THE ACADEMIC CHALLENGES FACING DEAF STUDENTS AT DURBAN UNIVERSITY OF TECHNOLOGY

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A dissertation submitted to the Faculty of Education, University of Kwa Zulu Natal, Durban in partial fulfillment of the requirements for the degree of Master of Education(Higher Education

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Durban   2011

DECLARATION

I declare that the information presented in this dissertation is my own work and has not been submitted or presented before for any other course or degree. This dissertation is being submitted in partial fulfillment of the requirements for the degree of Master of Education (Higher Education) at the University of KwaZulu Natal.

Name :

Date:

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ABSTRACT

This study will take the form of a case study of a group of Deaf Information Technology (IT) students and their Sign Language interpreters at Durban University of Technology (DUT). These students are enrolled under a Programme for the Deaf run by the Information Technology Department. The department provides additional assistance in the form of Sign Language interpreters who attend all their lectures and also provide extra tutorials for them. The aim of the research is to identify the main challenges encountered by this group of students at DUT. I first became aware of the existence of these students while engaged in an action research project at the beginning of 2005 and realised that this was an area that needed further study.

There is a lack of research on Deaf students in tertiary institutions in South Africa and there are not many tertiary institutions which enrol Deaf students and provide them with a Sign Language interpreter. I realised that this was an area which needed to be researched and that the resulting findings could make a difference to the lives of Deaf students at DUT by identifying the main problems and perhaps suggesting ways in which these could be addressed. Group interviews with the Deaf participants were conducted with the assistance of a Sign Language interpreter in order to explore their challenges. Further interviews were conducted with the interpreters who were interviewed individually.

 The study was limited to Deaf students enrolled under the undergraduate Programme for the Deaf at DUT and, as a result, might not reflect challenges faced by any other deaf students at DUT or other tertiary institutions. The findings identified, amongst others, problems such as poor literacy levels of the Deaf students and lack of communication between the Deaf students and hearing staff and students on campus among other problems. The Deaf students felt marginalised and largely ignored on campus. There was very little awareness of Deafness among hearing students and staff at DUT. Some possible solutions to these problems were suggested such as including deaf awareness in the orientation of hearing staff and students.

DEDICATION

I would like to dedicate this study to my family who patiently put up with all my problems without complaint and encouraged me to persist despite my many setbacks due to ill health. Without their support I doubt that I would have completed this thesis.

ACKNOWLEDGEMENTS

I must first thank the Deaf students studying under the Programme for the Deaf at Durban University of Technology and their dedicated Sign Language interpreters, without whose willingness to participate, this study would not have been possible. They gave freely of themselves and their very scarce spare time to be interviewed.

I would also like to thank all my many friends who encouraged me to keep on working, page by page, and insisted that I would complete my thesis.

Then, to my very patient supervisor Ruth Searle who must have felt at times that I would never complete my thesis, but who continued to motivate me every step of the way..

Finally, I would like to thank everyone who participated in any way towards helping me complete this study.

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CHAPTER 1

1.1   INTRODUCTION

In this chapter I will be introducing my topic, giving the rationale for the choice of topic, my research questions and the form that this study will take, as well as a brief back ground to the study.

1.2 THE ATTITUDE TO DISABILITY AND DEAFNESS IN PARTICULAR

The attitude of the world to disability has undergone major changes. Disability was something to be ashamed of and hidden from society, perhaps as a result of ignorance and fear about people with disabilities, whereas today there is a much greater awareness of disability and human rights. Across the world people are now far more aware of equality and the rights of people from different cultures and backgrounds, including people with disabilities. There has been a distinct shift away from the Medical Model of Disability which regarded a disability as something wrong or missing with the disabled person which needed to be 'fixed' so that the disabled person could "fit in" with the rest of the able-bodied world (Reiser, 2006). This was a very negative way of regarding disability and had the effect of making people with disabilities feel inferior and excluded from the rest of the world.

The Social Model of Disability is far more inclusive and does not look at what is wrong with the disabled person, but rather what can be done to the environment so that they are included (Reiser, 2006: Oliver, 1983). This model of disability seems far more suitable for modern society and takes into consideration every person's basic human right to be treated in the same way as everyone else and wherever possible not to be excluded from access to education, sport and employment, because of their disability.

This new awareness of the rights of people with disabilities seems to be especially true in the field of sport, where we saw a wonderful example of what disabled people can

achieve through hard work and dedication, at the Beijing Paralympics in 2008, which demonstrated how attitudes towards disability have changed recently. This year was the first time that people all over the world were able to watch so much of the Paralympic Games on TV. Prior to this the majority of people without disabilities knew little or nothing about the Paralympic Games. Because of the publicity attached to the Paralympic Games in 2008, athletes with disabilities were recognised for their achievements, not just by disabled people, but by people throughout the world.

The South African athletes who performed there really made us proud of our athletes with disabilities as they came sixth in the medals standing, gaining 21 gold, 3 silver and 6 bronze medals. In previous years most people in South Africa, including myself, knew little or nothing about the Paralympic Games. The most important lesson that people learnt from the Paralympic Games was that just because a person has a disability, does not mean that they are unable to excel in different fields such as sport.

However because of my particular interest in deafness, the event that impressed me the most in the Paralympics, took place during the opening ceremony. A musician started playing the most moving piece, without reading the music – he was blind. Then the arena was filled with beautiful young girls who moved gracefully in time to the music. Their actions were in perfect harmony with each other and the music. This should not be at all unusual for such an important event, until one realized that these young girls were all deaf and could not hear the music at all. They were being directed by about fifty Sign Language interpreters. To me this embodied the real spirit of the Paralympics: that people with disabilities, with determination and hard work, can achieve many things which able bodied people might think are impossible for them to do. The pride and happiness on each of those young girls' faces was indescribable and I think I will remember that for the rest of my life. These young girls had a disability but had managed to achieve what would have been considered impossible not so many years ago. No one watching them dancing would have thought that they had any disability at all, if the announcer had not indicated to the audience that they were deaf. I certainly found it difficult to believe that they could not hear the music as their movements were so precise, graceful and in perfect

time with the music and this demonstrated to me how little I knew about what deaf people are able to do. It also helped to focus my attention more deeply on the problem of Deaf students in an educational environment.

It seems that the majority of achievements by people with disabilities are in the sporting field and that many people with disabilities still have to struggle for recognition, acceptance and achievement, in most other areas of their lives – school, work and socially. People without a disability do not need to struggle as hard for recognition and acceptance as the disabled. Deaf[1] people are even more disadvantaged than people with other disabilities, as the majority of them are unable to communicate with the rest of the hearing world, or are only able to communicate with extreme difficulty. This difficulty communicating with hearing people has the effect of marginalising Deaf people, sometimes to the point of exclusion.

Deaf people have a particular problem which people with most other disabilities do not have: they generally do not look disabled, as their deafness is not immediately apparent unless they are wearing a hearing aid or are signing to another Deaf person, or unless one tries to communicate with them. With disabilities like blindness or paraplegics one can see almost immediately that the person has a disability. However, if a deaf person does not respond on being spoken to because he/she did not hear or see that he was being spoken to, it is possible that the hearing person might just think that the deaf person is being unfriendly and may not try to communicate again. This has the effect of further isolating deaf people.

In first world countries such as America, where knowledge about deafness is greater than in less developed countries, communication is easier for Deaf people, as the technology and support systems available for Deaf people are greater than in lesser developed countries such as South Africa (SA). There is also more government support offered to Deaf people, such as tele-fax machines, different coloured flashing lights installed in

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[1] Deaf (with a capital D) will be used to denote a deaf person who uses Sign Language as their means of communication and is a member of Deaf Culture as opposed to a deaf person who can lip read and vocalise.

homes to warn of fire or other emergencies and to act as door bells, as well as vibrating mechanisms instead of an alarm clock. These are some of the aids that are provided free of charge to my deaf aunt in Norway. In the UK, Deaf people can have the option of having captioning on their TV, where what is being said during the programme is written at the bottom of the screen and the Deaf person is able to follow the dialogue on the screen. This helps Deaf people keep in touch with what is going on in the rest of the world. Unfortunately in SA there are few programmes on TV where this is done. The news and weather programmes in SA now have Sign Language interpreters translating the news on TV into Sign Language and there is a special programme for deaf people on DTV which does help deaf people to be a little more aware of current affairs. However, these are small changes and the majority of programmes on SA TV are still only able to be seen by deaf people unless they have DSTV (where they have an option to have sub titles on the screen for programmes). However, this DSTV option is out of reach for many deaf people as it is expensive.

Prior to these changes Deaf people who could not read newspapers had very little knowledge about current affairs and currently those who do not have access to TV and are unable to read newspapers still have little knowledge of events occurring in the hearing world.

Despite the South African Constitution (1996) which provides a Bill of Rights whereby no person may be discriminated against on any grounds, including disability, life for Deaf people in South Africa (SA) is still very difficult. The majority of deaf children attend special schools for the deaf, because the mainstream schools do not have the facilities such as Sign Language interpreters to teach them. These special schools, however, generally have had a lower level of education than the mainstream schools, especially in regard to English. As explained in Chapter 2 of this thesis, many deaf students leave school with the equivalent of a 4th Grade education (Aarons, 1999) and this means that these Deaf people are effectively excluded from higher education and find it extremely difficult to get employment. Job opportunities for Deaf people are limited and many of them are employed in menial work or are unemployed.

The good news is that things are changing, albeit very slowly for Deaf students and some tertiary institutions such as the University of the Free State (UFS) and DUT now offer a Foundation Course to help students to improve their literacy levels and help them gain admission into tertiary education. These Foundation courses assist not only Deaf students to improve their literacy levels, but also other second language students too.

These positive improvements are, however, the exceptions and in reality Deaf people are still socially marginalised outside of the Deaf community, with little or no interaction with hearing people at all. This is because Deaf people in a hearing environment have limited means of communication (Lane, Hoffmeister and Bahan, 1996).

In my next chapter I will explain in more detail about deafness, describing some of the specific problems which face Deaf people, because of their generally lower literacy levels compared to hearing people and the problems that they have in communicating with the hearing world, all of which have an exclusionary effect on Deaf people.

1.3   RATIONALE FOR THIS CHOICE OF TOPIC

1.3.1   My personal interest in Deafness.

When I was a child of about 9 years old I watched my aunt who is deaf, struggle to communicate in a hearing world. She was profoundly deaf as a result of having had measles as a child. She was fortunate because by that time she had already learnt to speak, but had difficulty with lip-reading and most communication with her family and hearing friends was done by means of writing. This was not easy to do and none of her immediate family ever learnt anything more than very basic signs. At family functions, she was present, but she always seemed to be excluded from active participation because of her deafness. Some of her own children ignored her almost completely, which meant that even within her own family she was marginalised. This made me realise how marginalised a Deaf person can be even among his/her own family and friends. My aunt

was physically included in functions but in reality she took little or no part in anything that took place there.

I became very interested in the deaf and discovered that there are different degrees of deafness ranging from slightly hard of hearing, to persons who are profoundly deaf and have little or no hearing. Also that not only did the Deaf have their own language-known as Sign Language (SL), but also their own culture, although not all deaf people belong to that culture. Belonging to Deaf culture does not depend on the degree of deafness and many profoundly deaf people, who are able to lip read and 'speak' and whose main means of communication is not Sign Language, prefer to be referred to as being hard of hearing. Members of the Deaf community generally do not regard themselves as being disabled but rather as members of a minority cultural and language group (Lane, 1992).

While doing an action research project I discovered that there was a group of Deaf students studying at Durban University of Technology (DUT) in the Information Technology (IT) Department. During discussions with these students, through their interpreters, I began to realise that these students did not just have a physical disability, but a communication problem as well. Added to this, while speaking to some of my fellow staff members at DUT, I discovered that very few of them were aware that there were so many Deaf students on campus at DUT or that we provided them with additional assistance in the form of Sign Language interpreters.

The Deaf students are a minority group at DUT. In 2009 when I interviewed the Deaf students there were only seven Deaf students that we knew of, among thousands of hearing students studying at DUT in that year. To a certain extent I can personally identify with being in a minority group at a tertiary institution. When I first started my studies in the 1960's, I was one of only three girls in a B.Comm. class of about 360 students. In those times it was not considered acceptable for girls to study anything other than the Arts and Teaching and I encountered a great deal of antagonism on the part of both lecturers and fellow students, many of whom felt that women had no place in commerce. In fact if my father had not been a lecturer at the Medical School in Durban, I

am not sure if I would have been admitted. Fortunately this has now changed and many women have proved that there is no reason why they cannot do as well as men in most fields of study. Deaf students are also limited, as I could have been, in their choice of career. Most tertiary institutions do not provide the extra facilities, such as Sign Language interpreters that Deaf students need in order to be able to study successfully and despite their constitutional rights most Deaf students have no one to fight for their right to be admitted to a particular field of study with assistance. Because of their difficulties in communication, Deaf students are usually unable to fight for their own rights without assistance, which results in them often being ignored and side-lined.

1.3.2   Need for further research in this area

At the time when this research was started not much research had been conducted in the field of Higher Education for Deaf Learners, especially in South Africa.
Research had been done in the UK, the USA and Canada on Deaf schooling as well as Deaf learners in Tertiary Institutions. However, in SA there were still very few tertiary institutions that accepted Deaf students with any extra support. As Watermeyer, Swartz, Lorenzo, Schneider and Priestley (2006) note the Integrated National Disability Stategies (INDS) calls for research in disabilities, therefore, I felt hat there was a need for research in this area which would create an awareness of Deaf learners and their needs, which could perhaps encourage other departments in my institution, Durban University of Technology (DUT) and other tertiary institutions to accept and provide support for Deaf learners in Higher Education in SA.

When investigating a topic for my dissertation I began looking at various forms of disability at Durban University of Technology (DUT), as I felt that this was an area that had long been neglected. There is no Disability Office or even a Disability Officer to assist students with disabilities at DUT. This means that students with disabilities have difficulty in making their special needs known. They do not have someone who can act as a spokesperson for them and make representations for them at various meetings and Boards. The only Disability Policy that I could find for DUT was a document titled

'Disability Policy for Staff and Students at DUT'. However, the only mention made of students with disabilities in the whole document was on the front cover. As a result of these shortcomings, students with disabilities at DUT have had to struggle on their own. The campus does have a few buildings with access ramps and lifts but there are still many venues that are inaccessible to people in wheelchairs (Jali, 2009).

According to a census conducted in 2001 by the SA Government, the percentage of the total population with impairments was 5%, while the percentage of the total population who are hearing impaired was 0.7% (www.info.gov.za). This means that almost 1% of the total population of South Africa have a hearing impairment. Bearing in mind that this figure includes those who are hard of hearing as well as those profoundly deaf, deafness still constitutes a significant percentage of the people with disabilities and for this reason I felt it was important to investigate this group of Deaf students. Deaf people are often overlooked as many of them are unable to speak for themselves.

1.4   THE RESEARCH APPROACH USED.

This will be an interpretive study examining the academic needs of the Deaf students at DUT, with the aim of understanding these needs and experiences from the perspective of the Deaf students. I will also investigating the perspectives of the Sign Language interpreters as to the needs of these Deaf students.

The study will be a qualitative Case Study of the programme for the Deaf at DUT. The case study will encompass the progress that has been made by this small unit (run initially by one person who coordinated and also acted as interpreter in 2000) to the present (2010). The programme has grown to the stage, where in addition to the coordinator, two other full time interpreters are employed. I decided to use the form of a case study of the whole programme for the Deaf and not just the experiences of a few selected students as I felt that I would obtain a deeper insight into the challenges facing Deaf students, as well as what this programme for the Deaf has achieved and what still needs to be done.

A qualitative approach was used as I needed a deeper understanding of the experiences of the Deaf students than I could obtain using a quantitative approach. The qualitative approach seems to be the approach favoured by other researchers in this field such as Magongwa (2008) and Nortey (2009).

1.5   BACKGROUND TO THE PROGRAMME FOR THE DEAF AT DUT

The programme for the Deaf at DUT originated in 1999 when the former ML. Sultan Technikon was approached by one of the schools for the Deaf to accept some Deaf students in 2000 into the Information Technology (IT) Department. These students had varying degrees of deafness but were all dependent upon Sign Language to communicate. The Deaf students have to pass the same proficiency test that the hearing students do before they can be accepted. The IT department appointed a Coordinator for this programme for the Deaf, who would also act as a Sign Language interpreter[2]. Initially they accepted five Deaf students. The number of deaf students has fluctuated over the years and rose to sixteen students in 2005. However, during that year eight of them deregistered as they either could not cope with the work load, or they felt that IT was not their career choice. The problem was that many of them only enrolled in the IT Department because there was no other option available to them, so they might not have been sufficiently motivated to study IT.

When the former ML Sultan Technikon merged with the former Technikon Natal in 2002, to form first, the Durban Institute of Technology and then the Durban University of Technology, the merged IT departments continued to offer support to Deaf students.
The IT Department at DUT currently employs three full time Sign Language Interpreters, who attend lectures, tests and examinations with the Deaf students and interpret what is said to the students. They also run extra tutorials for them and are available to assist them in any other way that they can. It is a very demanding job and these interpreters need to

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[2] Sign Language interpreters are people who need to be fluent in Sign Language and at least one other language. They act as the ears and voice for a Deaf person when dealing with hearing people. They have a code of professional conduct and ethics to which they must adhere.

be dedicated to the students. As well as being able to interpret Sign Language, they also need to understand the subject matter, so that they can correctly interpret and explain the lectures to the students. It is important that these Interpreters have some form of Educational or Teaching background as they need to be able to explain the lecture content to the students. They must understand what the lecturer is saying so that they do not interpret incorrectly.

Until 2007 the Information Technology (IT) Department was the only Department at Durban University of Technology (DUT) which accepted and offered any form of support system to Deaf students, but in 2008 a Deaf student was accepted into the Financial Accounting Department under the Programme for the Deaf with the added assistance of Sign Language interpreters.

There have been a few deaf students, who have been admitted to other Departments in the past, but they had no support offered in the form of Sign Language interpreters and I am not sure what their level of deafness was, or if they were able to lip read. I was unable to find out if there were any other deaf students registered in other departments at DUT in 2009. Thus I have concentrated on the Deaf students who have been accepted under the Programme for the Deaf, who all depend heavily on the Sign Language interpreters.

Up until 2009 seven Deaf students have graduated from DUT with Diplomas in Information Technology. This might not sound like a large number but these students may never have been able to achieve this if they had not been given the opportunity firstly to register and then had the added support of the Sign Language interpreters.

1.6   LITERACY AND LANGUAGE PROBLEMS FOR DEAF STUDENTS

According to Sacks (1990) the problems of the Deaf students are a special case as their deafness affects them not only in the physical sense of not being able to hear or speak, but also in their literacy levels. For most Deaf people, Sign is their first language and English their second or third language. There are degrees of deafness ranging from the

profoundly deaf to those who are 'hard of hearing', but more important than the degree of deafness is the age at which the person became deaf. If a person becomes deaf after he/she has learnt to speak, he/she will still be able to speak, even if he/she becomes profoundly deaf. However, it is almost impossible for a person who has never heard speech to be able to imagine sound. This means that most people who are born profoundly deaf have no way to communicate with others except by the use of Sign Language, lip reading or resorting to writing down everything. If such people do not learn at an early age to communicate, then this will have a serious effect on their linguistic abilities (Sacks, 1990).

Deaf children born to deaf parents, can learn as early as six months of age, how to sign. By the age of fifteen months they can have a considerable vocabulary (Sacks, 1990). However, hearing parents of deaf children are often not even aware of what is wrong with their child and think that they are retarded. This means that some of these children are only diagnosed as deaf when they first go to school, which results in their vocabulary being far behind that of the average child. This coupled with their deafness makes learning very difficult for them.

Lane (1992) explains that there are various approaches to Deaf Education, the two most common being the Oral Approach, and Bilingualism and Second Language Learning.
The Oral Approach discourages the use of Sign Language and the deaf person communicates by lip reading and vocalizing. The argument for this approach is that it is supposed to make it easier for the deaf person to 'fit into' the hearing world and seems to be popular with many hearing parents of deaf children (Lane, 1992).
However, according to DeafSA[3] (2008) this approach will only work with certain children, usually those who have some degree of hearing and who are able to imitate sounds that they hear. For this and other reasons which will look be examined in more detail later in the study, DeafSA discourages the use of this approach.

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[3] DeafSA is the Deaf Federation of South Africa and represents the Deaf Community in SA and have been lobbying for years to gain recognition for South African Sign Language as an official language in SA.

The approach that DeafSA endorses is Bilingualism and Second Language Learning, where Sign Language is treated as the students' first language and children are encouraged to learn Sign Language as early as possible. If a child has a good understanding of their first language, (in the case of Deaf students this would be Sign Language) that child would find it much easier to learn to read and write another language such as English (Lane, 1992). Sign Language is taught in some of the Deaf Schools and is also used in some of these schools as the medium of instruction (DeafSA 2007). Written English is the second language. However, at present, teachers of the deaf in South Africa are not required to learn South African Sign Language (SASL) or to have any specialised teacher training in order to be able to teach the deaf (Storbeck, 2005). This means that many deaf children do not learn Sign Language as a subject at school and thus do not have a good foundation in their first language Sign Language. This makes it harder for them to learn to read and write English. Since the profoundly deaf are unable to hear spoken English, if they do not have a good grasp of their first language, Sign Language, this could be one of the main reasons why the majority of deaf learners in South Africa leave school with a matriculation which means that they do not qualify to enter into Higher Education.

Some hard of hearing or deaf students who have acquired the ability to lip read, may be able to manage without a Sign Language interpreter, but need to be able to watch the lecturer's lips at all times. This can be difficult if the lecturer does not face directly towards them, or if the lighting is bad. Deaf students generally need some extra form of support system, such as interpreters, note takers, counsellors and extra tutorials. Lecturing staff are usually willing to help, but are generally unaware of what they can do to assist the Deaf student.

1.7   THE INCLUSION OF DEAF STUDENTS IN TERTIARY INSTITUTIONS

The inclusion of students with disabilities in tertiary institutions has become an increasingly important issue in South Africa with the drawing up of a 20 year plan in the Department of Education White Paper 6 (2001). All Higher Educational Institutions in

South Africa (SA) are required to increase the number of learners with 'special educational needs' that they enroll and must have plans in place to show how they are going to do this. They must also provide reasonable accommodations for these students to help them cope with their disability in a tertiary environment. Most Deaf students need some intervention to enable them to access the information delivered verbally during lectures: the most common intervention being the provision of Sign Language interpreters. Other interventions could be extra tutorials, provision of note takers, extra time in exams and tests and extra English lessons to improve their literacy levels. Howell (2010:164) makes the point that

> "... disabled students in South Africa, particularly black disabled students have in the past been − and continue to be −especially vulnerable to exclusion from the education system, including the Higher Education system"

Many people with disabilities, although accepted into Higher Educational Institutions, are not fully included in all the activities of the Institution. This can arise out of a lack of understanding on the part of the able bodied people who are part of the Institution, and sometimes even a 'fear of the unknown.' This is particularly the case of Deaf students who have difficulty in communication with hearing students.

