follows:

The extreme limitation of obtaining textbooks and study materials in accessible format. The accessible formats are either in electronic, braille or in audio format. All subjects experienced this limitation and expressed strong frustration towards the problem. The limitation and consequent delays in obtaining text and study materials in accessible format, suggests that there is lack of integration and inclusion of students with visual impairments in the academic activities of the University. The limitation which is a consequence to the students with visual impairments at the university, is the adherence to the medical model to disability, whereby the deficits are with students with visual impairment. However, the Constitution and it's Bill of Rights of the Republic of South Africa (Constitutional Court, 1996) and the Education White Paper 6 (Department of Education, 2001), which promoted equal opportunity and adopts an inclusive approach will require the University to accommodate the needs of

students with visual impairment. These policies are consistent with the themes of the Social Rights Model which states that changes also be made to the institution to accommodate the needs of people with disabilities. The Social Rights Model states that the deficits are with the institutions (Peters, 1993).

In light of the current policies (Policy on disability, University of Natal, 2001; University of Stellenbosch, 2001; University of Witwatersrand, 2000; University of South Africa, 2000) and suggestions from the subjects, it is recommended that the University develops a digital library. This will serve the needs of visually impaired students, as copies of textbooks will be purchased in electronic format. The library needs to develop its services to include the needs of visually impaired students. One subject stated "I think that there should be a library for blind students where whatever material that's read onto tapes is kept in a central location... library should negotiate with publishers of the books and see if they could get the electronic CDs..."

Another problem reported by the subjects was stereotype attitudes and perceptions of the University population that students with visual impairment are incomplete people, people who are in need of help. The subjects reported that there was disbelief among the students population that the visually impaired students study the same courses and write the same exams. Some students with visual impairments had the experiences where lecturers discourage them from pursuing with a course saying that they will not cope. These prejudices are the themes in the medical model and deficit theory to disability which was prominent during the doctrines of apartheid (Peters, 1993). It appears that those entrenched perceptions are contributing to the negative attitudes by students and lecturers to students with visual impairments. Hence there are inadequate adjustments made by the student population and more especially by the lecturers to address the needs of students with disabilities (Peters, 1993; Fulcher, 1989). It is recommended that there is closer networking and liaison with the Disability Unit, the students with disabilities and the various programmes, schools, faculties and units to develop awareness on the needs of students with special needs. There should be University wide campaigns/workshops and information in posters or handbooks, pamphlets to improve awareness and understanding on the special needs and appropriate service for students with visual impairments and other disabilities.

The case study on Adam who studied biology at the University of Washington (University of Washington 1, 2001) reveal that the networking with the disability services and relevant departments helped in the reasonable accommodation of Adam's special needs

The networking of the programmes, schools and faculties with the Disability Unit will also inform the sectors of the University of the specialized support services that are available for students with visual impairments. This approach will facilitate the integration and inclusion of students with special needs within the various faculties, programmes, schools and departments of the University. This approach adopts the principles of the Social Rights Model (Peters, 1993), which is in line with the Constitution and its Bill of Rights (Constitutional Court, 1996).

It is imperative that the students become advocates of their own needs and form part of the various student representative structures at the University, as this will ensure that their needs are incorporated and addressed. Such an approach will develop confidence, self-esteem and independence. This approach will correct the current feelings and experiences of separation, marginalization and isolation.

There is also the need to provide permanent support structures for students with visual impairments. The established support structure will allow for commitment, efficiency and dedicated services for students with visual impairment, which was reported as a limitation by the subjects. The volunteer programmes created the false impression that the students with visual impairment are students who are in need of help, and their special needs do not need to be incorporated into the academic activities.

In addition, students with visual impairments found the orientation to the university during their first year, extremely stressful and an anxiety-provoking experience. Their general disorientation had a negative impact on their academic studies. Some students reported that they would not attend lectures for fear of being lost on the campus. It is recommended that the Disability Unit, works in close collaboration with specialist non-governmental organisations (such as Natal Blind and Deaf Society, and the Association for the Physically Challenged) in planning and coordinating full orientation programmes for all visually impaired students. These programmes must be

implemented in advance, prior to the commencement of the university academic year, as this would allow adequate time for students with visual impairments to be orientated to the university. It is further advisable that the Disability Unit plan orientation programmes during the course of the year for the special schools with students from grade 10 to grade 12, as early preparations could be made for their enrolment to the university. Such orientation visits will facilitate preparation and development of independent life skills for the students with visual impairments, considering studying at the university.

Finally it is hoped that this study will serve as a foundation of future research in the field of disability in higher education.