This is where a well -planned and coordinated Inclusion Policy could help. I witnessed one example of this while in Canada four years ago. I visited a Primary School in Vancouver (Glenwood Primary) which practiced Inclusion. It was a relatively small school but included in the classes were a few children with disabilities. One child in particular was severely disabled, physically and mentally. He had his own special 'helper' and participated fully in the class and other activities. He took part in the school concert and from the smile on his face he really enjoyed himself. Even the school sports day had some activities that all the children could participate in. The other children were very considerate of their friends with disabilities and accepted them as they were, and not as something strange or frightening. I feel that with this sort of education these children could grow up to accept disability as a part of normal day to day life and realise that disabled people are human beings with the same emotions and feelings as they have.

'Eventually society will experience a reduction in prejudice and discrimination against disabled people as difference becomes part of everyone's experience and disabled people become part of the community in their own right' (Reiser, 2006:177).

Unfortunately this type of inclusive education is difficult and costly to implement at tertiary level.

South Africa is not as progressive as many other countries in the world in regard to the inclusion of Deaf students, as we do not have universities like Gallaudet University in America, nor do we have many universities which offer any form of extra academic support to such students, such as Sign Language interpreters and note takers. The Deaf students in the USA even have their own University, Gallaudet University which is run by the Deaf for the Deaf. Gallaudet University also accepts hearing people who wish to study there, but the majority of students are Deaf. Rochester University of Technology, also in USA, also has a special unit for the Deaf on the campus of the University. Both Gallaudet and Rochester offer various support systems to Deaf students such as innovative ways that students can communicate with hearing students and lecturers. Both Sign Language and English are used in all lectures at Gallaudet.

The University of Witwatersrand (WITS) in SA does offer a number of courses in Deaf Education, among them the B.Ed. (Hons) (Deaf Education), which helps equip teachers to teach Deaf learners both in the mainstream and in schools for the deaf, as well as courses in South African Sign Language (SASL) and Deaf Culture[4]. This is an important step in the move to increase the number of teachers who are qualified to teach the deaf. As the teachers attending these courses are required to learn SASL as part of their curriculum, this should increase the number of teachers of the Deaf who are well equipped to deal with teaching Deaf children (Storbeck, 2005). However, these courses are all post graduate courses and Deaf students coming from Deaf schools still have a

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[4] Deaf Culture: members of Deaf culture are usually Deaf and use Sign language and tend to look down on deaf people who do not sign or use speech as a means of communication. Members of Deaf Culture do not regard themselves as disabled.

problem being accepted at first year level unless they are exceptional students and can cope without needing any extra support in the form of Sign Language interpreters.

In 2005 the University of the Free State (UFS) accepted its first Deaf student to be provided with support in the form of a Sign Language interpreter and had six Deaf students registered in 2009 who had Sign Language interpreters provided for them (Miranda, 2009).

Cape Town University has an excellent Disability unit which offers access to students with a large range of disabilities and the university even went as far as registering 2 deaf students for the Diploma in Adult Education offered by CHED two years ago. They provided funding for a Sign Language interpreter, but unfortunately both students withdrew due to work and personal pressures. However, the infrastructure is in place for future deaf students who wish to study there. They were also going to accept a profoundly Deaf student in 2009 but unfortunately by the time that they had managed to find a suitably qualified Sign Language interpreter, there was no place in residence for the student and thus the student withdrew their application (Popplestone, 2009).

Deaf students have been attending classes in the Information Technology Department at DUT since 2000 under a programme for the Deaf and these students are given extra facilities to assist them, including the services of a Sign Language interpreter and extra tutorials provided.

Naicker (2005:19) describes inclusive education as: "a system of education that is responsive to the diverse needs of learners". In order for disabled learners to be fully included it is essential that academic and support staff of the institution need to be aware that the learner is not fully included if he/she is sitting in the same lecture venue as the other students, but is not participating fully in the life of the University (Cole, 2006).

It is not enough to merely include Deaf students in the academic programme with assistance. It is essential that they interact with fellow students in order for them to be

able to participate in group discussions which will facilitate active learning. Students' learning at a tertiary institution is not confined to what they learn in the lectures, as they learn from tutorials and discussions with fellow students, as well as by working in groups with fellow students. This active learning reinforces what they read in their text books and learn in lectures. In order to achieve this, the Deaf student's social skills must be developed as these will have an impact on their academic progress (Hung and Paul, 2006).

My research questions focus on the academic needs of the Deaf students. However, in order for students to gain maximum benefit from their tertiary education, they also need to have their social needs met. Students learn social behaviour from their peers and how to interact with other people. This is an important part of development because when they leave the university to go into the work place they will need those skills (Hung and Paul, 2006). This ability to socialise and communicate with other people is even more important for Deaf students than for hearing students. All the Deaf students in this study went to schools for the deaf and did not communicate much with hearing people so they need to develop social awareness skills that will help them to cope in the hearing world. They need to learn what is and is not acceptable behaviour when mixing with other people (Silveira, Trafford and Musgrove, 1988). The Deaf students can cope well among the Deaf community but if they wish to be employed in the hearing world then they need to be able to interact with hearing people.

As will be shown further in this study, Deaf students have difficulty in communicating with hearing people and although the Deaf students are included in the mainstream lectures, they have a problem coping with group work, unless an interpreter is present.

1.8   RESEARCH QUESTIONS

My main research question is:
"What are the academic needs of Deaf students in a higher education environment?"

In order to answer this question it will be necessary to ask the following specific questions:

1. What are the academic needs particular to Deaf students as perceived by the Deaf students studying Information Technology at DUT?

2. What are the academic needs particular to Deaf students as perceived by Sign Language Interpreters helping deaf students studying Information Technology at DUT?

1.9 PURPOSE OF MY RESEARCH

The purpose of my research is to provide some answers to the two research questions shown above.

Because many Deaf people are unable to 'speak' for themselves this could be an opportunity to make more people at DUT and elsewhere aware of their existence and the difficulties that they encounter at DUT. I hope that this study will create an awareness of the challenges faced by the Deaf students at DUT and that further studies might be undertaken to attempt to find a means of redressing some of these challenges.

This will include looking at ways in which the Deaf students can be fully integrated into the activities of the University, while still maintaining their own identity and Deaf culture.

This study aims to identify the academic needs of Deaf students studying at DUT so that, in time, these needs can be addressed. It is hoped that this research into the Programme for Deaf students at DUT will help the reader to understand the experiences and challenges of Deaf students in Tertiary Education at DUT and the unique position that these students find themselves in, more clearly than if the facts and figures only were presented. The study might motivate other departments within DUT to think about

enrolling Deaf students for their courses, with the added support of Sign Language interpreters.

At present there has not been much research done in this area and DUT is one of the few universities in South Africa that not only accepts Deaf students into any of their programmes, but also offers support in the form of Sign language interpreters.

1.10   CONCLUSION

Very few Deaf students enroll to study at Higher Education Institutions and one of the reasons for this could be the poor education offered at many of the South African schools for the Deaf as well as the low literacy levels of most Deaf Learners, through no fault of their own. More than 90% of Deaf learners have hearing parents who cannot communicate in SASL. This means that their vocabulary is limited and their literacy levels are lower than those of hearing children of the same age. The standard of education at many of the deaf schools is not as high as in the mainstream schools and since they are mostly taught in spoken English and not their home language, Sign Language, this has an adverse effect on their literacy levels. Most of them would not be accepted into other tertiary institutions as they do not meet the entrance requirements. This means that they do not have many choices if they wish to study further (DeafSA Education Position Paper: draft 17. 2006).

It is hoped that this study will create awareness among the staff and students of DUT of the existence and struggles of the Deaf students at DUT. It is tragic that so few people at DUT are even aware that there are so many Deaf students studying in one Department. The study should highlight areas where improvements can be made to the conditions at DUT so that more Deaf students can be accommodated not only in the IT Department but also other Departments. A start has been made in this regard with the acceptance of one Deaf student to the Financial Accounting Department under this programme for the Deaf in 2009.

This study might also encourage and motivate other Deaf students to try and achieve what the Deaf students at DUT have done and perhaps encourage other institutions to also give Deaf students a chance to prove themselves. So far up to 2009 seven students have graduated under this programme for the Deaf.

1.11   SUMMARY OF CHAPTER 1

In this chapter I introduced my topic and gave the rationale for choosing the topic. I explained the varying degrees of deafness that exists among deaf people. I explained briefly about the Program for the Deaf at DUT and the people who will be interviewed during my study. I mentioned the major limitations to my study and what I hope to achieve by doing this study, and I hope that I have created an interest in this topic which will inspire the readers to learn more about the Deaf.

In my next chapter I will expand upon the concept of Deafness and Deaf culture, so that hearing readers can understand certain issues which affect the Deaf, of which I, as a hearing person, was completely unaware. I feel that it is important to set the background from which the Deaf students have come, so that readers can understand the problems encountered by Deaf students at DUT.

1.12   ORGANISATION OF THIS STUDY

Chapter 1 –   This chapter gives the background to the study, the reasons why I decided to do this study, limitations of the study and what I hope to achieve by doing this study.

Chapter 2 –   This chapter gives a deeper insight into deafness, Deaf Culture and various issues which affect Deaf people. It is important as it helps the reader to understand the context within which the Deaf students are situated and helps to understand the many differences between the Deaf

and the hearing world. It also goes into more detail on the Programme for the Deaf at DUT.

Chapter 3 -   This chapter reviews the literature regarding disability and the various models of disability and Deafness in particular, as well as the concepts of integration, inclusion and segregation of deaf students in the higher education system.

It looks at how these concepts are regarded globally, and then in the South African context and finally it examines what is being done at DUT to bring it closer to developments in the rest of the world in creating an environment conducive to learning by Deaf students.

Chapter 4 -   This Chapter describes the Research Methodology used.

Chapter 5-   This chapter gives the results of the study and analyses these results

Chapter 6 –   In this chapter the findings will be presented and recommendations made.

CHAPTER 2: DEAFNESS IN HIGHER EDUCATION: LIVING AND LEARNING

2.1 INTRODUCTION

This chapter has been included to help hearing readers to gain a basic understanding of what it is to be deaf. It is hoped to demonstrate the differences in the lives of hearing and deaf people, because only when people understand that, will they be able to understand the challenges that face Deaf students at a tertiary level.

"I recognise that my pursuit of knowledge about Deaf people, however intense and prolonged, will never give me the knowledge of a Deaf person" (Lane, 1992: xiv).

This very powerful quote from a man who has written numerous books and articles about the Deaf makes one realise that it is extremely difficult for the average hearing person to imagine what it must be like to be profoundly deaf. No matter how much one reads up about Deafness unless a person is deaf them self, they will never completely understand what it is like to be deaf (Lane, 1992).

One can only imagine how difficult it must be for a Deaf person to be alone in a room full of hearing people who appear to be opening and closing their mouths, (laughing and talking) but the deaf person has no idea what is going on. They must feel isolated and marginalised, and possibly even disorientated.

2.2 WHAT IS DEAFNESS?

There is no global description of deafness that serves the needs of all deaf people because there are varying degrees of deafness and the different advantages and opportunities that the deaf may or may not have access to.

The different degrees of deafness, range from those who are merely 'hard of hearing', who can hear some sounds and can be helped with the use of a hearing device, to the

profoundly Deaf, who can hear little or nothing at all. Those who are 'hard of hearing' might only need to use a hearing aid, which might be of little or no use to a profoundly deaf person, who cannot hear much except noise.

Deafness is different from most other disabilities where the person, although disabled can still communicate with other people. Many Deaf people by the very nature of their disability; which cuts them off from communication with hearing people if they do not have the intervention of Sign Language interpreters, are effectively marginalised by the hearing world.

2.3 LITERACY

Whatever the cause of the deafness, the earlier a Deaf child is diagnosed as being deaf and starts being taught to communicate, the better their chances of having a good level of literacy (Sacks, 1990). Unfortunately many deaf children in South Africa are only diagnosed when they start school. As a result they do not have the same vocabulary as the average school going child, which makes it very difficult for them to catch up with their peers (Aarons and Akach, 2002).

The level of literacy of a deaf child also depends on the attitude of the child's parents. A Deaf child born to Deaf parents is likely to be taught Sign Language from birth and by the age of fifteen months they can have a considerable vocabulary (Sacks, 1990).
Once Deaf children have learnt to sign, they then find it easier to read and write (Sacks, 1990).

 In a home where one or more of the parents are Deaf, Sign Language will probably be the home language. If Deaf children have a good vocabulary and knowledge of Sign Language, they will find it easier to learn a second language, such as English. Ironically it is an advantage to be a Deaf child born to Deaf parents, rather than to hearing parents.
Deaf children born to hearing parents do not have the advantage of parents who understand what it is like to be deaf and how to cope with deafness. Often the parents do

not even realise that the child is deaf until he/she goes to school and is tested. By this stage their language skills are far behind those of their hearing peers (Lane, 1992).

If the parents are Deaf they already know what it is like to be Deaf and this makes any decisions regarding the up-bringing of their child much easier than for hearing parents. If the Deaf parents already use Sign Language, then there are far fewer decisions to be made. Their home language will be Sign and the parents will start signing to the child from a few months of age. They will probably be involved in the Deaf community and the child will probably attend a school for the deaf, so the decision about how to treat their deaf child will be much easier for them.

However for hearing parents of deaf children it is much more difficult as they do not have experience with deafness. The first step is getting the child's hearing tested in order to know how severe the deafness is. Once that is done, the parents will have to decide whether their child should be taught in a special school for the deaf or a mainstream school.

Throughout their lives hearing people gain additional knowledge in an informal manner, by way of hearing conversations between other people, on the radio or TV. Deaf people on the other hand miss out on much of this informal knowledge acquisition as they are unable to hear (Mole and Peacock, 2006).

In 1998 the average reading age of Deaf adults was about 4th Grade (Aarons, 1999). The insistence of deaf schools on the Oral approach to teaching the Deaf has not been very successful, mainly because the profoundly Deaf cannot hear and thus cannot be taught to hear. They might be able to learn to lip-read but in many situations they are disadvantaged, as in order to 'read' lips one has to be looking at the person face to face. This is extremely difficult in a group situation where different people talk at different times. It is also almost impossible to lip read a sound that one has never heard and it takes an enormous amount of time and patience to teach a profoundly Deaf person to lip read and vocalise. Aarons (1999) feels that it would be far more beneficial to teach a Deaf

child to sign. This would increase his/her vocabulary and also his/her literary levels, instead of wasting hours on speech therapy, which will not help many Deaf children (Aarons, 1999).

This opinion is endorsed by Lane (1992), when he says:

> "The superior performance of children from Deaf homes highlights the changes that most need to be made in the education of deaf children; namely a return to manual language, deaf teachers and deaf administrators directing the residential schools – successful practices in the last century, when American Deaf children studied all their subjects in their most fluent language, ASL" (Lane,1992:139).

Profoundly Deaf people have to rely on lip reading and Sign Language in order to communicate. The life stage at which a person lost his/her hearing is vitally important in the acquisition of spoken language. A person who loses his/her hearing after the age when they had started to speak will be able to verbalise and will also find lip-reading easier than a person who has never heard sound (Sacks, 1990).

Many Deaf children born to hearing parents go through a barrage of tests and examinations to try and 'cure' their deafness. There is a relatively new 'treatment' for deafness, which was discovered in the 1990's – the Cochlear Implant. This is a surgical procedure which has been described almost as a miracle cure for deafness and gives hope to many hearing parents of Deaf children who begin to hope that their child will be 'normal' (Lane, 1992). Some deaf children, usually those who had some hearing before they had the operation, can be helped. However, many children have this operation and are still able to hear little or nothing at all. They are then subjected to many hours of voice training to enable them to speak and are not much better off at the end. There is much controversy among Deaf people about these implants and whether deaf children should be subjected to this operation (Lane, 1992).

> "Although the implanted deaf child will not move easily in the hearing world, it is unlikely that he will move easily in the Deaf community either, unlikely that he

will learn American Sign Language (ASL) fluently and make his own the fundamental values of that community. This will result in him/her growing up without any substantive communication, spoken or signed" (Lane, 1992:4)

According to Lane, Hoffmeister and Bahan (1996), the main goal of these implants is to try and enable Deaf children to communicate by way of normal speech. However, many profoundly Deaf people will never be able to 'speak normally'.

The Deaf community tends to condemn Deaf people who try and 'speak' in order to fit into the hearing world, while hearing people feel pity for those 'afflicted' with deafness who seem to do nothing about it. The Deaf do not feel disabled in their culture as they have an active social life and there are many talented actors, performers and artists who are Deaf. There are many prominent Deaf people who have written books, articles and plays about deafness (Lane, 1992), and later in this chapter we will see how a group of Deaf students at Gallaudet University made themselves and their demands known to the whole world.

2.4   EDUCATIONAL SETTING

Certain factors affect a Deaf person's ability to make the most of whatever hearing they may have. Background noise is very distracting to a deaf person, as are 'reverberations' in the venue. Additionally the person speaking should be fairly close to the deaf person (Cayton, 1987). This means that many lecture venues are far from ideal as they are mostly large and rather noisy. The situation is further exacerbated by other students talking in the background, especially during lectures.

2.4.1   Aids to assist Deaf students to cope in a Tertiary environment

- **Hearing Aids** do not correct a person's hearing but rather 'boost' any residual hearing that a person may have. Good hearing aids can be very helpful to partially hearing people, but not every deaf person is able to be helped by hearing aids, as

the aid can only magnify what the ear can hear. Many deaf people can hear noise but are unable to hear 'speech patterns' (Cayton, 1987).

- **Sign Language interpreters** are used in some tertiary institutions in South Africa such as the University of the Witwatersrand (WITS), University of the Free State (UFS), and DUT. This is only of benefit to those Deaf students who use Sign Language. There is some difficulty in obtaining suitably qualified Sign Language interpreters who are able to correctly interpret the content of lectures to the students, but for Deaf students who can only communicate by means of Sign Language they are an immense help.

- **Note Takers** who either take down notes for the Deaf students, which can be costly, or fellow students who give the Deaf students a carbon copy of their notes as is done at UFS, can be helpful. This is because it is impossible for Deaf students to watch the Sign Language interpreter and take down notes at the same time.

- **Assistive learning devices** where the lecturer and the student both wear a device which helps the deaf student to hear what the lecturer says. Many lecturers do not like to wear these devices and students also have problems carrying the device around campus (Warick, 2004).

At the University of Bath in the UK there are venues **with built -in hearing loop systems,** which help enhance the residual hearing of some deaf students who do not sign and who have some hearing, good lighting in certain of the venues to make lip reading easier and additional level desk space for professional note takers to work at. (www.bath.ac.uk/learning-support/prospective/access-support.html)

- **Captioning** is used at the University of British Columbia in Canada where what is said by the lecturer is shown on a screen for the students. The equipment needed to do this, is however, costly.

2. 4.2 Durban University of Technology

At the time of the study, there still does not appear to be any Disability Office or Disability Officer at DUT. There is no mention of disability on their website and, although they accept students with disabilities, there does not appear to be any formal structure in place to assist them, other than that offered to the Deaf students by the IT Department (Jali, 2009). The Department of Language and Translation ran a Sign Language course for the library staff a few years ago which created an awareness of Deafness and the Deaf student, but this was not enough to help them to communicate with each other. For students with other disabilities, apart from a few ramps being built for students with physical disabilities there is little else that appears to be in place.

In the year 2000 the then ML Sultan Technikon accepted five Deaf students to study for a diploma in IT at the request of the VN Naick School for the deaf. These students were to be given additional support in the form of Sign Language interpreters, tutors and note takers. This programme was restricted to the IT Department and Deaf students who wanted support to study anything else at the Institution were unable to do so. The programme has been extremely successful as four of the original five students have now graduated – one of them within the same three year period as the hearing students. Since then a further five Deaf students have graduated in this department. These are intelligent young people who, if they had not been given the chance to study, would probably be sitting at home unemployed, or working at a menial job.

2.5 SOCIAL AND CULTURAL MORES AND DEAFNESS

Deaf Children need Deaf role models as they grow up so that they can learn Sign Language from them and also learn about Deaf Culture. Children born to Deaf parents are fortunate in this regard. But Deaf children born to hearing parents are often not aware of the assistance that they are able to get from the Deaf Community and the reassurance

that could be given by Deaf members of the Community who are educated, hold down jobs and raise families. The parents of Deaf children need to be shown that their child too could lead a relatively normal life (Lane, 1992).

2.5.1   Deaf culture

The Deaf have a very strong Deaf Culture and this culture and the bonds between its members are often stronger than the bonds between the Deaf person and his/her hearing family (Lane, 1992). For this reason forcing Deaf pupils into mainstream schools might not necessarily be the best thing for the Deaf child, especially if he/she is profoundly Deaf. Hearing people, especially parents of Deaf children, might find this concept difficult to understand, but it might be better to have a child, who, although unable to speak or communicate 'normally' has a good grasp of Sign Language and can communicate easily and fluently among the Deaf community, than a child who can lip read and 'might' be able to say a few words aloud, but has a very small vocabulary and low literacy levels. Deaf Children who have a good grasp of their home language – Sign, usually cope much better with their second language, written English (*Ibid)*.

According to Ram (2010) many deaf people have problems trying to find their own identity. Some try and fit into the hearing world by learning to lip-read and speak, while others embrace Deaf Culture. This choice is not always dependant on the degree of deafness, but rather where they feel most comfortable. Some people who learnt to lip read and 'speak' at school might later in life decide that they prefer to mix with fellow Deaf people who can sign (Ram, 2010).

Many members of the Deaf community believe in marrying within the Deaf community. This is because they have the same culture and language and can often understand someone who speaks the Sign Language of another country fairly well. Even when somebody is from a country like Japan where their spoken language is very different from ours, the Sign Language is fairly similar. There might be some differences but they can still communicate with each other (Lane, 1992). This seems to argue in favour of the

cultural-linguistic paradigm as Deaf Culture embraces a community of people with a common language (Sign Language) as well as a common culture, with their own Deaf actors, comedy, art and writing.

Since mainstream schools do not have the trained staff to teach South African Sign Language, it would be better for Deaf school pupils to attend Deaf schools, provided that these have properly trained staff who can teach in Sign Language, either teachers who are Deaf themselves or who have studied SASL and are fairly fluent in it.

2.5.2 Models of Deafness

One way of regarding Deafness is the Medical Model and regarding it as a disability or lack and something to be 'fixed' and another being the Social Model, which is the view held by many of the Deaf, where they view themselves as a cultural minority with their own language and culture (Reiser, 2006). One example of the application of the Medical Model to a Deaf child would be trying to 'fix' their deafness by means of a Cochlear Implant. This may be an appealing option to hearing parents of a deaf child, who want their child to fit into their world, however, there is a gradual shift away from the Medical model, it is treats the person with a disability as if they were 'abnormal' instead of just different. The majority of Deaf people reject this particular model of disability.

The Social Model does not create the same negative feelings as the Medical Model, as it looks to accommodate Deaf person by trying to adjust the environment to include the Deaf person, rather than expecting the Deaf person to adapt to the environment.(Oliver, 1983: Ram, 2010). However, barriers can arise as a result mainly of ignorance and prejudice on the part of the hearing, which result in disablement (Reiser, 2006). At DUT the Deaf students have been provided with Sign Language interpreters, but, because they have difficulty in communicating with hearing people, they still tend to be ignored and isolated. This means that they are not able to participate in most of the activities of the institution other than lectures and tutorials.

The Cultural- linguistic model takes into account the problems that Deaf people have in communicating with hearing people. Sign language used by Deaf people is a visual language. Deaf people are expected to communicate with hearing people in a spoken language which they cannot hear. This model regards Deaf people as having their own culture and language. (Ram,2010). It is interesting to note that many Deaf people do not regard themselves as disabled, but just as having a different culture and language (Magongwa, 2009). This vie is endorsed by Lane, Hoffmeister and Bahan (1994). When talking of Deafness and disability, they describe the Deaf Community as a 'linguistic minority' (*ibid*:42). This is an interesting concept and could affect how we look at Inclusive Education regarding Deaf students. Do we want them to be included under the umbrella concept of disability and make accommodation for them, or as a linguistic minority and cultural group who want to be taught in their home language which is South African Sign Language? The socio -cultural model is one which assists Deaf people in finding their identity.

There are also human rights issues involved as every disabled person is entitled to the same treatment as anyone else by virtue of being a human being in terms of the Constitution of South Africa (The South African Government, 1996)

2.5.3   Sign Language

Sign Language is a visual language and not a spoken one. The 'speaker' uses his/her hands, face and body to get the message across. It originated in about 1750 in Paris when an Abbe' de l'Epee came into contact with some deaf people in the poorer streets of Paris and discovered that they used a form of sign language which was indigenous to that area. He learnt their sign language and then 'by associating signs with pictures and written words, he taught them to read' (Sacks, 1990:17). This was the beginning of an organised Sign Language.

Prior to this there was little or no uniformity in the signs and gestures used by people who were deaf and mute. Abbe' de l'Epee founded a school in 1755 and by the time he died

in 1789 he had trained many teachers of the Deaf, who in turn had founded twenty one schools for the Deaf in France and Europe. These schools taught deaf children to read and write by using Sign Language as the means of communicating and teaching them (*Ibid*).

The first school for the Deaf in America was founded by a Deaf Frenchman, Laurent Clerc and Thomas Hopkins Gallaudet, a hearing American. This school eventually became Gallaudet University, which is a University which caters mainly for the Deaf in America.

When Gallaudet University was formed, all instruction was in Sign Language and this was a major step forward for profoundly Deaf people who could not speak. They discovered that speech is not necessary within the Deaf Community if one is able to sign. Though initially not all the teachers were Deaf, they had to be proficient in Sign Language to be employed (*Ibid*).

Originally Gallaudet was run by hearing people, but as more and more Deaf people became educated they began to want their own university run by Deaf people. This resulted in the 'Gallaudet Revolution' in March 1988: all the students at the university united to protest against the appointment of a hearing person as President of the university. This was successful and in 1988 the first Deaf President of the University was appointed. It was also a historic occasion as the Deaf showed the world that they did in fact have a voice. Gallaudet is now an example to the rest of the world of the fact that a community of Deaf people is not a community of disabled people and is capable of achieving what would have seemed like a miracle fifty years ago (Lane, 1992).

2.5.4   The controversy between whether to sign or to 'speak'

There is much controversy about whether deaf people should be taught to 'speak' so that they can fit in with the hearing world or should learn to communicate by way of Sign Language.

Proponents of the Oral school argued that Sign Language has isolated the Deaf and encouraged the growth of Deaf culture. Hearing parents felt that it prevented their children from speaking and thus being more 'normal' (Van Cleve & Crouche, 2002).

In 1880 the International Congress of Education of the Deaf held in Milan decreed that the use of Sign in Schools was 'officially proscribed' (Sacks, 1990).

This meant that teachers were not allowed to use Sign when teaching deaf pupils. The Deaf students had to struggle to try and use speech, which for them was unnatural, and for many impossible. If a student could not lip-read or verbalise they were cut off from any form of communication and were unable to be taught to read and write (Sacks, 1990).

At many Deaf schools in South Africa, although Sign language is no longer banned, many teachers of the Deaf are hearing and therefore do not sign. This must be extremely difficult for children who have little or no residual hearing and cannot hear or understand what the teacher is saying (DEAF Federation of South Africa, 2006).

In Martha's Vineyard in the 20th Century, there was an unusually high proportion of hereditary deafness and most of the local families had one or more deaf members. In this community everyone, Deaf and hearing, used Sign Language and no one was disadvantaged by the fact that they were Deaf. People were accepted as normal human beings and not thought of as being Deaf or Hearing. In fact, whenever a baby was born Deaf the community rejoiced. Unfortunately due to the modern world and improvements in travel, this community no longer exists as it did then (Sacks, 1990), but it was a wonderful example of a situation where the community adapted to meet the needs of their Deaf friends and family and everyone was fully included in the community and its activities.

2.6   SUMMARY

This chapter gives the reader some insight into the world of the Deaf which was important to the study, because in order to understand the needs of Deaf people and their perceptions of their needs, one must understand something about their background and culture. When most students enter tertiary education for the first time they find that tertiary education is very different from school and they have to adapt to the new environment. For the Deaf students it is an even greater adjustment from being at a

school where they were mainly surrounded by other Deaf people and only a few hearing people, to being on a large campus with where all the lecturers are hearing and there are very few Deaf students.

The next chapter will review the literature that influenced my research.

CHAPTER 4: METHODOLOGY.

4.1   INTRODUCTION

This chapter will explain how the research was conducted, what methods were used and why those methods were used. The problems that arose in gathering the data, mainly as a result of the fact that the researcher was not Deaf and could not sign at all and was relatively new to the whole research process will also be clarified.

4.2   PURPOSE OF STUDY

The main question of this study is: 'what are the academic needs of Deaf students in a Higher Educational environment?' This will be answered through the exploration of two specific research questions:

1. What are the academic needs particular to Deaf students as perceived by the Deaf students studying Information Technology at DUT?
2. What are the academic needs particular to Deaf students as perceived by Sign Language Interpreters helping deaf students studying Information Technology at DUT?

4.3   RESEARCH APPROACH USED

One way to understand the perceptions of Deaf students of their academic needs is to engage in an interpretive study. Because it is difficult, if not impossible for hearing people to fully understand the experiences and thus the needs of Deaf people tapping into the experiences as the Deaf outline them is important so this will be an interpretive study. In order to be able to do this I have to understand to some degree a part of what the Deaf students at DUT experience and what it is like to be one of a small group of Deaf students studying at DUT. Only then might I be able to partially understand why they feel the way that they do. (McNeill, 1990). Only by communicating with these students will I be able to gain real insight into their feelings and perceptions.

4.3.1   Qualitative or quantitative?

I used a qualitative approach to this research because I needed a deeper understanding of the students' and their interpreters' perceptions of the experiences and challenges facing Deaf students studying at DUT under the Programme for the Deaf. A quantitative approach to this study would have confirmed patterns and trends but would not have shown the underlying reasons for these trends. A qualitative study looks more deeply into data than quantitative studies where the research base is broader (Creswell et al, 2007).

It is difficult to quantify peoples' perceptions and thus the qualitative approach seemed to be the best for this purpose. This opinion was endorsed by Cohen, Manion and Morrison (2000).

Because there were only a small number of students with varying degrees of deafness and varying needs in this study, it was not possible to rely solely on information which could be quantified so each student and his/her perceptions had to be looked at separately. Bloomberg and Volpe, (2008), describe the qualitative approach as "a broad approach to the study of social phenomena" (Bloomberg and Volpe, 2008: 9). Much of the research done in this field seems to have also used a qualitative approach. "The literature in the field of deafness contains numerous examples of qualitative research methodology" (Magongwa, 2008:57).

According to Bloomberg and Volpe some of the other advantages of using a qualitative approach are that a qualitative study is flexible, purposely uses small samples and seeks to discover the 'essence' of the topic, which is what this research seeks to do (Bloomberg and Volpe, 2008:13). This was important because I wanted to understand the Deaf students in order to realise how different their experiences at DUT would be from those of hearing students.

Quantitative research usually selects large random samples which are then systematically studied, in a manner which is usually predetermined (Bloomberg and Volpe, 2008). This would not be suitable for this study as there were a very small number of participants and there was little choice or selection as all the Deaf students registered in any year of study under the Programme for the Deaf at DUT in 2009 participated.

This is not an ethnographic study, as I was not a participant observer in the research, but only an independent, passive observer who did not spend lengthy periods of time observing the Deaf students. It would have been impossible for me as a hearing person who is unable to sign to join the group of Deaf students as part of the group, nor to follow them around campus observing everything that they did over a period of time, and so I maintained my independence (Bloomberg and Volpe, 2008).

The main method of data gathering would be focus group interviews with the Deaf students and individual interviews with their interpreters.

4.3.2   Case Study

I felt that a case study approach would be the most suitable approach to this situation. Mc Neil (1990:87) describes a case study as: "An in-depth study of a single example of whatever it is that the sociologist wishes to investigate".

This seems to describe the Programme for the Deaf at DUT, since the study will be looking at the Deaf students within a specific programme run by a specific Department within DUT. The case study would investigate as many Deaf students enrolled at DUT under the programme for the Deaf in 2009 as possible. As many graduate students as possible would also be interviewed to obtain a deeper insight into the Programme for the Deaf at DUT. It would be necessary to interview the three Sign Language interpreters in order to gain their perceptions as they are a vital part of the programme for the Deaf. Two lecturers would also be interviewed. Although they are not part of the programme for the Deaf, because they lecture to the Deaf students I felt it would add another dimension and point of view to the programme for the Deaf. As seen in my findings they did contribute

some interesting observations and suggestions to the study and added to my personal observations of how the Deaf students were treated by hearing students and staff on Campus, as well as the need for Deaf awareness campaigns not just for students but also for staff.

Originally I was only going to interview a few of the Deaf students studying in the IT Department. However, it soon became clear that the research would be much more meaningful if the case study included the whole Programme for the Deaf at DUT and not just the experiences of a few individual students. This meant that eleven Deaf students rather than just a few were interviewed. All seven Deaf students registered at all levels under the Programme for the Deaf in 2009 were interviewed as well as four graduate students (See Table 4.1). The three Sign Language interpreters who assisted the students in 2009 were also interviewed, although for nearly half of the 2009 academic year, only two Sign Language interpreters were working in the programme.

Bloomberg and Volpe (2008:11) define a case study as "an intensive description and analysis of a phenonomen, social unit or system bounded by time and place", while Cohen, Manion and Morrison (2000:182) describe a case study as a unique situation which "focuses on individual actors or groups of actors, and seeks to understand their perceptions of events". Both these descriptions of a case study seem to fit the Programme for the Deaf at DUT as it is a distinct unit situated in the InformationTechnology (IT) department at DUT and all Deaf students who were registered in 2009 under this Programme for the Deaf were interviewed as well as the interpreters who interpreted during that year. In an attempt to find out their perceptions of the academic needs of these Deaf students, the focus of the study is on these Deaf students and their interpreters.

Another reason that a case study was chosen was that it provided flexibility in the design of the study; as well as data collection, although this can also create problems for the researcher when analysing all the different data (Hakim, 2000). Flexibility was necessary because I used a number of different data collection methods. I also needed flexibility in

the questions. My knowledge of Deaf people was not enough to know exactly what questions should be asked so I needed to be able to be able to diverge from the original questions if necessary. I conducted focus group interviews with both the enrolled Deaf students and the graduated Deaf students and held individual interviews with the interpreters and lecturers (see earlier comments); I also conducted personal observations of the Deaf students. I had access to a set of memoranda which the coordinator of the Programme for the Deaf allowed me to use. This gave a much clearer picture of how the Programme for the Deaf developed.

According to Hakim (2000) the main disadvantage of case studies is that it is possible that the perspectives and interests of the researcher can influence the study. This is an important consideration as this could render the study worthless. For example I had observed that the Deaf students appeared to be marginalised by the hearing students on campus, and this was one area in particular where I had to find out the students perceptions and not be biased by my personal observations. For this reason I had to be very careful not to ask leading questions. Including the interpreters and the lecturers in my study also provided me with different perspectives and provided a guide for me. Bearing in mind that the Deaf students' literacy levels were low, I did not want the questions to be misinterpreted so I also had to take care that the questionnaires were easy to understand.

4.4 PARTICIPANTS

As mentioned previously, I had originally intended to do a case study with three or four of the current students (that is those registered in 2009). It soon became clear that, because of the varying degrees of deafness and the different backgrounds that the students came from, the study should be of the whole Programme for the Deaf, from its inception to date, in order to be able to look at as many of the problems, and also positive results, as possible. This broadened the research area and gave a much clearer picture of the situation and experiences of Deaf students taking part in the Programme for the Deaf at DUT, than if the focus had just been conducted on three or four Deaf students. For this

reason all seven Deaf students registered in 2009 were interviewed, as well as four graduate students.

TABLE 4.1   STUDENTS INTERVIEWED

Status of students	No of students
IT Extended programme registered in 2009	3
IT second and third years registered in 2009	3
National Diploma in Accounting first year registered in 2009	1
Students who had graduated from IT before 2009	4
Total Deaf students interviewed	**11**
Interpreters interviewed	**3**
Staff – lecturers interviewed	**2**

Eleven Deaf students were interviewed - six who were registered in 2009 for IT and one who was registered for the National Diploma in Accounting (NDA) in 2009 (when the programme for the Deaf was extended to include the National Diploma in Accounting), and four graduate students. There may be other Deaf students registered in other departments at DUT but they are not offered any additional support in the form of Sign Language interpreters. For this reason the research focuses on those Deaf students who are enrolled in the IT Department and the Accounting Department under the Programme for the Deaf where they are given support in the form of Sign Language interpreters.

The students studying under this programme, study the same subjects as the hearing students enrolled for the same qualification, but for them it is an extended programme, as the Deaf students take fewer subjects in the first and second years and it therefore takes them longer to complete their diploma. The support system for these students relies heavily on the intervention of the Sign Language interpreters and for this reason students accepted onto this programme must be proficient in Sign Language in order to benefit

from it. Deaf students have to complete the same proficiency tests as hearing students before being accepted to study IT.

All the Deaf students interviewed had hearing parents, although two of the students had siblings who were Deaf. Five of the families used Sign Language at home. All of the participants had attended Deaf schools, although three students had attended a mainstream school for one to two years in the early stages of their school careers.

TABLE 4.2: PERSONAL DETAILS OF STUDENTS INTERVIEWED

Ages	From 17- 27	
Sex	6 Female and 5 Male	
Race	3 African, 7 Indian 1 White	
Age when became Deaf	8 Born Deaf 1 at 2 years of age 2 at 5 years of age	
Able to lip read	2 not at all 1 a bit 8 yes	
Able to vocalise	5 yes 7 no	
Other deaf family members	9 No 2 Yes- siblings	
Attended hearing schools	8 no 3 for about 1 year	

4.5 SELECTION CRITERIA OF PARTICIPANTS

4.5.1 Students

I tried to include as many current (2009) Deaf students as possible, with their consent, since they are such a small group within the institution. All seven Deaf students agreed to participate. As mentioned previously, the Deaf students take longer to complete their diplomas than hearing students as they take a smaller number of subjects in the first two years than the other students. This meant that the Deaf students were not able to be categorised into first, second or third year as they were completing subjects from previous years. There were three students doing the extended program, which had some first and some second year subjects, and three students in second and third year IT. There was one first year Accounting student, who was registered for Accounting when the programme was extended to include Accounting (total seven students registered in 2009). There were two African female students, two Indian female students and three Indian male students. All seven of the 2009 Deaf students agreed to participate and have taken part in this study.

In order to gain a deeper understanding of the programme for the Deaf as many as possible of the Deaf students who had already graduated were approached to participate in the study and four Deaf graduate students agreed to be interviewed. I felt it was necessary to interview some of the graduate students to see what their challenges had been when they were studying at DUT and to see if their understandings had changed once they had left DUT. This would contribute to a better understanding of the whole programme. Since many of the graduate students were working, their perspectives of their experiences at DUT could possibly have changed from what they felt as a student, as they have experienced going for interviews for jobs and some of them were working. This meant contacting as many graduate Deaf students as possible; to see what their perceptions of studying at DUT were and to assess whether they felt that DUT could have done more to prepare them for the outside world. I also wanted to find out whether they were employed in their field of study.

Seven Deaf students have graduated between the start of this programme in 2000 and 2009 and it was possible to contact six of them. They were sent a questionnaire to obtain their basic details (See Annexure A) which they completed and then a focus group interview was held with four of them who were able to attend. Two of these are employed in their field of study and the third one had just graduated and was seeking employment. The fourth one had been employed in a bank but was retrenched and is currently (2009) looking for a job again.

Including the graduate students did mean that more interviews had to be conducted than were originally planned, as eventually all seven students registered in 2009, as well as four graduate students were interviewed. (A total eleven students interviewed). This broadened the research area and gave a much clearer and richer picture of the situation and experiences of Deaf students taking part in the Programme for the Deaf at DUT, than if I had just focused on three or four current students. These graduate students gave a slightly different perspective on their experiences at DUT, as they were able to look back on their experiences as students, from the perspective of the world outside DUT and gave some useful advice to the other Deaf students which will be disclosed in my findings and conclusions

The common factor with all the students interviewed was that they all relied on the services provided by the Sign Language interpreters in order to study and had all been part of the programme for the Deaf at DUT.

The students were very enthusiastic when they were told about the research. They all agreed to participate and they seemed to be delighted that a hearing person wanted to know more about them. They were all happy to sign the Informed Consent form and very excited that the research would create an awareness of Deafness and Deaf students at DUT.

4.5.2 Interpreters

In order to answer the second research question about the interpreters' perceptions of the needs of the Deaf students, it was necessary to interview the interpreters. The interviews focussed mainly on the coordinator of the programme who is also the main interpreter, but the other full time interpreters were also interviewed for their views. There were just two interpreters for the second part of 2009 due to difficulties in getting suitably qualified interpreters, but in 2010 they managed to get a third interpreter.

These interviews were individual interviews with each interpreter. The same open-ended questions were asked of each interpreter (See Annexure D) and the interviews lasted about an hour each. Only one interview each was conducted with two of the interpreters but the coordinator (who is also the chief interpreter) was interviewed more often, usually briefly after each interview with the students. These interviews were conducted in English and then transcribed by the researcher.

4.5.3 Other interviews conducted

Although this study looks at the perceptions of the Deaf students and their interpreters, two of the lecturers who lecture to the Deaf students were interviewed. One was from the Accounting Department, as this is the first time that they have been involved with Deaf students, and the other was from the IT Department, where the programme has been running since its inception. The reason for this was to find out what preparation or guidelines they were given on to how to treat the Deaf students, as well as any problems or difficulties they encountered, and any advice which they could give to lecturers who have Deaf students in their classes. Due to time constraints it was only possible to do two brief interviews, which I felt was sufficient to find out whether lecturers were prepared in any way for lecturing to Deaf students and to uncover any problems that they had in lecturing to the Deaf students. The number of lecturers involved in lecturing to Deaf students is less than twenty and generally the students said that they interacted more with the interpreters than with the lecturers because of the communication problem. In my

analysis chapter I will explain the frustration experienced by one of the lecturers at not being able to communicate properly with the students.

The lecturers were each interviewed individually, in English and asked the same open-ended questions which generated quite a detailed response from each of the two lecturers interviewed.   Each interview lasted about an hour. The lecturers who were interviewed were a white female lecturer from the Accounting Department who was lecturing to a Deaf student for the first time and an Indian male lecturer from the IT Department who had been lecturing to the Deaf students for a number of years. The reason for choosing these two was, firstly to have some diversity among the lecturers selected and also because one had no previous experience of lecturing to Deaf students and one lecturer had lectured to Deaf students for a number of years.

4.6 PILOT STUDY

Mouton, (2001) and Cohen, Manion and Morrison, (2000), recommend trying out the selected research methods on a pilot group before actually starting interviewing. This is like a 'trial run' of the interview process and questionnaires used and will help spotlight any problems with the interview process and the questions asked (Cohen, Manion, and Morrison, 2000). A pilot study can help the researcher to find confidence in the research process, methods of data collection and use of technology such as recording devices (Marshall and Rossman, 2006:57). Since I had never done interviews through the mediation of an interpreter before, I felt it was extremely important that I tried out the interview process on a pilot group.

After obtaining permission from the Deputy Vice Chancellor (DVC) Academic to conduct research on Campus with Deaf DUT students I decided to conduct a pilot study with a group of four of Deaf students at the end of 2005.

Focus group interviews were set up with four students, two third year students, a black female and an Indian female, one second year student (a white male), and one first year

student (an Indian male). I needed to have at least three Deaf students in the pilot study as I wanted to test the focus group interview process and the use of a Sign Language interpreter as well as the questions to be asked, in order to try and solve any problems that might arise with the questions or any other aspect of the interviews. I wanted to have students from different levels to ensure that the process worked with students at all levels. I was not sure how long each interview would last, nor what problems could arise when using a Sign Language interpreter. Arrangements had to be made to have one of the interpreters present to interpret as I cannot Sign.

The students in the pilot group were asked open- ended questions which I had prepared and where they had difficulty in understanding the questions, these were rephrased. The interpreter said that the literacy levels of Deaf students are generally much lower than those of hearing students and that they struggled with English. At the time that the questions were drawn up I was not aware of this problem. This was another reason why the pilot study was so necessary for my research; I had to ensure that the questions were clear and easy to understand.

After the first pilot group interview it became clear to me how important it is to run a pilot group before actually starting the interviews. During the first interview with the pilot group a number of problems showed up which had not been anticipated when the study was originally planned.

4.7   PROBLEMS REVEALED BY THE PILOT STUDY

The main problem was that it was difficult to find times to conduct the interviews which suited both the interpreters and the students and which also fitted in with my lecture schedule.

Because everything that was said had to be interpreted to the students and then their replies had to be interpreted back to me, the interviews took twice as long as originally planned. After the first meeting with the pilot group I found that I had not managed to get

all the basic background information from the students in the time allotted for the interview, and there were only four students in the pilot group. My focus group interviews in 2009 would consist of seven students. I realised that in order to make the best use of the interpreter's time I had to devise a questionnaire which would give me the basic information that I needed and yet was easy for the Deaf students to understand and complete. A questionnaire was drawn up, which could be completed by the students in their own time. This helped to get answers to questions which could be answered in one or two words. A copy of this questionnaire is attached. (See Annexure A). This questionnaire was then tested on the pilot group to make sure that it was easy to understand. This was important because English is a second language for the Deaf, many of whom have difficulty understanding complex questions. This was another factor that was discovered during the pilot study. I found that the use of the questionnaire helped to make the best use of the time available with the interpreters.