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APPENDIX A

**AN EXPLORATION OF THE BARRIERS AS EXPERIENCED BY
VISUALLY-IMPAIRED STUDENTS STUDYING AT THE UNIVERSITY OF
NATAL**

A. PROFILE OF STUDENT WITH DISABILITY
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Identification particulars

1. Gender: male..... female..... other (please specify)
2. Age:
3. Nature of Disability (such as blind, partial sighted)
.....
4. Do you have any other disabilities/special needs
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.....
5. Were you born with the visual impairment?
Yes..... No.....
6. If not when was the impairment acquired?
.....
7. What was the cause of the impairment?
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8. Marital status: Divorced Married Single Separated
9. Number of children, if any
10. School where you matriculated ? Was it a "special school" and did the school cater for your special needs ?
.....
11. Year started at the University of Natal
12. Year of study at University of Natal (first, second or third year)
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13. Degree or Diploma registered for at the University of Natal
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14. Residence at University of Natal

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15. Residence at Home (when not at University)

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16. Reason for choosing to study at the University of Natal

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17. Hobbies

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18. Recreational Activities

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**B. SUPPORT SYSTEM AND TECHNICAL RESOURCES
ESSENTIAL TO FACILITATE LEARNING OF PERSONS
WITH DISABILITIES AT THE UNIVERSITY OF NATAL**

19. Being a student at the University of Natal with visual impairment/special needs, what are the problems/limitations/difficulties you encounter in your learning activities ?

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20. Through the Disability Unit, the University of Natal provides supporting services to students with disabilities. What are the services provided by the disability office that you are familiar with/ aware of ?

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21. Indicate what services, provided by the disability office you have utilized

Services	Tick
Personal and/or Career counselling,	
Braille of text material	
Scanning of texts	
Audio-taping of text materials,	
Applications for financial support,	
Advocating for students' needs with the faculties, schools, departments and programmes, co-ordination of exams,	
Providing volunteer services	
Other (please specify)	

22. What is your assessment of the services provided ?

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23. What other services should be provided by the University to enhance your studies?

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24. What assistive devices/equipments/resources provided by the university do you utilise to facilitate your studies ?

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25. How accessible are these resources (When can you use them, how do you get to or access the equipments ?)

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26. Does the accessibility of these resources need to be improved ? Yes..... No
If yes, how can we improve the accessibility of these facilities

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27. What forms of technical support would you recommend for students with your kind of disability, which is not currently being provided by the University of Natal?

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C. WHAT ARE THE GAPS IN THE SERVICES PROVIDED BY THE DISABILITY UNIT?

28. What are the gaps or limitations that exist in the support services of the Disability Office ?

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29. Outside the disability office, what gaps have you encountered in the services of the university for students with visual impairments ?

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30. When did you become aware of the disability office ?

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31. How did you become aware of the disability office ?

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32. What are your impressions about the services of the disability office ?

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33. How accessible is the disability office or its services ?

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34. What other comments do you have regarding the disability office or its services ?

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D. IDENTIFY PERCEPTIONS, STEREOTYPES AND OTHER SOCIAL ATTITUDES EXPERIENCED BY STUDENTS WITH VISUAL IMPAIRMENTS AMONG THE UNIVERSITY POPULATION

35. What are your experiences of the attitudes or responses of students in relation to your disability ?

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36. What are the attitudes or perceptions of the lecturers or staff members at the university, towards you ?

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37. What was your worst experience studying at the University of Natal ?

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38. What was the most positive experience at the university ?

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39. What are your suggestions to improve awareness and understanding of the university populations on the various aspects of visual impairments, disabilities ?

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40. What are your suggestions to the university to improve their services for students with visual impairments to overcome existing barriers ?

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41. Do you have any other comments ?

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APPENDIX B

Declaration of Consent

I, the respondent, of my free will, enter into participation in this research study with the understanding of the following:

The Nature of the Research

- The research is being conducted by the Co-ordinator of the Disability Unit at the University of Natal, Durban, Mr. Krish Shunmugam.
- The research forms part of the requirement for Mr. Shunmugam's Master's degree.
- The research centres around the barriers that blind or visually impaired students experience at university, their perceptions, experiences and suggestions regarding the university, the disability office and the related support services, staff and students.

My Rights as a Respondent

- I have not been forced, coerced or deceived into participation in this study on any manner whatsoever.
- I have the right to decline participation in this study.
- I have the right to terminate my participation in this study at any point in the research process.
- I have the right to decline to answer any question(s) I am not comfortable with.
- I will remain anonymous and my name and identity will be kept from public knowledge.
- Any information I reveal during the course of this study shall remain confidential, and shall only be used for the purposes of this research and for publication in Mr. Shunmugam's dissertation, and relevant or appropriate publications.
- I grant permission for any information I reveal during the interview process to be taped, with the understanding that the tapes and the data contained therein, will remain in the possession of the interviewer, Mr. Shunmugam, and will not be released for public consumption.

I, the respondent, agree/ decline to participate in this study

Signature of Respondent

Signature of Interviewer