Owing to the fact that there were only two voices on the tapes (mine and that of the interpreter), and there were usually about four students present at the meetings, it was difficult to identify who had said what. This problem was overcome by asking the students to say their name before speaking, and when they forgot to do so I made a note of who had been speaking. This was useful when analysing the results of the research.

It was found that the interviews could not last longer than about 40 minutes as it was very tiring for both the students and the interpreters. Signing requires great concentration and the interviews had to take place in between lectures or at the end of the day.

I learnt a very painful lesson when conducting the pilot study, when the battery in my recorder died early into the second interview and I only noticed it when I got home to listen to it. After that, every interview was started with fresh batteries and checks would be made at frequent intervals during each session that they were still working. A back up set of batteries was also always brought along to my interviews.

Because I was only able to contact four graduate Deaf students to be interviewed, it was impossible to exclude all four students who were in my pilot group (see further on in this chapter) from the interview with graduates and there were actually 3 students from my pilot group who were interviewed but not as students but rather as graduates. I am aware that it would have been better if I had chosen completely different Deaf students who had not had any earlier contact with me or my research but then I would only have been able to interview one graduate student. In order to prevent the Deaf students being influenced by their previous contact with the research I asked them different open- ended questions from those which I had tried out in the pilot study. This was because I did not want their judgement to be skewed by having participated in the pilot study.

I also did not use any of the data obtained during the pilot study which was conducted in 2005. The only thing that was the same was the questionnaire asking demographic details such as name, sex and race. I felt that the four years gap between the pilot study and the current contact would also have meant that the pilot study would not be fresh in their minds.

4.8   DATA COLLECTION METHODS USED

The main method of data gathering was focus group interviews with the Deaf students, as well as a basic questionnaire to be answered by the Deaf students at the start of the study. Individual interviews were conducted with the Sign language interpreters and lecturers. I chose to collect my data as a result of interviews as I needed to ask open- ended questions so that the participants could explain why they had a particular perception. The Deaf students could also ask me questions if they did not grasp what the meaning of a certain question was. I also had to be aware of the low literacy levels of the Deaf students and the fact that they might have problems writing down exactly what they felt. An interview allowed me the flexibility that I needed to be able to question the Deaf students in focus groups as well as conducting individual interviews with the interpreters and lecturers.

4.8.1 Questionnaires

Originally I did not intend to use questionnaires at all as I did not think they would be of use in this study. I was only going to conduct focus group interviews with the Deaf participants and individual interviews with the Sign Language interpreters and the lecturers. However, as described earlier in this chapter, while piloting my study, I discovered that the process involved in asking questions in spoken English to the Deaf students, then having them translated into Sign Language to the students and then having their signed replies translated back intro spoken English for me took a very long time and very little progress was made in the first pilot interview. For this reason I drew up a questionnaire which the Deaf students could fill in at their leisure (See Annexure A) which listed basic questions about the Deaf students which could be answered in one or two words (closed questions). All the Deaf Students were given the same questionnaire to complete (McNeill, 1990).

The advantage of using this type of closed questionnaire was that I was able to obtain answers to basic questions about the participants without wasting valuable time in the interview with the interpreter. The questionnaire was used to get information about the details of the students such as age, sex, race group, whether they were born Deaf etc which really only required an answer of one or two words and did not require any explanation by the participants. After analysing the results of these questionnaires, I was able to ask the Deaf students open-ended questions during the focus group interviews, which could expand on their answers to the questionnaire.

4.8.2 Focus group interviews for the Deaf students

Because of the time factor and the difficulties in communication it was not possible to interview each Deaf student individually, as the assistance of a Sign Language Interpreter was required to translate. I decided to use focus group interviews, as all the participants were in the same situation; all were Deaf and all were studying under the programme for

the Deaf at DUT. Focus groups have been described as being composed of people "who have been selected because they share certain characteristics relevant to the study's questions" (Marshall and Rossman, 2006:114).

In this case all the students are Deaf, all use Sign Language as their main means of communication and all are studying under the same Programme for the Deaf at DUT. I felt that the advantage of focus groups, where the participants feel more relaxed and confident, would stimulate conversation as focus groups tend to encourage interaction between the members (Cohen, Manion and Morrison, 2000).

Another reason for the choice of focus groups was that I felt that the students would be more likely to give detailed replies to the questions if they were asked in a group setting. I hoped that the students would feel less intimidated by the research if they were among their peers and with their interpreter and discussion would be easier as the students interacted with each other (Cohen, Manion and Morrison, 2000). I also felt that the students would be more comfortable answering questions in their own language. This meant that an interpreter needed to be present at every interview to interpret. As time was limited, it became apparent that a focus group interview seemed to be most suitable for this study.

The focus group did work to a certain extent, in that sometimes some discussion was stimulated, but I did not realise that having to work through an interpreter could have an inhibiting effect on discussion. There was a delay between my asking the question and receiving the replies which tended to disrupt the normal flow of conversation that would have taken place if I had been able to Sign and understand what the students were saying. It was also possible that a student who did not agree with what had been said might not want to be different from his/her peers and so agreed to what was said. The only way I could overcome this problem was to try and gain the Deaf students' trust, which took time to build up. Unfortunately the only way to communicate with the Deaf students other than writing everything down was through an interpreter, and I was very fortunate

and grateful that the interpreters were so generous with their time in assisting with the interviews.

Another disadvantage of focus groups is that unless the interviewer is very careful, the conversation can get right off the point (Cohen, Manion and Morrison, 2000). This happened to me on one occasion and about fifteen minutes was wasted, although it was not completely wasted as the students and I got to know each other better and I think they began to feel more relaxed in my presence. However the interpreters helped to keep to the topic on track.

During the interviews the students sat opposite to both me and the interpreter because they needed to be able to see the interpreter. I addressed questions to the students and the interpreter then translated the questions into Sign Language. The students then signed their replies and the interpreter translated their replies back to me in English.

Semi-structured interviews were also used. A number of questions were drawn up that were discussed in each interview, but I left space for further questions to be raised if an interesting issue arose, or one which had not been thought of (Cohen, Manion and Morrison, 2000).

At the start of the first focus group interview with the Deaf students I told them about the purpose of the research and explained that participation in the study was voluntary and that they could withdraw from participation at any time. I tried to get the Deaf students to understand the purpose of the research and to feel free to ask questions about the research and anything that they might be concerned about. The Deaf students were very excited that a hearing person was interested in them and wanted to know why I was interested in the Deaf. I explained about my few experiences with deaf people, such as my aunt who was deaf (See Chapter 1).

I gave them the informed consent form (Annexure C), which was explained to them by the interpreter and after they had signed the informed consent form, the students were

then given the initial questionnaire which had been drawn up as a result of the pilot study, which was discussed earlier in this chapter. The questionnaires were left with the students for them to answer at their leisure and collected by the coordinator and given back to me a few days later. This was so that the Deaf students did not feel pressured into taking part in the study and so that the interpreter could answer any questions that they might have about either the questionnaire, or me or the research.

After analysing the results of these initial questionnaires another list of open- ended questions was drawn up, similar to those used in the pilot study but with a few additions (See Annexure B). These questions were then used in further focus group interviews with the Deaf students with the addition of further questions when necessary.

The type of question that was asked in the focus group interviews was open-ended, where a question was asked and the students were left to expand on it. The purpose of using this type of question was to try and get the Deaf students to tell me what they were thinking without me asking any 'leading questions'. I did not have much idea at that stage of what problems Deaf students would experience at DUT and hoped that these open-ended questions would encourage the participants to talk (McNeill, 1990).

All the interviews with the Deaf students were conducted in a combination of spoken English and Sign Language, with the aid of a Sign Language interpreter; who interpreted the questions that I asked in English into Sign Language for the students and their replies in Sign Language back to me in English. All the interviews were recorded with a digital voice recorder and these recordings have been saved onto my personal computer which is password protected.

4.8.3   Individual interviews with the interpreters and lecturers

Individual interviews with the interpreters and lecturers were conducted in English and were taped and transcribed by the researcher. Since the coordinator of the programme is also one of the interpreters and has been coordinating the programme since its inception,

the majority of the interviews were conducted with her. She knew exactly what had taken place, what problems had arisen and what still needed to be done for the Deaf students. Only one interview of about one hour each was held with each of the other two interpreters, as well as each of the two lecturers.

I asked each of the interpreters the same open-ended questions but additional questions arising from each interview with the individual interpreters were different (See Annexure D). The coordinator in particular had far more to say about the programme as far as budgets and running the programme was concerned and had also been with the programme from its inception to the current date (2010).

The interpreters' understanding of the problems facing the students was not always the same as that of the students and they saw that there was far more that could be done to make things easier for them and the students. I think this is probably because the interpreters took care of most of the problems so that the Deaf students often were not even aware that there was a problem. This will be discussed further in Chapter 5 on the analysis of the research.

The two lecturers were asked the same open ended questions in separate interviews lasting about one hour (see Annexure G) but further additional questions were asked when necessary.

4.9 TRANSCRIPTION OF INTERVIEWS

I transcribed each interview as soon as possible after the interview had taken place. During the interview I made notes on students' reactions such as facial expressions and excitement about certain issues. It took a long time to transcribe the interviews as the recordings had to be played over and over again to ensure that what was said by the interpreter was transcribed exactly as it was said. However, I found that I became much more familiar with my data than if I had got someone else to transcribe it for me and this made it easier to identify recurring and common themes.

Marshall and Rossman (2006) recommend that the conversation is transcribed exactly as it took place, with pauses shown and repetitions. There was, however, an added complication with the interviews with the Deaf students – there were pauses because the questions were being interpreted into Sign for the students and then their signed responses were spoken back to me. I felt that these pauses could have had an inhibiting effect on the flow of conversation as most of the time the conversation did not flow as I had expected. It was not possible to use the 'tone of voice' of the participants to add meaning to the interview as they did not speak. I did, however, make notes when a certain topic arose and the students got excited and more than one person wanted to 'speak' at the same time. When interviewing the students it was impossible for me to note when a particular word or phrase was stressed, as nothing was said by the student However, when interviewing the interpreters this was noted.

Another problem was that because the interviews with the Deaf students were translated I had to rely on the interpreter's integrity that it was being translated exactly as the students had signed it to the interpreter. I did, however, try and verify with the students that whatever issues I had transcribed were correct. This could have an impact on some of my findings and if I were to do another study with Deaf people I would try and obtain the services of an independent interpreter if finances permitted it. This was a major limitation of my study (See 4.13).

4.10   OTHER DATA SOURCES

4.10.1 Documents

The coordinator of the Programme for the Deaf was extremely helpful and made available copies of proposals that she had sent to the Dean, as well as to the Deputy Vice Chancellor (DVC), over the period of about 5 years, regarding the way forward with the Deaf Programme. These helped in gaining an understanding of the history and progress of this programme, as well as problems which still exist and solutions to these problems

which she has suggested, as well as responses or lack of responses to these suggested solutions.

4.10.2 Observation

In order to understand fully what happens when the deaf students write a test or exam, I attended a session when the students were writing a test and observed how the students sat in a row together, with the interpreter standing in front of them so that each Deaf student could see her. The interpreter signed all the instructions that were given by the invigilators to the students. When a Deaf student had a problem with the wording of a question, the student put up his/her hand and the interpreter explained the meaning of the word that they did not understand. The Deaf students were also given extra time in the tests and exams (fifteen minutes for each hour of the test or exam).

I also attended a lecture where the Deaf students were and I observed how the students sat in the front row and to the side of the lecturer, while the interpreter stood in front of them. She translated everything that the lecturer said into Sign Language for the Deaf students. If one of the students had a question they asked the interpreter and she then asked the lecturer to explain and the interpreter signed her reply.

4.11   PROBLEMS WITH DATA COLLECTION

The biggest problem in gathering data was trying to find a time that was suitable for both the interpreters and the students, who have a heavier work load than most other students. This is due to the fact that they have extra tutorials given by the interpreters over and above the normal ones, and that it takes them longer to read and understand the subject matter.

There are no venues on Ritson Campus, where the IT department is situated, that are suitable for conducting such focus group interviews, as they are all very noisy and this

caused some of the tapes to have background noise which made it difficult to transcribe the recorded information

.

The only alternative option was to use the coordinator's office which was very small and to split the group as there was not room for all of them at once. There are seven Deaf students currently registered on this programme. There is nowhere on Campus where the Deaf students can gather together. They used to have a room where they could sit but this was needed by the IT Department and now they have nowhere to congregate. There are however plans to provide a separate building as a Centre for the Deaf students, which was hoped to be operational in 2010, but due to 'red tape' has still not been opened.

Staff and student unrest which the interview schedule, as not only were interviews cancelled and the students were unavailable, but the lectures that were missed also had to be made up by the students and time was at a premium.

4.12   DATA ANALYSIS

While transcribing the interviews, a number of common themes kept recurring. Because most of the information was the result of interviews this meant that I had to use a combination of thematic and narrative analysis. Three main themes emerged – academic, environmental and social. I assigned each main theme that I identified with a code (a colour). I was then able to split these main themes into sub-themes. Examples of themes were the difficulty experienced in communicating with hearing people on campus and the general lack of awareness about deafness on campus. The students and interpreters were questioned further on each theme and the issues arising out of them to make sure that I had correctly understood what the issues were. This was necessary as one of the issues which were discussed was noisy venues. I thought that this meant that the actual venues were noisy, but the interpreter explained that the noise came from fellow hearing students who were talking in the lecture venue during the lecture which made it difficult for the Deaf students to concentrate on the interpreter. Some of the Deaf students can hear some sounds with their hearing aids.

The main themes were then further categorized into sub-themes and once the data had been sorted in this way, I was able to analyse the information that I obtained in relation to the framework. Some of he data fell under more than one theme and so were included under both themes.

Among the main issues raised were attitudes of hearing students, lack of space for Deaf students to socialise together, need for extra tutorials and noisy venues. Some of these issues were similar to those raised by other researchers in this field, such as the need to improve Deaf education and hearing students' attitudes (Magongwa, 2008). However the situation of the Deaf students at DUT is unique in that there is no Disability Unit to help coordinate this programme and all the coordination is done by one of the interpreters.

In the interviews with the graduate students they raised the issue of poor conditions in the computer labs which the current students had not mentioned. At my next interview with the current students I asked them what they thought of all the facilities on campus. It was found that they had also experienced similar problems, but had not mentioned this as a problem until they were asked about facilities in general. This re-enforced my feeling that it was necessary to include past students in the study in order to get a full perspective on issues.

A profile was drawn up for each student from the data gathered. These profiles were then compared and a common pattern of problems seemed to emerge from most of them.
All the data relating to each specific problem was grouped together.
These common problems will be discussed in the next chapter on the analysis of the research.

4.13   VALIDITY OF DATA COLLECTED

Since I am not Deaf but hearing and am also unable to Sign it was necessary to have an interpreter present at all interviews with the Deaf students to interpret what was said. I

had to trust that the interpreters were correctly interpreting what was said during the interviews.

Translation can be done either 'word for word' or 'sense for sense' (Munday, 2008). Since Sign Language is a visual language – not a verbal one it is not possible to apply the word for word translation which only works between similar languages (Munday, 2008) One sign can also have a number of different meanings depending on the facial expression of the 'speaker', and therefore, 'the sense for sense' method would be used and the interpreter should "discard the original wording and retain only the ideas, or sense, underlying the speaker's text" (Janzen, 2005:68).

For this reason it is possible that something could be misinterpreted. Janzen (2005) does however argue that the meaning and the form should be looked at in analysing any signed source text.

> "Instead of directly conveying a message, the interpreter must gather evidence of meaning and construct a new text. Depending on what the interpreter knows and what her skills are, this new text more or less approximates the original – a great deal when the process works well, and very little when it doesn't" (Janzen, 2005:7).

One of the interpreters did say that qualified interpreters have a code of ethics which they have to comply very strictly with and so I felt that I could trust the interpreters. I also tried to overcome this shortcoming by confirming, whenever possible with the participants that what had been transcribed was indeed what they meant to say. This was done by showing them the issues that were raised, giving them each a copy to read and then getting them to confirm that this was in fact what had been discussed.

Since I am a hearing person I knew very little about Deaf students and came into this research with a relatively open mind. I did not have any preconceived ideas about what the results of the study might be, although I did know some of the problems experienced by Deaf students in other institutions. I found it difficult to distance myself from the

students and their problems at times, but tried my best not to let this influence the findings and to report the actual situation as factually as possible.

In the pilot study it was found that the students were so grateful to find a tertiary institution that would accept them, that they seemed reluctant to be critical of anything even if they felt that things could be improved. This meant that when I did my interviews I had to gain the confidence of the students before they fully opened up and were able to be critical. Once they felt more comfortable with the interview process and why it was necessary to know the answers to these questions, they were very keen to help. It also helped to interview the students after they had graduated and were working as they seemed more discerning of problems.

Another problem arose. When analysing my data and comparing it with that of Magongwa (2009) I found that we had very different results in one area. Where none of the Deaf students at DUT complained about the Sign Language interpreters, his study had some very negative comments about the Sign Language interpreters from his Deaf participants. Because I had to use Sign Language interpreters to translate during my interviews and they were the same interpreters used by the Deaf students, it is possible that the students would be reluctant to complain about the interpreters. Magongwa did not have this problem because he can sign. In Chapter 5 on data analysis I give other reasons why this disparity in results could arise. However, this was a limitation to my study.

4.14   ETHICAL CONSIDERATIONS

Before starting any interviews, permission was obtained from the Deputy Vice Chancellor (DVC) Academic at DUT to conduct this research on campus.
Because all the students that were interviewed were Deaf, the researcher had to be particularly careful not to do anything that would compromise them or put them at risk in any way (Marshall and Rossman, 2006). It was also necessary to obtain an Ethical Clearance from University of KwaZulu Natal (UKZN) before starting to interview the Deaf students (Annexure F).

It was clearly explained to the Deaf students what the research was about before any interviews with the Deaf students took place, that participation was voluntary and that they could withdraw at any time. They were happy to participate. Some of them even felt that they would not mind if their names or even photographs appeared, but it was explained to them that this was not a good idea. They were told that I, the researcher, would be extremely careful that no one could identify any quotes as coming from any particular person (Bliss and Higson-Smith, 2000). Because of the small number of participants, the race or sex of the originator of any of the quotes would not be mentioned, as this would make it fairly easy to identify some of these students and I did not want any participant in the study to suffer any adverse effects from participating in the study.

The Deaf students were all given the Informed Consent form (Annexure C) which they signed. They were told that participation was voluntary and that they could withdraw from participation at any stage. The students were very enthusiastic when they were approached and told about the study. Not a single student said they did not want to participate and they seemed to be delighted that a hearing person wanted to know more about them.

4.15   LIMITATIONS OF THE RESEARCH

- Only eleven Deaf students were interviewed for this study. All seven students registered under the programme for the Deaf in 2009 (six in IT and one in Accounting) and four students who had graduated under the Programme for the Deaf prior to 2009.
  This is a very small group of Deaf students and it is possible that these students might not be representative of all Deaf students in all tertiary educational Institutions. There may be other deaf students studying at DUT in other programmes but I decided to concentrate on those students who are part of the Programme for the Deaf run by the IT Department. Due to the small number of

students involved it was not possible to interview Deaf student representatives of all racial groups in South Africa.

- The majority of the students, that I have interviewed so far have been almost completely Deaf with little or no residual hearing and can also all Sign, which means that they need to make use of the Sign Language Interpreters. Among the current (2009) IT students, three can lip read and vocalise, as well as Signing. The remaining four are completely dependant on Sign Language to communicate. I did not grade the Deaf students according to their degree of deafness, as many did not know the exact degree of their deafness, but the majority felt that their hearing loss was severe to profound.

- Due to time constraints I did not go into the home background of the Deaf students in much detail. This could have effect on their experiences at DUT.

- There were further limitations in that it was necessary to have an interpreter present at every interview and due to time constraints I was unable to do as many interviews as I would have liked. It was difficult to find times which were suitable for all the parties that would need to be involved. I would have liked to have spent more time interviewing the students further, perhaps looking at their backgrounds, to see whether this had any influence on their experiences of higher education. However, time was limited and I had to be realistic and work with the information which had already been gathered.

- The other limitation to the study, as mentioned before was that I cannot Sign and so had to find a way to be able to confirm that the questions or the answers to them were not misinterpreted. The only way to overcome the problem was to ensure that the students confirmed what was written about the interviews.

- Cost constraints prevented the video taping of the interviews and then getting an independent party to watch the tapes and confirm that the translation was correct

as was done by Magongwa, (2008). If that had been done, then that would have been proof of the validity of my data. However, as mentioned before, I have tried to confirm with the interviewees that the transcriptions were correct.

- This study has focused on the experiences of Deaf students in the IT and Accounting Departments at DUT and might not be the same as the experiences of other Deaf students in other higher educational institutions, or even in other departments at DUT.

- There might be other Deaf students studying in other departments at DUT but this study is limited to those in the Deaf Programme run by the IT Department.

- Due to the small number of students involved it was not possible to interview Deaf student representative of all racial groups in South Africa. This may have an influence on their experiences.

- As mentioned previously, the degree of deafness of the students has not been taken into consideration, as I had no way of accurately finding this out and many of the students did not know their degree of deafness. This could have an impact on the students' experience of tertiary education. The majority of the Deaf students, however, seemed to think that their degree of deafness was severe to profound.

4.16   SUMMARY

In this chapter the study and its participants have been described, as well as the methods of data collection used and how the data was analysed. Any problems that arose during these processes have been discussed. Any limitations to this study have also been described. Because the Deaf students could be considered to be at risk of being exploited, careful consideration was given to ethical issues concerning their participation in the study.

CHAPTER 3: LITERATURE REVIEW

3.1. INTRODUCTION

In the previous chapter I introduced Deafness and outlined the effects on Deaf students in a tertiary educational environment. I also explained a few of the most common aids used to assist Deaf students in higher education and explained a little about Deaf culture, as well as various controversial issues relating to Deaf people.

In this chapter I will be reviewing existing literature relating to the inclusion of students with disabilities at institutions of higher education, and focusing on Deaf students in particular. I will briefly discuss legislation which exists in South Africa regarding the rights of students with special needs and their inclusion in higher educational institutions. I will also give a brief outline of developments in the education system in South Africa since 1994, particularly in regard to inclusion of special needs students in higher education and deaf students in particular.

Lang (2002) identified that although research existed on barriers for deaf students in higher education, there was not much research on how to overcome these barriers. There was also not much research on the effectiveness of accommodations made for Deaf students such as additional support in the form of the provision of Sign Language interpreters, extra tutorials, note takers and other interventions.

3.2   LEGISLATION AND GOVERNMENT POLICY IN SOUTH AFRICA

Prior to the first democratic elections in South Africa (SA) in 1994, there were huge inequalities in the educational system of the country. Black, Indian and Coloured students were unable to register at so-called 'White' schools and they even wrote a different matriculation examination. However, this changed after our first democratic elections in South Africa and the drawing up of the Constitution of South Africa (1996)

This SA Constitution was a major step towards trying to repair some of the damage that had been done during the Apartheid era and contains a Bill of Rights which sets out basic human rights for everyone in South Africa. The Bill of Rights contained in Chapter 2 of the SA Constitution, Section 29 Paragraph 1 gives everyone a right to basic education and to further education which the state must make progressively available. This means that where students were previously only permitted to attend certain schools in certain areas, they are now able to choose where they wish to be educated. Deaf students from rural areas now have a chance to attend a school for the Deaf if they want to.

Paragraph 2 of Section 29 of the SA Constitution also gives everyone the right to receive education in the official language of their choice. Although Sign Language is not one of the official languages of South Africa, DeafSA has been trying to get recognition for Sign Language as an official language of SA, but so far this legislation is still only in Draft form (DeafSA, 2007).

At present (2010) many learners in schools for the deaf do not learn South African Sign Language (SASL) as one of the subjects towards their Matric, and often do not meet the entrance requirements to study at Tertiary Educational institutions in terms of passing two of the official languages of South Africa. For many of them the only languages they know are written English and Sign Language. Many of the teachers at schools for the Deaf are unable to use Sign Language or do not sign very well and this also has an impact on their learning and literacy levels.

The South African Government started to address some of these inequalities in education with the issue of the White Paper 3 in 1997 which started the transformation of the education system allowing learners to attend schools of their choice and having only one system of education for all learners regardless of their race, religion or culture (Department of Education, 1997).

The South African Government White Paper 6 of 2001 goes even further. It deals with special needs education and outlines a 20 year plan which aims to remove barriers to

learning for people with disabilities and aims to integrate such learners into the mainstream schools and universities where- ever possible. It has also required higher educational institutions to increase the number of learners with 'special educational needs' that they accept. It requires such institutions to be accountable to government and give plans and time frames for complying with this. Howell (2006) makes the point that this constitutional move was a landmark, especially because, in particular black and disabled students were severely discriminated against under apartheid, and the new constitution began a process towards redress.

However, one has to be realistic about this and cannot expect all institutions of higher education to accept all students with special needs.

> "It will not be possible to provide relatively expensive equipment and other resources, particularly for blind and Deaf students, at all higher educational institutions. Such facilities would therefore have to be organised on a regional basis" (Department of Education White Paper 6, 2001:42).

This could, however, be exclusionary to some students. We should be aware that not all students might want to, or be able to leave their homes in order to study at schools for pupils with special needs and in such cases accommodations would need to be made in mainstream educational institutions to meet the needs of such students.

 Further on in this chapter I will demonstrate the plans that a few higher educational institutions have already put into place. It does make sense for such institutions to 'specialise' in a particular impairment initially, with the ultimate goal of eventually being able to offer support to students with all disabilities. It is useless to accept students with impairments without offering them a good support system so that they can fully participate in the activities of that institution and many of these support systems can be very costly.

3.3   INCLUSION

For inclusive education to take place successfully it is suggested that the Social Model of disability be adopted and that the institution makes such adjustments to the school and programme as are necessary to remove as many barriers as possible for the disabled child. This is in opposition to the Medical Model of disability which was previously applied, which has the effect of marginalising disabled people (Reiser, 2006).

In order for higher education to be truly inclusive for people with disabilities, it must be possible for the students with disabilities to feel included by being able to participate not just in the academic activities but also the social activities of the university. No person with disability can be equal if:

> " academic and support staff don't understand that 'inclusion' means far more than just being in the same lecture room as everyone else; it means being able to partake fully in the life of the institution; joining the societies, enjoying the social life and being treated with informed respect" (White in Adams and Brown, 2006:xvii-xviii)

This view is endorsed by Hall and Stahl (2005), who also feel that it is not enough to just give students with disabilities access to tertiary education; we must make sure that they have whatever support they need in order to succeed in their studies. This is in line with the recommendations of The Department of Education White Paper 6 (2001) where the Deaf students are being provided with the extra support of Sign Language interpreters which they need in order to study.

I agree with these opinions and have seen how the Deaf students at DUT have succeeded and managed to graduate with a diploma in IT once they were given the support of Sign Language interpreters. They do, however, appear to be excluded from many of the social activities as a result of problems with communicating with the rest of the student body.

Dyson and Forlin (2005) make a distinction between Integration, *w*here a disabled learner is admitted to a mainstream class or institution and is expected to cope with little or no accommodations made by the institution (the learner has to adapt to the system) and Inclusion where the student is accepted into the mainstream and the institution tries to adapt to th**e** needs of the disabled student. In this study I will be more concerned with the Inclusion of Deaf students at DUT as I feel that Integration has a disabling effect on Deaf students who are unable to communicate by means of normal speech.

Deaf students have previously been excluded from higher education because of their deafness. There are people who say that they must be included on the grounds of their disability while others feel that they should be included as a minority language and cultural group. The latter view is how many Deaf people regard themselves, as mentioned in my previous chapter (Magongwa, 2008).

Howell (2006:164).comments that "…disabled students in South Africa, particularly black disabled students , have in the past been – and continue to be – especially vulnerable to exclusion from the education system, including the higher education system". She also indicates that this means that there is a limited pool of disabled students emerging from the schooling system for higher education to draw on.

Debra Aarons points out that although Deafness is 'universally regarded as a physical disability', Deaf people may be regarded by others as 'being members of an oppressed linguistic minority' (Aarons, 2002:154). This ties in with what I discovered when talking to and observing the Deaf students – they did not regard themselves as disabled. They coped very well when among their own community. Aarons goes on to say that without their special needs being accommodated, the Deaf are in fact a disabled group in the hearing world (Aarons, 2002). I agree with her, as without their Sign Language interpreters, among hearing people the Deaf students are lost.

This could be used as an argument for 'special Deaf schools'. At present (2011) it would not be realistic for every school to have a Sign Language interpreter as it is costly and

there is a shortage of suitably qualified Sign Language interpreters. In the Deaf schools a young Deaf child is able to learn in an environment where he/she is not the only learner who is deaf and come into contact with learners with different degrees of deafness. The deaf child learns to communicate with other deaf children and can build up his/her confidence in him/herself. It is a sheltered environment and the Deaf person should be prepared for life after school. Many Deaf learners form links with Deaf people and Deaf culture which will give them a sense of belonging that will last for life. The Deaf have a very strong Deaf Culture and this culture and the bonds between its members are often stronger than the bonds between the Deaf person and his/her hearing family (Lane, 1992).

It is only when the Deaf have to interact with hearing people that they are at a disadvantage as those Deaf people who cannot lip-read and vocalise need someone to interpret for them. This view was endorsed by Lucas Magongwa (2008), who is himself Deaf.

> "I view Deaf people as a cultural group rather than as disabled people. They use Sign Language and identify themselves as members of a deaf community" (Magongwa, 2008:55).

When I watched a group of Deaf students communicating with each other, I saw what they meant. They were relaxed and happy, enjoying jokes between themselves and laughing. In fact I felt that I was the one who was disabled as I could only understand a very small fraction of what they were saying. When talking of Deafness and disability Lane, (1992) describes the Deaf Community as a 'linguistic minority'. This is an interesting concept and could affect how we look at Inclusive Education regarding Deaf students. Do we want them to be included because of disability and have accommodations made for them, or as a linguistic minority and cultural group who want to be taught in their home language which is SASL?

I tend to believe that Deaf people are a minority language group with a very strong sense of their own culture. Because of communication problems, in the hearing world they are disabled without certain accommodations, such as the provision of Sign Language

interpreters being made for them. Among other Deaf people they are definitely not disabled as they can communicate very well with each other and enjoy socialising together.

DeafSA supports the principle of inclusive education. However, it seems that many Deaf learners are in fact currently excluded from accessing equal education, because many of the teachers of the Deaf, even in the deaf schools are not able to use SASL. This means that the Deaf learners are not only being taught in a language which is not familiar to them, but also a language that many of them cannot hear (DeafSA, 2006). This has an adverse effect on their literacy levels. I personally would find it difficult to be taught anything in a language other than my home language of English, but if I could not hear what was being said, I would find it impossible. This is a very real disadvantage to Deaf learners. If SASL is to be an official language that can be examined as one of the two required language subjects for matric, then it is important that we have sufficient trained teachers who can teach SASL as a subject (DeafSA 2006).

Magongwa (2008) says there are both positive and negative effects of inclusive education for disabled students. The positive effects are that all students learn tolerance and understanding of each other and that students have freedom of choice to attend any institution that they wish and can have support services provided wherever possible. He does, however, say that Deaf students, because of communication problems with their hearing peers, might be isolated and have difficulty in participating in activities with fellow hearing students (Magongwa, 2008).

3.4   DEAFNESS: A DISABILITY OR A MINORITY CULTURAL GROUP?

As mentioned in the previous chapter, there are several ways of regarding disability – the Medical model, the Social Model, the Socio-Linguistic Model and the psychoanalytical Model

3.4.1. The Medical Model regards disability as a lack of something and tries to make the disabled person fit into the world of people without disabilities. This can create negative feelings in people with disabilities as it suggests that something needs to be changed in the person with the disability in order to make them fit into the norm (Reiser, 2006).

One example of the application of this model in relation to the deaf would be parents of a deaf child insisting on their child learning to lip-read, and then having hours of speech therapy in an attempt to make their child fit into the hearing world. This might work for those who are not profoundly Deaf or who are prepared to spend many hours of hard work.

From talking to Deaf students, my personal opinion is that the majority of profoundly Deaf people do not regard themselves as disabled and therefore would not like to be treated in terms of this model. Reiser also seems to feel that this model is not acceptable to people with disabilities (Reiser, 2006).

3.4.2 In the Social Model we look not at what is wrong with the disabled person, but rather at what can be done to change the environment to accommodate people with disabilities. This seems to be the model which is more popular in the world today as it is inclusive rather than exclusive and accepts people as they are and does not try and change them to conform to the rest of the world (Reiser, 2006). This is the model that I prefer as it does not create the same negative feelings as the Medical Model. This Model is supported by Lazarus, Daniels and Engelbrecht (2005) as well as Cayton (1997) and Magongwa (2008).

Barriers can arise mainly as a result of ignorance and prejudice, which result in disablement. For this reason, environmental factors are extremely important. At DUT the institution has tried to assist the Deaf students by providing them with Sign Language interpreters. The general environment on campus is, however, not conducive to social interaction between Deaf and hearing.

For this reason I feel that forcing Deaf pupils into mainstream schools might not necessarily be the best thing for the Deaf child, especially if he/she is profoundly Deaf. Hearing people, especially if they are parents of Deaf children, might find this concept difficult to understand, but it might be better to have a child, who, although unable to speak or communicate 'normally' has a good grasp of Sign Language and can communicate easily and fluently among the Deaf community than a child who can lip-read and 'might' be able to say a few words aloud, but has a very small vocabulary and low literacy levels. Deaf Children who have a good grasp of their home language – Sign, usually cope much better with their second language, written English (Lane, 1992).

3.4.3. The Socio- Linguistic Model as described by Ram (2010) appears to me to be the one which most closely relates to the situation of the majority of Deaf people, as there are elements of disability, language and culture which influence their activities. They communicate in their own language, Sign Language, they have their own Deaf culture and in a hearing world they are disabled.

Finally, Watermeyer (2006) posits the psychoanalytic model, which explores the way the disabled people view themselves and the psychological effects of the physical and social construction of these individuals on their personal and identity development. As he terms it, it is developed through the process of "othering" that this occurs. This adds an interesting dimension to exploration of disability but is not one that is drawn in this study.

3.5 TERTIARY INSTITUTIONS WHICH PROVIDE SUPPORT FOR DEAF STUDENTS

3.5.1 Outside South Africa
Gallaudet University

This is the only University in the world which is specifically designed to accommodate Deaf and hard of hearing students, and where the majority of students are deaf. The

University practises bilingual education where all lectures are conducted in spoken English as well as American Sign Language. The whole university, including the residences is designed for deaf people and although hearing people can attend the university, they are in the minority. This university is a leading example of what can be done to accommodate deaf people (Van Cleve and Crouch, 2002).

University of Bath

This university has a very good learning support structure for disabled students. This includes Deaf Awareness Training for staff who have to deal with deaf students, as well as written guidelines on things that should be remembered when dealing with such students. Lecturers with deaf students in their class just have to ensure that they are given venues suitable for use by Deaf students. They use venues with built -in hearing loop systems and the good lighting in certain of the venues to make lip- reading easier. Additional level desk space is also provided for professional note takers to work at (www.bath.ac.uk/learning -support/staff).

The university website encourages disabled students to apply to study at the university and also contains information about all the support which is available to them. Students with disabilities are identified at registration and lecturers are informed and are able to draw on the resources of the Learning Support Service. They are truly practising inclusion as they are trying to integrate the students into every aspect of the University and to create an atmosphere where disabled students feel comfortable. Disabled students attend lectures in the same venues alongside the other students in their class. There are structures in place to enable students to apply for funds for Sign Language interpreters and any other additional resources they may need. The students then pay the interpreters out of these funds. These funds are, however, only available to UK students and only cover costs relating to the student's disability that would not arise if the student was not studying at the institution (www.bath.ac.uk/learning support).

University of British Columbia

This university has a clear disability policy for staff and students and defines academic accommodation for students with disabilities as 'an alteration in the "usual" way of doing things'. The purpose of an accommodation is to allow students to overcome disability related challenges that impede their academic success' (UBC Student Disability Services 2008).

This university makes it clear that they are not prepared to drop academic standards and consider certain academic criteria when admitting students. The student must meet all the essential criteria for that particular course despite their disability, if they were given reasonable accommodation. They also include note taking and interpreters in their lists of reasonable accommodations for deaf students but do not appear to offer the services of Sign Language interpreters for Deaf students (www.students.ubc.ca/disability-services).

These are not the only universities outside South Africa which cater specifically for deaf students but they seem to be the most well known. I have tried to give an example from each of the USA, Canada and the UK.

3.5.2 In South Africa

In South Africa there are not many tertiary institutions other than DUT which accept Deaf students and provide them with any form of additional support. Among these are the University of the Witwatersrand (WITS), University of the Free State (UFS) and University of KwaZulu Natal.

University of the Witwatersrand

Wits has a Centre for Deaf studies which offers courses in Deaf Education and accepts Deaf graduate students - and provides support services in the form of Sign Language

interpreters. They also employ a number of staff who are deaf. (Magongwa,2009). The University of the Witwatersrand educates and trains Deaf teachers as well as teaching Sign Language as a major subject. The Head of the Centre for Deaf studies is Lucas Magongwa, who is quoted in this study. He has been doing research on the experiences of Deaf Teachers at the University of the Witwatersrand. His research examined the experience of Deaf teachers who had enrolled at Wits with the added support of Sign Language Interpreters, while my research examines the academic needs of the Deaf undergraduate students studying IT at DUT with the support of Sign Language interpreters. His research was also from taken from a different perspective from mine, as he is Deaf and did not have to work through Sign Language interpreters as I had to and this could have resulted in some of the differences between his findings and mine. These differences will be discussed in Chapter 5. Magongwa also found, as I did, that the Deaf students preferred to be with other Deaf students (Magongwa, 2008).

University of the Free State (UFS)

At a presentation she gave in 2009 Miranda (2009) gave a brief history of accommodations made for Deaf students at UFS from 2007 to 2009 and explained the problems which she experienced as a Sign Language interpreter at UFS.
In 2005 UFS enrolled their first Deaf student with the added support of a Sign Language interpreter into the career preparation course and in 2009 had six Deaf students on campus doing courses in B.Com, B. Admin and B. Ed. They had one Career Preparation Programme student. They had one permanent SASL interpreter and three freelance interpreters. They also used note takers and Lip Speakers and they used third year Sign Language students to help tutor the Deaf (Miranda, 2009). This sounds like a very good idea, especially the use of the third year SASL students to help tutor. It gives the SASL students practice with their signing and according to Miranda the tutors have to register with the tutor programme on campus. They receive training and payment from that unit.

For note taking the Deaf students are provided with carbon paper and select students to voluntarily make copies of their notes for them. There are, however, no checks as to the

correctness of the notes that are given back to the students. This could be a problem, unless the note takers have been carefully selected (Miranda, 2009).

According to Miranda (2009), South African Sign Language (SASL) was not compulsory in Deaf schools. Some schools taught American Sign Language (ASL) and as a result some students did not understand SASL. This made it costly to provide Sign Language interpreters for both forms of the language (Miranda, 2009).

University of KwaZulu Natal (UKZN)

UKZN has a disability policy and a Disability Unit which is doing wonderful work with blind students, as well as with students with other disabilities but so far (2009) they have not had any Deaf students requiring the services of Sign Language interpreters, but have included the costs of Sign Language interpreters in the list of accommodations they could make for any staff or student who needed it (UKZN Policy on Students and Staff with Disabilities). They have, however, had a few deaf and hard of hearing students who have managed to cope without the assistance of Sign Language interpreters.

University of Cape Town (UCT)

This university has set up procedures to be able to offer support to Deaf students. UCT had an operational disability unit as early as 1995. They believed even at that early stage that it was important to remove barriers that prevented disabled students from participating in studying at the University and the whole University had to change if they wanted to integrate staff and students with disabilities into the mainstream of the university. This involved many structural changes to existing buildings as well as changes in presentation and attitude.

UCT conduct research into the feasibility of being able to remove enough barriers for students with a particular disability to succeed before accepting students with that disability. Although they did accept deaf or partially Deaf students who could lip read

and communicate orally, they were not at that stage in a position to provide Sign Language Interpreters for Deaf students (University of Cape Town Disability Unit Progress Report 1994-1995).

In 2005 they had two Deaf students registered for the Diploma in Adult Education offered by CHED. They provided the funding for the Sign Language Interpreter and were hoping that this would lead to more Deaf students applying to study at Cape Town University. Unfortunately both students had to withdraw from their studies for personal reasons. However the ground work has been done and the university feels that they will be able to cope with more Deaf students in the future (University of Cape Town Student Affairs Disability Service Progress Report 2005).

In 2007 a dayhouse was opened to accommodate students with disabilities. The Disability Service had its doubts about whether it was the right thing to do, or whether it might make the disabled students feel marginalised. However, it has been a success and created a feeling of togetherness and empowerment amongst the students who use the facility. (University of Cape Town Student Affairs Disability Service Progress Report 2007).
When the DUT's new proposed Deaf Centre is opened, I think that it could have a similar empowering effect on our Deaf students, especially since we at DUT do not have any Disability Office.

Durban University of Technology

When looking at disability in general DUT lags behind most higher educational institutions in catering for these students' needs (Jali, 2009). However, DUT has run a Programme for Deaf students since 2000 under the auspices of the Information Technology Department. There are three Sign Language interpreters who attend lectures with the Deaf students and interpret what is being said in the lecturers. This programme has been extended to include the Department of Accounting and since 2008 Deaf students are able to have the additional support of Sign Language interpreters in both IT and Accounting. So far these are the only two options available to Deaf students under this

Programme for the Deaf. DUT has enabled many profoundly Deaf students who would otherwise have been unable to study without the intervention of Sign Language interpreters to achieve their dreams of a tertiary education.

3.6   RESEARCH IN THE FIELD OF DEAFNESS

3.6.1   In the rest of the world

As mentioned by Lang (2002) not much research has been undertaken into ways in which Deaf people can be accommodated in an institution of higher education.

Gallaudet University

This university is a world leader in deaf education and especially deaf higher education and students have access to a large range of technology to assist them in their studies. The university also runs Gallaudet University Press which makes literature available on a vast range of topics related to deafness. Research is being conducted on a range of topics such as *'Deaf and hard of hearing youth'* as well as '*The reading development of deaf and hard of hearing students'* (www.gallaudet.edu/Gallaudet_university).

University of British Columbia

Ruth Warick conducted research at the University of British Columbia with fourteen hard of hearing University students from 3 different Universities in Canada whose degree of hearing loss ranged from mild to profound. She studied the type of accommodations that were offered these students and the students' perceptions of the usefulness of these accommodations (Warick, 2004). This study, however, only dealt with hard of hearing students and not Deaf students who use Sign Language as their means of communication. As a result, the only accommodations that Warick (2004) mentioned which could be useful for Deaf students at DUT was note-taking and extra time for Deaf students in tests and examinations as well as captioning, as they did not use Sign Language interpreters at all.

Where captioning was used the deaf students seemed to find it helpful. However the equipment is costly and not all of the three universities in Warick's study used captioning. I think captioning could be useful for deaf students at DUT who cannot Sign or in departments where Sign Language interpreters are not provided depending on the availability of sufficient funds.

However, I did find it very useful as a hearing person, to see what interventions can be put in place to help Deaf and hard of hearing students in their studies, as well as any possible problems that might arise in their use.

3.6.2   In South Africa

At Wits University

Lucas Magongwa (2008) examined the experiences of Deaf teachers at Wits University. The participants in his study were all adult learners who had already obtained a tertiary qualification and were not first time learners like those at DUT. Magongwa was also able to conduct his interviews in Sign Language without requiring the use of an interpreter, as he is Deaf and can sign, while I had to rely on the services of the Sign Language interpreters supplied by DUT and this might have been the reason why some of our findings were different. For example Magongwa found that many of his Deaf participants experienced problems with the Sign Language interpreters provided, while the DUT students said they had no complaints about the interpreters.

At UFS

Research was conducted by M. Miranda into the challenges of a full time interpreting service at a tertiary institution. This research was centred on problems that arose in the provision of SL interpreters to Deaf students at UFS. In 2009 they had one permanent SL interpreter and three freelance interpreters. Their Deaf students seemed to experience

many of the problems which the Deaf students at DUT experience as a result of low literacy levels of Deaf students. UFS does however run a Career Preparation course which both Deaf and hearing students attend and this does seem to help the Deaf students to adjust to tertiary education. One of the problems experienced was the lack of confidence of many of the Deaf students in their own abilities. The presentation by Miranda did not look closely at interaction between Deaf and hearing students, although it appears that some hearing students are involved in note taking for the Deaf students (Miranda, 2009).

At UKZN

Research was conducted by Ram (2010) into the life experiences of five Deaf teachers. Their experiences were recorded from early childhood to adulthood. This study also used adult participants but they gave an account of their whole lives including their struggles to become teachers. The focus of the study was more on these teachers' struggles for their own identity than on the assistance that they received or had not received during their tertiary studies. While reading this study I began to understand the frustration that these people must have felt and the pride and pleasure they must feel in their current situations where they are now able to help other Deaf people to achieve their dreams through education.

At DUT

Lulu Jali (2009) examined the experiences of students with physical impairments at DUT. She initially interviewed eight participants but two withdrew from the study and she continued with the remaining six participants. One of her findings confirmed my own, which was that there is no Disability Office or even a Disability Officer at DUT. Also that the Disability Policy document for staff and students did not mention students at all, except on the cover and title page. She also found that little or no provision was made for students with disabilities at DUT. She did not interview any Deaf students.

3.7 Summary

In this chapter I have looked at the literature which informed my study of Deafness in higher education. I examined legislation underpinning Deafness, and Deaf education. I have examined the various paradigms of disability generally and, in particular, in relation to Deaf people. In my opinion Deafness, although regarded as a disability by some, actually fits within the Socio-Linguistic paradigm as described by Ram (2010). Interestingly although the majority of Deaf people do not regard themselves as disabled, nevertheless, many Deaf people do collect a disability pension from the government (Ram, 2010). Deaf people are not impaired when among fellow Deaf people but hearing society disables them by a general lack of knowledge and interest of how they can help them. I have tried to help hearing readers to understand a small part of the lives of these young Deaf students, as well as the arguments for and against inclusion of Deaf students in mainstream schools and in tertiary institutions.

I have examined research on Deaf tertiary education and feel that my study has a role to play in informing on Deaf higher education in South Africa. The studies by Magongwa (2008) and Ram (2010) both use graduate students as participants, while my study is mainly involved in the undergraduate experiences of Deaf learners at DUT

In the next chapter I will explain the methodology which I used in my study.

CHAPTER 5: DATA ANALYSIS

5.1   INTRODUCTION

In this chapter I will be examining the data that I obtained as a result of my interviews with both the Deaf students and their interpreters, in combination with the responses to the questionnaires completed by the students. I am also using data obtained from two lecturers who I interviewed (See Chapter 4).

In order to get the answers to my first research question about the academic needs particular to the Deaf students at DUT as perceived by the Deaf students I interviewed eleven Deaf students who were or had been registered in the IT Department at DUT (See Table 4.1). These students were interviewed as a group as they form a group in the Programme for the Deaf. This means that their experiences and perceptions might not be the same as individual Deaf students studying at DUT or other Institutions on their own without the support of a group or Sign Language interpreters. Individual Deaf students are not easily identified as Deaf unless they are wearing hearing aids as they look similar to any other student on campus.

In order to be able to answer the second research question about the academic needs particular to the Deaf students as perceived by the Sign Language interpreters, I interviewed the three Sign Language interpreters, one of whom is the coordinator of the Programme for the Deaf at DUT.

Although I had observed that the Deaf students on Campus at DUT appeared to be marginalised, I have tried to remain open minded as recommended by Bloomberg and Volpe (2008) and not to have any preconceived ideas. I had to find out from the students whether in fact they were marginalised and if so to what extent, without asking any leading questions. This was not too difficult to do, as I am a hearing person and did not have any idea what the actual academic needs and perceptions of the Deaf students might

be, so I was able to remain open minded about the questions I asked as well as the answers that I received to my questions.

I will be using comments made by the students to describe their feelings, using their actual words. I will also be giving both positive and negative comments, and when not all the students agreed on a theme I will try and give all the different opinions.

It seems that the problems of Deaf students in tertiary education are very different from those experienced by many other students with disabilities because Deafness combines problems of disability and language. They could be regarded as disabled, or as a minority language and cultural group which they prefer, with their first language being SASL rather than English. My personal opinion is that they fall within the socio-linguistic paradigm.

Other minority language and cultural groups do not have the same communication problems as the Deaf students as they can speak normally, while the Deaf have to communicate by means other than speech such as interpreters or writing.

5.2 LITERACY

5.2.1 Basic Literacy

Both the Deaf students and their interpreters agreed that the low level of literacy of the Deaf students was a problem for most of them. Because the schools for the deaf do not teach Sign Language as a school subject, in a set structure with a set curriculum, students coming from these schools for the deaf (especially if their parents are hearing and still learning Sign Language themselves), often do not have a very strong vocabulary in their first language, which is Sign Language. This low vocabulary in Sign Language affects their ability to acquire a good understanding of their second language which is written English. If a Deaf child has a good grounding in his/her first language which is Sign Language, they seem to find it easier to learn a second language, for example English

(Lane, 1992). Basic literacy is essential for people to be able to read notices, fill in forms and read signs. This is normally learnt at school but many Deaf people, especially those in rural areas have not learnt to read and write. This is a serious difficulty for such people as they always need someone to help them with even the simplest task.

One of the interpreters felt that although many of the schools for the Deaf were doing the best they could with the resources at their disposal, and although many Deaf students work really hard at school, when they leave the Deaf schools their matric is not up to the standard which is required by universities, especially as far as their level of English.

> "Their literacy and academic levels need to be improved greatly. I feel it's their lack of knowledge and basically everything starts with the school system. I'm not trying to put the blame on the school system, you know, as obviously they are doing the best they can with the resources at their disposal."

The Deaf students who study at DUT have basic literacy skills in that they are able to read and write basic English but have difficulty with technical terms and subject specific language. This is an example of academic literacy, which is what most of the Deaf students seemed to struggle with.

The Deaf students also seemed to feel that the problem stemmed from the school system. Some of their comments were:
"You struggle with Sign, that's how we struggle with here, the different background. Our schools are so much *(sic)* different, that's why we struggle."

The level of English taught in most schools for the deaf is lower than that taught in mainstream schools. This means that many Deaf adults have difficulty reading newspapers and books because of the unfamiliar English words. This results in many Deaf people having a poor knowledge of current affairs and the world around them. This lack of general knowledge is compounded because Deaf people are unable to pick up conversation going on around them as hearing people often do. If an event happens in the world, most hearing people will discuss it and people who were unaware of the event will

often overhear other people discussing it and in this way gain knowledge of the event. Deaf People, however, are unable to access this method of residual learning as they cannot hear.

One of the interpreters said:

> "I do find that they do have somewhat *(sic)* a lack of general knowledge. It depends on the topic you are discussing with them. If you talk really generally they do have a lack of general knowledge, but I feel that comes hand in hand with their lack of residual learning, because us hearing people you know, we gain a lot of knowledge by overhearing conversations, by hearing stuff on TV and radio or whatever as we go through our daily lives and we have had that our whole life. Often, especially if they have been born deaf, they don't have that incidental learning and that's where they get that lack of general knowledge. That's what I feel, that's a contributing factor to the problem."

Deaf people have to wait until they are told about the event or perhaps they are fortunate enough to be able to read it in the newspapers and can inform their friends. Things have improved somewhat by the simultaneous translation of the news and weather by a Sign Language interpreter in one corner of the TV screen.

We had an example of this lack of awareness of current events amongst the Deaf students on campus at DUT during 2009, when the students were striking. The hearing students all seemed to know exactly what was going on, but the Deaf students were bewildered at all the commotion around them and did not realise what was happening. They had to run to the IT department and try and find an interpreter who could tell them what was happening. Usually when a Deaf student needs to know something and there is no interpreter around to help them, then they resort to writing down the question they want to ask the hearing person. In the situation of the strike, however, there was no time to write anything and no one wanted to waste time reading it, everyone was just running away. It must have been a frightening experience for many of the Deaf students and could have been dangerous for them.

5.2.2   Academic literacy - The role of the interpreter

The Sign Language interpreters play a key role in assisting Deaf students to overcome some of the problems created by their poor literacy levels. They not only translate what is said by the lecturer during lectures and act as the voice of the Deaf students when they want to ask a question or need a further explanation, but they make notes of the subject matter in a simplified form of English when necessary, such as when the language in the text book explanation is too difficult for the Deaf students to understand. Some of the language used in lectures and textbooks is unfamiliar to the Deaf students and this, coupled with their low literacy levels, makes it necessary for them to have notes in a form which they can understand, or can be explained to the students by the interpreters. Obviously the Deaf students would have to learn the correct terminology but the interpreters would have to explain the meaning of the words. This is a problem that is shared with many second language students but where the hearing student can ask his/her friends for help, the Deaf students have to rely on the interpreters. In time, when there are more Deaf students on Campus, it might be possible to get third year Deaf students to explain things to the first year Deaf students but at present this is not possible. The Deaf students do try and help each other but because there are only two or three Deaf students in each class, the pool of knowledge is limited.

Some of the comments by students were:
 "The English language is very high and the words in the text books difficult. Mrs Kanaye really helped us a lot by giving us easier notes".

"My most difficult thing is English. The English language is very difficult, very high level. At school the levels were very low and here it is very high. In the lectures the lecturers use a very high language and Nan adjusts the language so we can understand it."

Deaf students also have problems with the correct use of language because Sign Language is a visual language, while English is a spoken and written language. Added to

this it is not possible to translate word for word from English into Sign Language, or vice versa (Glaser and Lorenzo, 2006).

The Sign Language interpreters run extra tutorials in English to try and improve the literacy and language levels of Deaf students, as well as extra tutorials in their subjects. In effect the interpreters at DUT are a life line for the Deaf students on campus and often act as advisors and counsellors as well as interpreters and tutors.

Shortage of sufficiently qualified interpreters

The Deaf students said that if there were more interpreters then the institution would be able to have more tutorials and could offer courses other than just IT and Accounting for Deaf students. As shown further on in this chapter the Deaf students really need a broader choice of qualifications to choose from, as the two that are offered are very practical and not suitable for students who are have interests in other fields.

The coordinator felt that it was very important not just to get interpreters, but suitably qualified interpreters, preferably with an educational background, such as teaching in a Deaf school, so that they are able to tutor students and can convey concepts that are being lectured, correctly to the students. She explained in a memorandum to the Acting Dean: Faculty of commerce on 16 November 2006:

> "The quality of the interpreter is extremely important as it can mean, if the interpreter is not adequately skilled, that the student will miss out on important subject content, while the interpreter is battling to understand the concepts and find the correct signs for it. Students also come to the interpreters for further explanations and clarification of concepts after the lectures, and, therefore, it is imperative that the interpreter is not only fluent in Sign Language, but is one who has a tertiary qualification, especially in the field of education and also one who has strong skills in the language of instruction, which, in this case, is English".

One of the other interpreters felt that for the courses offered at present, there were enough interpreters but that if they expanded the number of courses offered, then they

would definitely need more interpreters, while the other interpreter felt that they needed more interpreters but was less specific about what these interpreters would be required to do.

The Sign Language interpreters keep in close contact with the lecturers who lecture to the Deaf students and work together to try and sort out any problems that might arise. The lecturers give the interpreters copies of overheads used in class as well as copies of some of the text-books used in class.

The Deaf students said that the interpreters were a great help, not only for interpreting the lectures, but also assisting them with other problems. It was interesting that none of the Deaf students at DUT complained about the interpreters or the quality of service they were receiving from the interpreters, which conflicted with the findings of Magongwa (2009). In his research many of his participants complained that interpreters were unreliable, did not translate well and were not dedicated. Since the Deaf students at DUT had to work through the same interpreters as were used to interpret for this study, it may be supposed that there was a risk that they would be unlikely to identify problems or complain about the interpreters. A different result might have been obtained if I had used outside interpreters. As mentioned in my previous chapter, this is a limitation to my study which I had not taken into consideration. Magongwa on the other hand did not need to use interpreters to conduct his interviews because he could Sign so the problem of the interpreters' presence inhibiting the participants' responses never arose.

Another possible reason for the difference in the findings of the two studies could be the fact that at Wits where Magongwa's study was done, there is a Disability Office and this office is responsible for finding and appointing Sign Language interpreters, while at DUT there is no Disability Office and all Sign Language interpreters are found and appointed by the coordinator of the Programme for the Deaf, who is extremely particular that the interpreters conform to her standards. This means that she is prepared to rather be without an interpreter for a period of time and have the existing interpreters and temporary staff 'fill the gap', than to employ someone who she feels is not suitable. In her words:

"Our vision here needs someone who understands Deaf Education and understands that Deaf students come from schools that don't offer a very high level of education. The person who works here has to understand that they are here to **help**[1] the Deaf students in a college environment. The mind set is very important for a person working with the Deaf. If they don't have that mindset it becomes very tough to work in the situation. It actually makes my role that much harder."

Because good qualified Sign Language interpreters are not easy to find, this has meant that when an interpreter has left he/she has sometimes not been replaced for a few months. However, again in the words of the coordinator:

"What happens is that the position will be put on hold and I will get someone who will come in as a temporary staff, but I am looking for someone, but that is not easy as well. If I get someone who does not have enough experience and who does not understand working in a college environment, then honestly it becomes even harder for me to deal with. It worsens the problem and actually becomes harder. Sometimes I actually feel that when I worked for three years on my own it was so easy. Much better than to deal with all these issues, that happens when we have people who are not competent and not willing to work. It really frustrates me."

Most of the participants said that they preferred to go to the interpreters when they need help, rather than asking other students or lecturers because of communication problems. This means that this increases the pressure on the interpreters who already have a heavy work load as illustrated above. The students feel that this is a logical solution to their problems, but it would actually be better for the development of their independence if they did try and work through the lecturers, as once they leave DUT it is unlikely that they will be able to use a Sign Language interpreter in their daily lives. The lecturers also have no idea of how the Deaf students are coping with their subjects until they write their first tests as they have no communication with the Deaf students. Thus the Deaf students

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[1] I have used bold letters to show the words that were stressed by the interpreter.

not only do not communicate much with the other hearing students but also have very little direct communication with the lecturers unless they can-not find an interpreter. This shows how very dependant on the interpreters the Deaf students become, which does not prepare them for the world outside DUT.

This demonstrates the need for informing lecturers who have Deaf students in their class how to communicate with their Deaf students to encourage Deaf students to come to the lecturers with any problems they have with their subject. The Deaf students should also be encouraged to go to the lecturers first for assistance and only if that does not work should they ask the interpreters. This would take some of the pressure off the interpreters. Some of the Deaf students do approach the lecturers but prefer to ask the interpreters for help probably because it is easier and more comfortable for them to be taught in their first language which is Sign Language.

Other minority language groups on campus also have problems understanding English, but they are able to use a dictionary to understand the meanings of words they do not know. However, because Sign Language is a visual language and not a written one, it is difficult for Deaf people to find out the meaning of an English word that they do not understand. They do not have access to English dictionaries where the words are explained in Sign Language. This is why they need the Sign Language interpreters.

All the students in this study cited some problems with the language used in the text books and lectures which they found very difficult to understand. One of the participants commented:

> "When I first came here it was a really big struggle with the English language used in lectures and text books. It was tough and we needed something to help us overcome this problem."

This is why the role of a Sign Language interpreter was very important to the Deaf students, as they explained the meanings of words used during lectures and in text books as well as interpreting the lectures for them.

Only three of the Deaf students experienced problems with the language used in tests and exams, especially multiple choice questions, but the others felt that the interpreters' explanations of the questions were adequate. In the words of one of the students:

> "If the English is difficult we are entitled to ask an interpreter, who can explain these words to us and then we can answer, but if it's hard and you don't understand and there's no interpreter then we might have to leave the question or just write rubbish, but luckily we have interpreters."

Although the language used in tests and exams is a problem experienced not only by the Deaf but also by other second language students, the situation of the Deaf students is a different situation to that of other second language students. As mentioned previously, there is no dictionary available for them to use, so the Deaf students are permitted to have interpreters present during tests or exams to assist the Deaf students with the meaning of words. The interpreters are not allowed to tell the Deaf students how to answer the question, only what the meaning of the words are. The institution has to rely on the personal integrity of the interpreters not to assist the students to answer the questions and this is another reason why the selection of suitably qualified interpreters is so important.

One of the interpreters did say that the Foundation course which has been introduced in 2010 seems to have helped improve the literacy levels of the Deaf students. The Deaf students are aware that their literacy levels are low and that it is important for them to improve their literacy in some way. Some of their comments were:

"The Deaf have to learn English because it's very important. When we study here and we go to find a job somewhere once we've completed our work here, there may not be an interpreter and we will be surrounded by English."

"It is really our responsibility. We should request extra English to improve our English so we don't have to rely so much on interpreters."

This need to improve the literacy and communication skills of Deaf students could be used as one argument for integrating Deaf students with hearing students at DUT. As the Deaf students themselves realise, they will have to leave the university in a few years time and be involved in the outside world, where most people are not Deaf. They will need to try and communicate without the assistance of the Sign Language interpreters, as mentioned before. It is very important that the Deaf students find ways to improve their literacy levels, such as reading more. However the Deaf students have very little spare time in which to do reading as they have to work harder than the average hearing students in order to keep up with their academic programme. The interpreters do run extra tutorials for the Deaf students to assist in improving their literacy levels, but their available time is limited.

The interpreters agree that the general literacy levels among the Deaf students are low for a number of reasons:

- One of the interpreters explained that deaf children generally do not have the same levels of literacy as hearing children of the same age, especially if they are born to hearing parents and are not exposed to Sign Language at an early age. Their vocabulary is limited as many of them are only diagnosed as being deaf when they start school. This was confirmed by the fact that three of the participants in this study had attended hearing schools for one year when they were about five or six years old after which they started attending a school for the Deaf. The earlier that a child learns to communicate the larger their vocabulary is going to be and the higher their levels of literacy. This view is supported by Lane (1992) and Oliver Sacks (1990) among others.
- The low levels of English taught in the schools for the deaf as mentioned previously.
- The fact that many Deaf students are not able to obtain a strong foundation in their first language Sign Language, as it is not taught as a subject with a proper curriculum in the schools for the deaf. If South African Sign Language was recognised as an official language, as DeafSA is proposing, it could be taught as a

subject for matric at a higher level and this would improve the literacy levels of Deaf children leaving school as they would have a strong first language and would find it easier to learn to read and write English. This is supported by DeafSA, (2007).

- Deaf children cannot access information going on around them as they cannot hear conversation, radio or TV sounds.

5.3 COMMUNICATION

It appears from personal observation, as well as interviews with the Deaf students and their interpreters, that there is little or no communication between the Deaf students on the campus and the majority of hearing people on campus. Because Deaf students have difficulty in communicating through speech, they tend to keep aloof from the hearing students and as a result are often ignored by fellow hearing students who often think that they do not wish to be friendly. This is an important issue as it has the effect of marginalising the Deaf students on campus and creates problems when students have to work together in groups. This will be discussed in more detail in the section on group work later on in this chapter.

5.3.1 Communication with staff and hearing students of DUT

The Sign Language interpreters play an important role in communication between the Deaf students and the hearing students and staff, as Deaf students may not be able communicate through normal speech and need some one to speak for them. When an interpreter is not available, the Deaf students usually resort to writing down what they want to say on paper or on their cell phone. This is not ideal as it is difficult to explain certain concepts in this way and makes students reluctant to ask lecturers for help. They would rather go to the interpreter for help. Unfortunately the interpreters are very busy and this adds to their work load.

One of the participants said:

> "One of the most important problems was communication, you know, especially with the lecturers and hearing students and everyone around. You need lots of paper and pens to write, write, write. Sometimes *(sic)* use cell phones and sms or just write message on phone and we communicate in that way."

However, in the event of an emergency on campus (such as the student unrest and strikes) there might not be time to write down a message. Because of the difficulties of communication between hearing and Deaf students, it could mean that at times the Deaf students could be in a dangerous situation. They are unable to talk to security personnel and because the Deaf students do not look disabled, the security staff would probably not even be aware that these students have a disability. If a security guard saw a student with crutches or in a wheel chair, in a dangerous situation they would be more likely to go to help them, but because the Deaf students look just like any other student they could be overlooked in an emergency. Usually when they have a problem the Deaf students go immediately to the interpreters for help. The coordinator of the programme has the cell phone numbers of all the Deaf students and one of the lecturers that I interviewed said that she would recommend any lecturer who has Deaf students in their class try to obtain their cell phone numbers so that in the event of an emergency they can contact the Deaf students by sms. She said that she found that that worked very well for her. This is something that could be adapted by other lecturers. The only problem is that this could be costly where there are a number of students involved.

The majority of Deaf students felt that the lecturers tried their best to be helpful, although they did say that some lecturers tended to speak too fast for them. There was, however, no problem with getting lecturers to repeat what they had said. I know from experience that many lecturers do tend to lecture fast, especially when trying to make up for time lost as a result of strikes, test weeks, holidays and so on. One solution to this could be that lecturers make the notes of their lectures available to the interpreters who can then go over what the students missed in the lecture. The only problem is that spare time is very scarce and the interpreters work to a very tight schedule. I have recently heard of voice-

activated computer programs where the person speaking wears a microphone and whatever he/she says is typed onto a computer screen. It is possible that this type of technology could be adapted for use by Deaf students, not necessarily as a replacement for the Sign Language interpreters, but as a further aid (See suggestions in next chapter).

One of the two lecturers that I interviewed said that he wished that he had been a bit better prepared to lecture to the Deaf students and that he personally would welcome a chance to be given a brief introduction to Deaf culture and perhaps a bit of simple Sign Language so he could at least greet the students. He said that at times he felt helpless when a student came to him and there was no interpreter present. He wanted to help but sometimes it is very difficult to write down the explanation of a concept that a student does not understand. When I asked him if he had any problems lecturing to the Deaf students he said:

> "We are not adequately prepared. Even if it is an induction or just 'Listen here .M. they tell us you are going to have 2 deaf students in your class. This is..X he's your interpreter. If you have any problems you talk to..X If …X….can't help you then you talk to Nan and if …X does not come to class you talk to Nan'
>
> 'If you want extra lectures this is where you can have them and this is the time '
>
> If you want to go for sign language classes which initially I wanted to do – something like that. Not just throw me in the deep end- which happens – it always does."

This lecturer had been lecturing to the Deaf students for a few years and still felt that he would like to be better prepared to help them more, to help make them feel more at ease in his class so that they have a sense of belonging as this would have an impact on their academic performance. His comment on the need for more preparation for lecturers was:

> "I think that we need that even for the lecturers. I wouldn't mind learning a few signs (I love you) you know things like that. When I talk to the students they can read lips and can understand me but I can't understand what they are saying. One student took out his cell phone and texted in a message because the interpreter was not there and showed me or wrote on a piece of paper what was his mark or how to do this? That made me feel inadequate."

This particular lecturer is extremely willing to do whatever he can to improve his service to the Deaf students as he feels that he is not giving them what they need. He was disappointed that very few students came to see him for help and felt frustrated that he was unable to communicate with the Deaf students on a significant level. He is prepared to attend extra workshops if necessary in order to improve his relationship with the Deaf students. And perhaps other lecturers to Deaf students feel the same way. He also felt that it would be a good idea to have regular meetings with all the other lecturers who lecture to Deaf students to share any problems they might have come up with ideas to solve them- some form of brain storming.

The other lecturer that I interviewed was lecturing Deaf students for the first time and kept in close contact with the interpreters. She insisted that both the interpreter and the student had to obtain the correct text book before lectures started and said that because she followed the text-book fairly closely there were no problems that she and the interpreters were unable to sort out. She gave the following advice to lecturers who were going to have Deaf students in their class:

> "I think that I would say up front that you can't just go there and slap on an overhead and just rattle off your lecture. You would have to give them actual hard copies. I think my lecturing style too is not too rushed and I do tend to repeat things. If you just go and rattle off the lecture and then leave then they might get lost. Also I think that the interpreters are playing a huge role (like Nan as I said). Giving her a copy of the text-book also helped."

The interpreters told me that there was no budget for text-books for interpreters and that this particular lecturer obtained a desk copy of the text-book for the interpreter. This is something that is fairly easy to organise and could be done for all subjects so that the interpreters have an up to date copy of the prescribed text-books.

While talking about problems during lectures one of the interpreters thought that:

> "There should be a sort of thing like a workshop, you know, just so that they realise what it's like to have a Deaf person in their class and so they understand

how an interpreter works, as often they don't have an understanding of the role of the interpreter. They think we are tutors who sign as opposed to interpreters who have a code of ethics, who do things in a certain way."

From personal observation, as well as discussion with the interpreters and Deaf students, there appears to be very little communication between the Deaf and hearing students and staff. I think that part of the problem behind this lack of communication could be a lack of understanding and knowledge about the Deaf. Most hearing people do not understand much about Deafness, Deaf people and Deaf culture and do not know how to communicate with Deaf people. I must admit that until I was told about these Deaf students by a colleague, I was completely unaware that we had such a large group of Deaf students in one Faculty and I certainly knew very little about Deaf culture.

Some of the Deaf students put this lack of communication down to lack of knowledge of Deafness or even fear of Deaf students because they are different. One of the comments received from the Deaf students reflected this opinion:

"Some people had never seen Deaf people. We were the first for them."

Because most Deaf children are educated in special schools for the deaf, many hearing people have not had any contact with Deafness and so do not know much about Deaf people. Most people tend to be wary of the unknown and this is reflected in a comment by a Deaf student about the hearing students:

"You can see from their faces that they are scared to try and communicate because they don't know how to communicate with us in the beginning. So that's what their faces look like – scared."

The Deaf students generally do not have the self-confidence to go up to a hearing student and try and communicate unless it is absolutely necessary. This adds to the communication problem, as the hearing students then feel that the Deaf students do not want to communicate.

5.3.2   Communication as impacting on learning

As mentioned previously Deaf students do not have the general knowledge that hearing students of the same age have as they cannot 'overhear' conversations between other people or listen to the radio or TV. If there are no captions on a TV programme or no Sign Language interpreter they are usually unable to understand what is being said. Lecturers often assume that students have a certain degree of prior general knowledge and use examples of current affairs to illustrate a point, thinking that all students will know about the event and thus will understand more easily. However, for the Deaf students this will just confuse them even more, as often they have not heard of the event which is being used as an example. According to one of the interpreters this makes it necessary for the interpreters to explain the example first before the student is able to understand the concept that is being lectured. This creates problems for the interpreter as described by one of the interpreters:

> "Having to keep up with the lecturer and then in terms of the prior knowledge that the Deaf student might have, where prior knowledge is often somewhat lacking from their years in the school."

Interaction between Deaf and hearing students could be of benefit to both hearing and Deaf students. The Deaf students would increase their general knowledge and also their subject specific knowledge if they were able to find an effective way to communicate with the hearing students. It would be possible for active learning to take place and group work, which I discuss further on in this chapter, would not present such challenges for the Deaf students. The hearing students would be able to learn about another cultural group which is completely different to theirs and would learn to regard Deaf people as people just like them who just communicate in a different way. The hearing students would be able to learn patience and tolerance of people who are different from them.

Students at DUT have been doing group work for a number of years and have found that it does prepare students for the work-place, where often they would be required to work as a team with everyone in the team contributing to the outcome. However the Deaf

students have experienced a number of problems working in groups with hearing students, which will be discussed further on in this chapter.

5.3.3   Obtaining Information

The main source of information for Deaf students in the Programme for the Deaf is in the form of lectures delivered by a lecturer in spoken English. They attend the same lectures as the hearing students but sit in the front and to the side so that they can see the SL interpreter. The students receive this information via the Sign Language interpreter in Sign Language. Provided that the Sign Language interpreter is skilled and understands the concept him/her-self this is probably the best way for the Deaf students to receive the information, in their own language. During class they can ask questions of the lecturer via the interpreter or even join in the discussion of a topic, again via the interpreter.

However outside of the lecture venue very few Deaf students go to the lecturer for help. They seem to prefer to go to the interpreters for help in understanding problems because of problems in communication with hearing lecturers. This means that they do not use the expertise of the lecturers in their field and are relying on the explanations of the interpreters who are then acting as tutors in a number of different fields. This could disadvantage the students in an exam situation, because they might not answer the question in the way that the lecturer wants it to be answered.

They are also required to look for information in books and this is where the Deaf experience problems because of their low literacy levels. Deaf students are fortunate that the Sign Language interpreters also run extra tutorials for them as well as being available to explain any work that they do not understand.

5.4   INCLUSION

All the participants had a problem adjusting from the relatively sheltered atmosphere of schools for the deaf, where all the pupils were deaf, to that of the University where Deaf

students were in the minority and only the other Deaf students, the interpreters and a few other people on campus could Sign or even understand the problems that they encountered. Most students have some difficulty adjusting to the change from school to a university, but for Deaf students it is harder than for most other students as they have difficulty communicating with hearing people and the schools for the deaf do not adequately prepare deaf pupils for tertiary education. Hearing students can communicate by means of speech but the majority of Deaf students are unable to use normal speech to ask for help.

5.4.1 Social learning – group work

The social environment at Ritson campus where the Deaf students are situated is not conducive to the promotion of active learning between Deaf and hearing students. The majority of people on campus are unaware that there are Deaf students studying IT and Accounting at DUT and there is very little communication between Deaf and hearing students.

Group work is only introduced in the second year of study for the IT students, so not all the participants had done any group work, but those who had, complained that when they had to work in a group with hearing students, they found it extremely difficult to do. Both the graduate students and the current students had problems with this. There are not enough Deaf students in each class at this stage to have a group made up solely of Deaf students as some of the other minority language groups do, so they have to form groups with hearing students. If there were enough Deaf students to form their own group they would be able to discuss the assignment that they had to complete actively, in their first language, Sign. They would not feel that they were holding back the rest of the group because they are Deaf but this is not really a solution to the problem

The fact that at present there are insufficient Deaf students to form a group with Deaf students is not necessarily a bad thing because the Deaf and hearing students are now forced to cooperate and communicate with each other, to prepare them all (Deaf and hearing) for the outside world. However, the Deaf students complained that the hearing

students lacked patience with them and if there was not an interpreter present they often did not explain clearly what was happening and sometimes even left them out of group meetings by not letting them know when the meeting was taking place.

One Deaf student commented:

> "It's problematic I would say when are we going to meet, or where is our group and they say later, not now and we never meet."

Another Deaf student had a similar problem but because she wanted good marks she did all the work herself and the hearing students benefitted from her work. She said:

> "Some problems – not a lot. Every time I want to have a meeting to discuss the project and what it entails, they just go away. Then I end up with a lot of work to do because I don't want my work to suffer and they are not doing much of the work."

Some students felt that the hearing students did not understand their problems and because of pressure and time constraints they did not want to be slowed down by the Deaf students. One student said:

> "For DST projects when we work in a group they are not very understanding sometimes, for example they need to understand that I need a little more help for me to understand exactly what is required and then I come to Mrs. Kanaye to ask her to help, but they are not very flexible enough and they don't give me the space and the time. They want things and they want them now. You know it is difficult, for example the English is difficult, so I like to go to Mrs Kanaye first to see what is required then I can go back with a lot more confidence to the group. They are not very understanding."

From what I understood from the interpreters, many of the Deaf students lack confidence in their own understanding of English and need to be reassured that they have understood the question correctly. They rely heavily on the interpreters to explain the requirements of questions to them and unfortunately there is pressure on all the students to complete the

assignments within a certain time. This means that hearing students could become impatient with the Deaf students in their group.

From the above examples one can see that there is a problem when Deaf students have to work in groups with other hearing students. The interpreters try to attend the important group meetings, but because of their heavy work load they do not have much spare time. All the students do eventually have to do group work as it is usually one of their assignments that count towards their final mark. I feel that if all the students were adequately prepared for group work by the lecturer concerned, especially those groups with both Deaf and hearing students in them, it would be possible to work on ways of communication which could work, such as e-mail or sms or even just writing messages. It might take slightly longer but perhaps the groups with Deaf students in them could be allowed some extra time to compensate them for communication delays. This could make the hearing students a little more patient as they would know that they are going to get extra time to complete their assignment and make the Deaf students feel that they are part of the group.

The coordinator of this programme says:

"We do explain to the students, but when it comes to crunch time, when it comes to something that they know they are getting marks for, then they are not very helpful. Then all they know about the Deaf is pushed aside, now it is work, we want to do work and I am not interested in the fact that you are Deaf. That is your problem and you have to solve it. They can't understand".

This made me realise that students can be very self-centered and many do not want to take time from their studies to try and explain something to a Deaf student. This is where the hearing students might be more patient and understanding of the Deaf students if bonus marks were allocated to groups working with Deaf students.

There was however one positive comment from one student who said:

"They do try and help us but they don't know how exactly to make us feel fully included. We try to have our important meetings with the interpreter."

I feel that this student is probably correct and that many hearing students want to be helpful but have very little knowledge of Deaf people and how to communicate with them. It should be the lecturer's responsibility to explain the concept of group work and working with diversity and how they are being given the opportunity to learn more about other language and cultural groups as well as people with disabilities, which will be useful when they go to work. With the introduction of the Employment Equity Act of 1998, many more employers are employing people with disabilities and students should learn to be able to work with any person.

The Deaf students who appear to cope best in group work seem to be those who can lip read, but they too have problems. As one student said:

"Sometimes they forget that we are Deaf and they carry on talking fast. I have to ask them to speak slower or wait. I can hear you but then I can explain to…F……. (another deaf student) when there is no interpreter available".

This could be avoided if the lecturer explained to the students about deafness before the assignment was given out and also explained the fact that a Deaf person cannot lip-read if he/she cannot see the face of the person speaking.

5.4.2   Separate units/spaces/groups vs integrated/mainstream

All the participants felt that, although they had been accepted into the institution, they did not feel included in all the activities of the University. The Deaf students said that they often felt ignored and treated as if they were not there most of the time by the hearing students. They seemed to think that this was because of a lack of awareness of the Deaf and they are probably right. The Deaf students do not look any different from the average

student and if hearing students do not see them signing to each other, they could think that they are unfriendly and do not want to join in their activities. The Deaf students lack confidence in their communication abilities and most of them would not want to go up to a hearing student and introduce him/herself in writing, explaining that they are Deaf. It is difficult for Deaf students to have the self-confidence to break the communication barrier between hearing and Deaf without being able to communicate orally.

There has been much debate over whether Deaf pupils/ students should be in separate 'special schools' or integrated or included in the main stream. A profoundly deaf child will struggle to cope in a mainstream school. The policy of the Education Department is that all pupils/ students with disabilities should be accommodated in mainstream institutions wherever possible, but recognises that fact that certain disabilities such as Deafness might require specialised resources and training and that in these cases special schools, with staff with specialised training can be utilised (Department of Education :White Paper 6, 2001). For tertiary institutions, accommodation should be made to include Deaf students in the institution, with additional accommodations made for their deafness. The most common form of accommodation provided seems to be the provision of Sign Language interpreters which are provided at Wits, UFS and DUT. Deaf students are also given extra time when writing tests and exams. Other alternatives such as captioning as suggested in Chapter 2 can be costly.

Two of the participants stay in residence where they share a room, but seem to be more or less ignored by their fellow residents. When I asked them if they joined in the social life of the residence one of them said:

> "No, we don't get included. We are just on our own, kind of separated from them. Some of them do try a few signs but very little. We share a room together."

This isolation of these two Deaf students could be from choice, as Deaf people have a very strong sense of community and from what I have observed as well as what I have been told by the interpreters, they enjoy the company of other Deaf people. Lane (1992) also agrees that the relationship between members of the Deaf community can often be

stronger than that between the Deaf person and his/her family and this was confirmed by one of the interpreters who said:

> "You must realise something. The Deaf community in South Africa is very small. I know a lot of deaf people from here and other places in Durban who go and hang out at the Workshop. They go and have milkshakes, movies, things like that and they have a good time there, so as much as they are isolated from the other students in some ways it is self-isolation".

This supports one of the findings of Magongwa (2009) that Deaf students in higher education seem to prefer to be with other Deaf students.

It could be that the other hearing students did try to include the Deaf students but that when the Deaf students did not participate in activities the hearing students gave up trying. It does, however, mean that the Deaf students are missing out on an important part of the higher educational experience - the social life. People learn from others what is acceptable behaviour in given situations and how to behave with other people. If a person does not interact with other people they may not learn how to behave with others (Silveira, Trafford and Musgrove, 1988). Thus it is especially important for Deaf students to interact with hearing students so that when they leave DUT and go into the workplace they will be confident about how to behave among hearing people.

From personal observation apart from one hearing student who has learnt Sign Language from one of the Deaf students, the Deaf students spend most of their time with their fellow Deaf students.

One of the lecturers commented:

> "They associate with the Deaf students, only the deaf students. It's so sad to see. Nobody else talks to them. They are always on their own. They might as well have a university only for them on their own and we don't accommodate them."

This comment shows that this particular lecturer sees the Deaf students as being excluded from most of the activities of the institution and not belonging. Hopefully once the new

Deaf centre is eventually opened (see further on in this chapter) they should feel that they have a place where they belong.

One of the graduate students said that some of the hearing students seemed interested in them initially as a novelty but that it seemed to wear off.

> "Before, the hearing seemed so enthusiastic. Please teach us the alphabet, la/la/la. And then after a while they lose interest – its all over. It's a novelty"

From my own experience with the Deaf students, they are very happy when hearing people take an interest in them and want to know more about them and the Deaf students seemed disappointed that once the novelty of being with the Deaf students wore off, the hearing students seemed to lose interest in them. As a hearing person I found that Sign Language was not as easy to learn as the Deaf make it appear and perhaps the hearing students found it too difficult and there was not the motivation to learn Sign Language that there would be if they or a family member had been Deaf themselves. However, there are ways of communicating with the Deaf students other than Sign Language and perhaps an awareness campaign could inform the hearing students about Deafness and ways that hearing students could help fellow Deaf class members.

I agree with the Deaf students that most hearing students and staff at DUT know very little about the Deaf and although the coordinator says that they have given talks on Deaf awareness and Deaf culture during orientation of the first year students, due to time constraints, it was not possible to give very much information.

The interpreters also felt that the Deaf students prefer to be together and whenever they have a free period they find each other and sit or stand around chatting with each other. I have observed them and they really seem to enjoy the company of their fellow Deaf students, probably because they can relax and do not need to struggle to be understood and accepted. I have also observed that the Deaf students tend to socialise together with the other Deaf students on campus. They seem to have formed their own Deaf community on campus.

5.4.3 Working with diversity

As mentioned in my previous chapters it is no good enrolling Deaf students into a course at DUT under the umbrella of the Programme for the Deaf, providing Sign Language interpreters for them in lectures and tutorials, if these students are unable to share in the other facilities offered by the institution. At a tertiary level it is important for students to be receptive to different ideas and cultures in order to prepare them for the outside world where they will meet up with people from different cultural and social backgrounds. Integrating Deaf and hearing students in a tertiary institution can have advantages for both groups. The Deaf students will have their general knowledge increased and will learn coping mechanisms to help them when they enter the work place and have to communicate by means other than Sign Language. The hearing students will learn tolerance and understanding of people who are different from them and will come to realise that although the Deaf students may communicate in a different way from them, they have many of the same hopes, aspirations and feelings as they do.

At UFS Deaf students get assistance from fellow hearing students who make carbon copies of their own notes to give to the Deaf students (Miranda, 2009). This is a good idea but this is done informally and the notes made are not checked for accuracy by anyone before the Deaf student receives them, which could cause a problem if there were errors in the notes. The idea of involving hearing students on a voluntary basis is an excellent one as there will be benefits for both the Deaf and the hearing students. The hearing students will learn about Deafness and Deaf culture and possibly some Sign Language, as well as patience and tolerance towards different people. Both Deaf and hearing students will learn to work on ways to communicate other than normal speech and will learn not to be afraid of a person who is different from them

UCT regularly has functions where they invite a small group of able bodied students and a small group of disabled students. They organise activities which both groups perform together as a way of learning more about disability. This has resulted in many able bodied students volunteering to help students with disabilities. Both groups of students have

benefitted and there has not been a huge cost to the institution (Popplestone, 2009). It would be wonderful if DUT were to launch such a programme, but unfortunately we still need a Disability Office or someone to initiate and organise these things, so this might take a while yet.

Although the Deaf students are included in the lectures and can even ask question or join in discussions in class with the aid of the interpreters, they still feel excluded from the social activities of the institution and seem to feel more comfortable socialising with their fellow Deaf students. They attend lectures and tutorials with the hearing students but have extra tutorials with the interpreters and also spend all their free time with their fellow Deaf students. There is, however, nowhere for them to socialise together as the cafeteria, where most of the hearing students congregate is too noisy for those Deaf students who wear hearing aids. At present they sit or stand around the steps and corridors of the campus. This lack of their own space is a very real problem for the Deaf students as they have formed their own Deaf community on Campus and need somewhere to be able to sit and chat. The Deaf students used to use a room in the IT Department but unfortunately the room was needed for office space and now they just sit wherever they can. When Professor Goba was Vice Chancellor there was talk of forming a Deaf club on campus but that was about the end of 2005, shortly before Professor Goba left DUT and so far nothing has changed.

In the words of one of the students:

     "We just sit around on the steps or walls. There is nowhere for us to go"

The problem is compounded when several of the Deaf students want to see one of the interpreters at the same time as their offices are not very big. I experienced this when trying to interview the students, as the room was very cramped for space and there was not room for everyone to sit.

The coordinator of the Programme for the Deaf has been motivating since November 2005 to have a separate 'space' for the deaf students to congregate, meet with the

interpreters and use computer labs without having to fight for them with the hearing students. At present (Nov 2010) it is almost complete and after many disappointments it looks as if it will soon be in operation. This Deaf Centre is situated on Ritson Campus close to the IT and Accounting Departments and consists of a separate small building. It has taken time and hard work, as well as much motivation by the coordinator of the Deaf programme to get this far, but she still has to be given a mandate as to what they can do and also a budget. At present the IT Department deals with these issues.

Although the new Deaf Centre is in a separate building, the Deaf students will be on the same campus and close to the IT and Accounting Departments as well as to their lecture venues. This seems to be a solution to the problem of making the Deaf students feel that they 'belong' by giving them space for the activities they wish to participate in.
It will be a place where the Deaf students can go whenever they need assistance, which is especially important for these Deaf students as there is no disability office/officer at DUT.

Although DUT does not have a Disability Office the Deaf students do not seem to feel that they need one as the interpreters help them to sort out any problems that they have, such as registration and so on. This was different from the response of the students with disabilities other than Deafness who really felt the need of a Disability Office as there was no help for them (Jali, 2009). The interpreters, however, felt that there was the need for a Disability Office on campus, but felt that it would not be of much use to them as they would still have to come and sort out problems for Deaf students. One of the interpreters did feel that perhaps a Disability Office could do some of the administrative work that is currently performed by the coordinator, as well as assisting all the other disabled students on campus. I personally feel that a Disability Office could help highlight the problems encountered by students with disabilities and create awareness programmes that could go a long way towards helping to include students with disability in activities on campus, especially Deaf students.

It was found at Cape Town University, when the disabled students were provided with a Day House in 2008 (which sounds similar to the proposed Deaf Centre) that meeting together as a group empowered the disabled students and that although it was a separate unit, it actually helped to make the students with disabilities feel that they truly belonged. In that same year the Disabled Students Movement was formed on campus (Popplestone, 2009), which could have been as a result of empowering of the students with disabilities. .

Unfortunately there is a lot of 'red tape' involved in opening this centre which has been very frustrating for everyone concerned, but especially for the coordinator of the Programme for the Deaf. There seems to be a lack of communication between her and the Administration of DUT. She is getting very frustrated as she has not been told anything about how the centre is going to be run, what her budget is or given any mandate at all.

At present (Nov 2010) the programme is run under the 'umbrella' of the IT Department where it started and the interpreters' salaries and that of the coordinator come out of that Department's budget. Any stationery or office assistance is currently provided by the IT Department. However when the Programme for the Deaf moves to their new Deaf Centre there has not been clarity about what the position will be. In an interview with the coordinator on 21 May 2010 she expressed concern that she had not been given a mandate as to what she should do, what additional staff she would be allocated, and what budget she would be given to do this. This was causing her to worry as to what was going to happen and when. In her words:

> "I haven't been given the go ahead by anyone higher up so I don't really know what my situation is. What do I do and how do I do it? Because obviously we are going to need technical assistants too, because there are going to be fifteen computers there plus the computers that we have now in the office. I am not really sure what I will be given and what I won't be given and who is to hand it over to us. I am not really sure."

The other problem that she (the coordinator) has, is that all the planning, requests for things and chasing up the maintenance have had to be done by her. This is over and

above her workload of interpreting and tutoring She feels that her first priority is the students. As she says:

> "It becomes difficult for me because I have to do everything, you know. To try and get that done and at the same time there is lectures and we try to help tutoring- as you can see I am busy tutoring a student now. Exams are next week and the students are our first priority. Helping them with day to day work- that's our first priority. I can't neglect that. Although we need that desperately, but I can't neglect the students needs right now. I am hoping it will come together by next semester."

It appears from these two comments that the coordinator is getting frustrated with the lack of concern and all the red tape and barriers that she is encountering. The building was earmarked for the Deaf Centre over two years ago and in May 2010 was supposed to only need minor electrical and maintenance work to be done. It is now nearly the end of 2010 and the Centre is still not operational and the Deaf Students and their interpreters are anxiously waiting for the opening of the new Deaf Centre, which should make their lives much easier. All Deaf students will know exactly where to find assistance as there will be office space for the interpreters and rooms for tutorial groups, as well as a computer laboratory for the use of the Deaf students.

The coordinator and interpreters would also like to expand the Programme for the Deaf to include courses other than IT and Accounting. However, it has taken eight years to get to the position where Accounting is offered as an option for Deaf students. At present there are only three SL interpreters and it would not be possible to expand the programme into other courses without more interpreters. Perhaps once the Deaf centre is operational and publicized funding might be found to expand this programme as there are many Deaf students who would like to enroll for other courses with the added assistance of Sign Language interpreters.

Only five of the participants said that IT was their first choice and the rest said that the main reason that they enrolled at DUT to study IT and Accounting was because of the

extra support offered in the form of Sign Language interpreters. The Deaf student enrolled in the Accounting Department was very happy that she was able to study Accounting and two of the graduate students said that Accounting would have been their choice if it had been offered when they enrolled. Some of the alternate choices that they would have made included Engineering, Psychology, Drama, Optometry and Social work. This is a wide range of courses and some of them like Drama are very far removed from practical subjects like IT and Accounting.

The Deaf students are, however, very grateful to have the support of the Sign Language interpreters at DUT in order to be able to study at a tertiary level.
In the words of one of the students:

> "We could do nothing if we didn't have this at DUT. Some of the students that finished school 2-3 years ago, you know if they want to study anything else except IT they can't because there are no interpreters."

One interpreter said that he wished that they could offer courses such as graphic design, or jewelry design as there were many young Deaf students who were extremely creative and not suited to practical subjects such as IT and Accounting. But because there was no other options available with the added support of a SL interpreter, they ended up doing IT or Accounting. Other students who have no aptitude for either of these courses are excluded from enrolling for other courses if they cannot cope without the added support of a SL interpreter. He said that he realised that they had to be realistic as they had cost restraints and at present the budget only paid for three SL interpreters, but he hoped that the Programme for the Deaf would grow to include other courses in time.

5.5   OTHER PROBLEMS EXPERIENCED BY THE DEAF STUDENTS

The participants all felt that at times the lectures were too close together and did not give them enough time to recover from the previous lectures. Because Sign Language is a visual language, it is very tiring for both the interpreters and the students to concentrate

on signing for long periods of time, especially if the student has to keep moving from watching the overhead projector and then the interpreter, as it puts a strain on their eyes.

In the words of one of the participants:

"Our eyes do get tired from looking backwards and forwards all the time."

This point was something that we, as hearing people take for granted - the ability to listen with our ears and watch what is taking place at the same time. Hearing students are able to listen with their ears and are still able to look in the text-book or look at the overhead at the same time. For Deaf students it is impossible to watch the interpreter and read in a book or look at an overhead at the same time.

A possible solution to this would be for the lecturer to make any overheads or pages of the text book to be read in the lecture available in time for the Deaf students to familiarise themselves before the lecture with diagrams and concepts. I know the lecturers do make notes and overheads available after the lecture for the Deaf students.

Many of the Deaf students are concerned about obtaining employment once they have graduated, but I will not be looking at problems encountered by Deaf students in seeking employment after graduation. This could be a possible area for future research.

5.6 FURTHER NEEDS OF DEAF STUDENTS AS PERCEIVED BY THE INTERPRETERS

Funding:

Lazarus et al (2005) identified a number of critical barriers to learning and development and one of those identified was a lack of funds and other resources. I agree with their opinion as the Programme for the Deaf at DUT cannot grow without sufficient funds being made available. In the long term if the Programme for the Deaf is to expand to other departments at DUT, money would need to be allocated for more qualified tutors, as well as administrative assistance and consumables such as stationery. They would also need office equipment such as a photocopy machine and so on.

5.6   SUMMARY

As a result of the difficulty in communication with hearing people, the Deaf students at DUT seem to have been marginalised by the rest of the campus. As a result of this marginalization, Deaf students at DUT are not able to take full advantage of opportunities for active learning and all the Deaf students have experienced problems with group work with hearing students.

The generally low literacy levels of Deaf students, combined with their lack of residual knowledge, make it difficult for them to understand language used in lectures, text-books, exams and tests and they rely heavily on the services of the Sign Language interpreters.

If more hearing students and staff were more informed about Deafness, and the Deaf students could overcome their fear of communicating with hearing people, they could work together to improve communication between the two groups which could only benefit both the hearing and the Deaf.

CHAPTER 6: CONCLUSIONS AND SUGGESTIONS

6.1 INTRODUCTION

The previous chapter showed the analysis of the data obtained by the research as well as the results of that analysis. This chapter will discuss those findings in line with the aims of the research, form conclusions based on the analysis and make suggestions as to what could possibly be done about some of the issues raised.

6.2 LITERACY

The Deaf students and their interpreters agreed that the literacy levels of the Deaf students were lower than those of hearing students and this was one of the greatest challenges facing Deaf students. This finding is similar to that of Aarons (2002) as well as Magongwa (2009), although the participants in Magongwa's research were all post graduate students and thus had higher literacy levels than the undergraduate students in this study, whose basic literacy was often poor which meant that they struggled with academic literacy.

According to one of the interpreters, the Foundation Course which was introduced in 2010 for the IT students at DUT does seem to have made some difference but until the schools for the deaf can improve the level of English of Deaf pupils the problem of low literacy levels will continue to be a problem for most Deaf students.

The academic language used during lectures and in textbooks and other material is difficult for many second language students but for the Deaf students it is especially difficult. The generally low literacy levels of Deaf students, combined with their lack of residual knowledge, make it difficult for them to understand the language used in lectures, text-books, tests and exams. The Sign Language interpreters play a key role in meeting as many of the Deaf students' needs as they possibly can, not only interpreting the lectures but also acting in a mediatory role by explaining the meaning of language used in text-books, tests and exams.

6.3   COMMUNICATION

All the Deaf students experienced problems in communication between them and hearing students and staff. At present if the Deaf students need to get something done for them, they have to go to their Sign Language interpreters for help. If there is no interpreter available they have to either write their message down on paper or sms or e mail it. In the event of an emergency such as strike, riot or other emergency occurring on campus this could put the Deaf students in a dangerous situation.

The Deaf students said that although most of the lecturers wanted to help them, they preferred to ask the interpreters instead which could have the effect of depriving themselves of the expert knowledge of the lecturer and even misunderstanding exactly what the lecturer requires of them.

Very little communication seems to take place between Deaf and hearing students at DUT probably because of difficulty in communication with hearing people. As a result of this lack of communication, the Deaf students at DUT appear to have been marginalised by the rest of the campus. The Deaf students have also contributed in some way towards this marginalisation by preferring to associate mainly with their fellow Deaf students and their interpreters. As a result of this marginalisation, Deaf students at DUT are not able to take full advantage of opportunities for active learning. All the Deaf students have experienced problems with group work with hearing students. They are also not benefitting from incidental learning, which they can gain from their fellow students who can hear, which would boost their low levels of general knowledge. The new Deaf Centre could further add to this marginalistion of the Deaf students or it could have the effect that the Day Centre at UCT had on their students with disabilities where it actually empowered them.

Marginalisation is partly caused by lack of awareness of hearing staff and students at DUT, but also arises as a result of the strong sense of Deaf Culture that the Deaf students possess. They seem happier amongst their fellow Deaf students with whom they can

easily communicate and who understand them. This is why I feel that the Deaf Centre will be a good thing and it could be used to promote awareness of Deafness on the campus.

However the Deaf students will have to cope in the hearing world and should, therefore, not isolate themselves as they need to learn ways to communicate with hearing people. This is why I personally feel that it is important that both the Deaf and hearing students should be brought together in small groups, such as to do the group work projects that the students complain so much about.

6.4   SHORTAGE OF SUITABLY QUALIFIED INTERPRETERS

There is a shortage of suitably qualified Sign Language interpreters. AT DUT the students have been fortunate that the coordinator has insisted that the interpreters must be suitably qualified, preferably with an educational background and dedicated to the students. This has meant that at times they have had to operate with only two Sign Language interpreters for a couple of months, but the coordinator feels that it is better not to have an interpreter than to have one who is not reliable. Perhaps this is one reason why DUT has not experienced the same problems that Wits University experienced with unreliable and inefficient Sign Language interpreters (Magongwa, 2008).

If the Programme for the Deaf at DUT is to be expanded then it will be essential to maintain the same high standards set for all the interpreters who interpret for the Deaf students and this could then become a problem.

6.5   ENVIRONMENT AT DUT

6.5.1   Lack of concern by hearing people at DUT about the Deaf

The participants and the interpreters all seemed to agree that there was little or no knowledge or concern about the Deaf students on campus at DUT. Very few people knew

that there were any Deaf students studying at DUT and those who did know seemed not to be particularly interested. In the words of two of the students they are just "ignored". This lack of awareness of Deaf students does not create an atmosphere conducive to active learning at DUT for the Deaf students. They are unable to discuss their work with fellow students other than those who are Deaf and this has a limiting effect on their learning experience, since there are so few Deaf students on campus.

Obtaining a university education does not just mean that a student passes all of his/her academic subjects, but also that they also grow socially and learn social skills which they can use when they graduate. It is extremely difficult when a Deaf student is unable to communicate with hearing students by means of speech and hearing, for him/her to learn these social skills, as the only students that they can easily communicate with are fellow Deaf students. The hearing students also need to learn compassion for, and understanding of, people who are different from them. This is in line with Government policy on the inclusion of students with disabilities in education, as well as every person's basic human right, in terms of the Bill of Rights in the Constitution of SA (1996), to be accepted as they are and not discriminated against because of their Deafness.

6.5.2   Lack of Facilities

All the students complained that the facilities in the computer labs were very bad and that it was often impossible to find a computer which was working. This is a problem shared with the hearing students but the Deaf students had to compete with hearing students for the few working computers and this created a very stressful situation for Deaf students. It is essential for their studies in IT that students have access to working computers, especially so for the Deaf students who rely on visual learning aids rather than oral assistance.

There is also no place at present where the Deaf students can socialise together or even a spare room where they can have extra tutorials or meetings with the interpreters when necessary.

Hopefully the new Deaf Centre mentioned in the previous chapter should solve some of these problems as the Deaf students would then have a place where they could meet, work and socialise with their fellow Deaf students. There would be space for them to have extra tutorials without having to struggle for venues and there would be computer labs which they would not have to share with the hearing students and fight for their turn in the labs. It should also be easier to control the computer viruses in these labs, which was one of the complaints of all the students. However, as mentioned previously, it could also have the effect of isolating Deaf students even more, so it appears that there could be both positive and negative effects of this Deaf Centre. It would be interesting to conduct research on the effects on the Deaf students of this Deaf Centre once it has been in operation for a while.

6.5.3   Lack of funds

There is no separate budget for anything other than salaries for the Programme for the Deaf at present. If they need anything, such as stationary they have to get it from the IT Department. The coordinator is not fully informed what exactly her mandate is. Although excited about the proposed Deaf Centre, she is also not sure when it will be established. At this stage she does not know exactly what funds and other resources will be available to them. This makes her rather frustrated as it is difficult to make any plans.

The interpreters all work extremely hard and do not just act as interpreters but also as tutors and counsellors for the Deaf students. The coordinator is doing a full load of interpreting and tutoring as well as trying to create awareness of the Deaf students at DUT.

Because of budget restraints it is impossible to offer the support services of Sign Language interpreters to more departments at this stage. It has taken more than ten years to get the programme to the stage where Accounting is now offered as an alternative option to IT. It is a long term aim of this Programme to extend it further but it is costly to provide dedicated Sign Language interpreters.

6.6   INCLUSION VS SEPARATION

Because Deaf students are unable to communicate in spoken English, this does create a barrier to learning and socialising for them. This has the effect of marginalising Deaf students from the rest of the Campus. If there were larger numbers of Deaf students on campus this would not be as great a problem as it is, because the Deaf students would be able to socialise within their own minority group. This would be in line with the Deaf students' view of themselves as being not disabled, but a cultural and linguistic minority group. Magongwa's study (2008) also found that this was how the Deaf students preferred to be regarded. If there were more Deaf students studying at DUT it would encourage active learning amongst the Deaf students as they could discuss projects and assignments together in Sign Language. However, I personally feel that working with hearing students in a group would help equip the Deaf students better for the outside world where they probably would not have an interpreter close by.

Although the Deaf students do not like to be regarded as disabled, there is a danger that if Deaf students do not show Deafness as a disability on their registration forms when registering at DUT, they will not be able to ask for additional support in the form of Sign Language interpreters and extra tutorials, which they are entitled to if they register at DUT under the Programme for the Deaf. The provision of Sign Language interpreters is costly and at present (2011) is provided only to the Deaf students registered in the IT and Accounting departments under the Programme for the Deaf. Although the Deaf students would like this Programme to be extended to other departments, this does not seem likely to happen in the immediate future.

Hopefully once the proposed new Deaf Centre is eventually opened the Deaf students would have a place where they can meet, work and socialise with their fellow Deaf students. There would be space for them to have extra tutorials without having to struggle for venues and there would be computer labs which they would not have to share with the hearing students and fight for their turn in the labs.

Provided that there is an adequate budget to run this Deaf centre and that the coordinator of the Programme for the Deaf has a clear mandate on what she can and can-not do, it could be possible to enroll more Deaf students once the centre is opened. The Deaf students would have a feeling of belonging as they would have their own place within the institution. This would bring DUT more in line with the Government requirements of tertiary institutions to make higher education more accessible to students with disabilities and would give hope to many young Deaf students that they can now obtain a tertiary education with the additional support of Sign Language interpreters.

Creating a Deaf community on campus with the Deaf Centre as its base would have the effect of making the Deaf students more visible to the rest of the campus and possibly even encourage hearing students who are interested in the Deaf to learn more about them, or to assist them in some way. If more hearing students were aware of the Deaf students and got to understand more about them, perhaps some of them might become friends with the Deaf students and might be prepared to help mentor them. Obviously this would not occur over night but as more interaction between Deaf and hearing students took place, the Deaf students would become less marginalised.

At present the Deaf students are included academically as they participate in lectures and tutorials with the other students. However, because of communication problems they are socially excluded from many of the social activities of the institution.

6.7   LIMITATIONS OF THIS STUDY

This study was conducted with a group of eleven Deaf students registered at DUT under the Programme for the Deaf and thus might not be representative of the experiences of other Deaf students at other tertiary institutions. At DUT the extra assistance that the Deaf students received was in the form of the provision of Sign Language interpreters and extra tutorials run by the interpreters.   The students were unaware that at other

institutions there were further accommodations that could be made such as captioning and hearing aids which are worn by the lecturer and the student.

Because I was unable to communicate with the Deaf students in Sign Language as mentioned in my previous chapter, I had to use the interpreters who interpret for the students. This could have inhibited the Deaf students in their answers to some of the questions.

I also did not investigate in detail problems experienced by Deaf students in obtaining employment after graduation.

6.8   POSSIBLE AREAS FOR FUTURE RESEARCH

6.8.1   The needs of Deaf students are many and some are difficult to solve. Not much research has been done in the field of higher education and particularly as on how tertiary educational institutions prepare Deaf students for the work place or the problems experienced by Deaf graduates in obtaining employment. This could be very useful as it is pointless allowing a Deaf student to graduate and they are never able t get work.

6.8.2   Another possible area of future research involves lecturers who teach the Deaf students at DUT. What problems do they have? Do they feel adequately prepared? What would they like to see done to help them as lecturers to be of better assistance to the Deaf students?

6.8.3   It would be interesting to research the effects of the Deaf centre on the experiences of Deaf students at DUT after the Deaf Centre has been in operation for a year or more.

6.9   SOME SUGGESTIONS FOR THE FUTURE AT DUT

Implementing some of these suggestions could help bridge the 'gap' between the Deaf students and hearing people on campus. Most of the suggestions will impact on the environment at DUT, so that DUT could be a more pleasant place for Deaf students both academically and socially:

1.   Plans should be put in place for the formation of a Disability Office at DUT as soon as possible, so as to comply with the requirements of the SA Government White Paper 6 (2001), which requires that structures be in place to accommodate students with special needs.

2.   As part of the orientation programme Deaf Awareness courses could be run on a regular basis for all students at the start of every year. These could start on the Ritson Campus where the Deaf students are situated and could possibly be run by the Centre for Higher Education if there is still no Disability Office.

3.   As suggested by one of the lecturers, all lecturers who lecture to Deaf students should attend a compulsory workshop to learn about Deafness, Deaf culture and perhaps a few basic signs. They could possibly also be introduced to some of the Deaf students and interpreters, so that they can make contact with the interpreters that they are going to be working with. They could also ask questions about anything that they might be concerned about regarding lecturing Deaf students. This workshop should be held before lecturers start lecturing Deaf students.

4.   As part of their orientation all new staff should have to attend a lecture on disability and Deafness in particular and be given ideas on to how to make life easier for Deaf students in their lectures. This would also assist the Deaf students academically

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5. When timetables are planned for classes where there are Deaf students attending, the person responsible for timetables should ensure that there are adequate gaps between lecture periods so that Deaf students do not have to strain their eyes concentrating on the interpreter for more than two hours at a time.

6. Lecturers whose students are required to do group work with Deaf students in their group, should explain to the other students that the purpose of group work is to learn to work with everyone and not just your friends. This is what happens in the workplace. They could possibly give the groups with Deaf students in them extra time to complete the assignment to make up for any delays caused by communication problems or possibly even allocate bonus marks to those groups who have worked together with Deaf students in their group. This would help both Deaf and hearing students to 'get to know' each other and help the Deaf students to socialise.

7. The disability policy for Staff and students at DUT should be updated so that the environment at DUT is more conducive for all its students to participate, in as many of the social activities as possible.

8. It should be a part of the orientation programme for all students, but especially for those who will be sharing a residence with Deaf students, that they are prepared for the Deaf students and shown how to make them feel welcome. The Language and Interpretation Department ran a Sign Language course for the Library staff a few years ago to show them how they could assist the Deaf students. This has made library staff more confident when dealing with the Deaf students and the Deaf students feel that the library staff does not just ignore them any more. If the hearing students could be taught a few basic signs, such as Hello, what is your name? How are you? Can I help you? , it could help the Deaf students feel more welcome at DUT.

9. It is suggested that DUT investigate the feasibility of obtaining voice activated software which could be used to type up lectures for students. The lecturer would wear a microphone and whatever he says would be typed onto the computer screen. The whole lecture could then be sent to the interpreters or the students via e-mail and the students can then read what was actually said during the lecture. Further research would be necessary to see if this technology would actually work for the Deaf students as it would probably mean that a number of copies of the computer program would need to be acquired. It could be that this software is expensive, but if it did work for the Deaf students it could be extremely useful. I do not suggest that it could replace the Sign language interpreters but it could be useful for deaf students who do not know Sign Language and are unable to make use of the Sign Language interpreters. This could be an option to be considered for the future, not necessarily just for the Deaf students, but also for students with other disabilities who have difficulty in writing and taking notes.

6.10 CONCLUSION

I hope that this study has high lighted some of the academic needs of the Deaf students at DUT. The needs that I have shown here are the most serious and pressing and the ones that have the greatest impact on their tertiary educational experience. Some of the problems such as low literacy levels (Both basic and academic) and problems of communication with hearing people will not be changed overnight.

Deaf Awareness programmes could help towards bridging the gap in understanding between Deaf and Hearing people on campus, although at present (2011), I am not sure who would be able to run these programmes as there is no Disability Office at DUT.

Obviously a long term goal would be that one day, courses other than IT and Accounting could be available to Deaf students at DUT with the additional support of Sign Language interpreters.

This would mean that more young Deaf students will be able to obtain a tertiary education which would enable them to acquire confidence and skills which will enable them to become useful members of society, rather than being a disabled person dependant on others for the rest of their life.

I would like to conclude my study with a few words from one of the graduate Deaf students, who is employed, which I feel could motivate Deaf youngsters to believe in themselves and that if they set their minds to do something, they can achieve what many people would consider impossible. When asked if he had any advice for young Deaf students who had completed their matric and were wondering what to do, he gave the following response:

> "I'd just like to motivate them. Tell them they actually need to be strong, to want to study and achieve things, to believe in themselves that they can accomplish something. Work towards the goals they have set themselves. Sometimes they might want to become a teacher, but that is not offered here but use what we have here to get that much closer to their goals later on in life.
>
> I also want to add that they must be responsible as well. It is tough, yes, but it is a good opportunity to enhance your brain and opens up horizons for you. It also kind of shows that Deaf people can do just about anything if we want to."

ANNEXURE A: Questionnaire for students

(To assist in research to discover the academic needs of Deaf Students at DUT)

1.	Were you born deaf	YES	NO
2.	If not how old were you when you became deaf	……………….	
3.	Is any other member of your family deaf	YES	NO
4.	If yes what relation are they to you	……………………	
5.	How old were you when you learnt to sign	…………………….	
6.	Do your family communicate with you by signing	YES	NO
7.	Did you find it easy to learn sign language	YES	NO
8. (A)	Did you attend a school for the Deaf before coming to DUT?	YES	NO
8. (B)	If yes how old were you when you first started attending A school for the Deaf	…………………..	
9 .(A)	Have you ever attended school in the main stream	YES	NO
9 (B)	If yes how old were you	…………………..	
10.	Can you lip read	YES	NO
11	What made you decide to study Information Technology at DUT?	……………………………. ……………………………… …………………………………..	
12.	Was Information Technology your first choice	YES	NO
13.(A)	If other courses had offered the support of sign language Interpreters would you have chosen Information Technology?	YES	NO

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13.(B)   If NO what would you have chosen   …………………………………………………………………

……

14.   What support other than the interpreters do you think could assist you in your studies?

……
……

15.   Do you feel included in the activities of the University?   YES   NO

16.   Do you feel accepted by the hearing students at DUT?   YES   NO

21.   Do you feel confident that you will obtain a job when you   YES   NO
         have completed your diploma?

22.   Do you find the lecturers helpful when you ask them for   YES   NO
         assistance?

23.   Do you socialise with other hearing students after lectures?   YES   NO

24.   Do you find the library staff helpful when you go to the   YES   NO
         library?

25.   Do you live :   A   AT HOME
                                B   IN RESIDENCE
                                C   OTHER

26.   If in residence do you feel part of the community   YES   NO
         there?

27.   What year did you first register at DUT?   ……………………

28.   What year of study are you now?   ……………………

29.   Did you find it easy to adjust to University life?   YES   NO

         PLEASE CIRCLE THE CORRECT ANSWER – Thank you fou completing this questionnaire

ANNEXURE B:
Questions to ask students at meeting

COULD YOU PLEASE JUST SAY YOUR NAME BEFORE ANSWERING SO I CAN IDENTIFY IT AND LINK YOUR ANSWER TO YOUR QUESTIONAIRE

1. If your family does not communicate with sign, How do you communicate with them?

2. Did your family want you to learn to lip read and speak or were they happy with you signing?

3. When you first came to DUT what was the thing that you found most difficult.

4. Do you think that it would have helped if you had had a bridging year. I noticed that I think it was Violan who was doing the extended program. How does that work?

5. Anything else that you struggled with?

6. Have you had any problems when doing group work with hearing students?

7. Do you find that the timetable gives you enough time to recover from your other lectures. (Are the lectures too close to each other)

8. Do you have to **watch videos** in class and if so do they have subtitles for you to read. Maybe a second viewing – UFS

9. Do any of you use an assistive listening device – not a hearing aid. One that the lecturer also has to wear?

10. If you do are the lecturers cooperative with using it.

11.   What problems do you experience in lectures

12.   What problems do you experience in tests and exams.

13.   Do you feel that the extra time allowed in tests and exams is enough?

14.   Many of you suggested that you needed extra tutorials. Would it help if you had student tutors, as I think the interpreters' time is fully used up.

15.   Do you take part in class discussions?

16.   I see that X and Y are both in residence, do the other students include you in their social activities or do you tend to just stay together a lot

ANNEXURE C

Consent to participate in research study and to publication of results

1. I understand that Pat Mazoue is doing research about the experiences of deaf students at DUT. She will be interviewing both students and interpreters to hear their view.

2. I understand that the purpose of this research is to provide a better understanding of the experiences of Deaf students in higher education.

3. I understand that I may ask Pat for any more information that I may need before I decide whether or not to take part in this study. I can contact Pat at Patm@dut.ac.za

4. I have been asked to take part in this research study and I understand that participation in this research study is voluntary and that I can withdraw my participation at any stage without any negative consequences for me.

5. I understand that Pat will interview me and she will tape record the interview. The recordings of these tapes will be saved in a special file on Pat Mazoue's personal computer which is password protected. After the research is concluded and a period of 5 years has elapsed this file will be deleted.

6. I accept that the results of this research study will be used towards a Masters degree through University of KwaZulu Natal. In addition, the results may be used for writing papers for presentation at conferences or publication in academic journals.

7. I understand that confidentiality will be ensured as far as possible, my name will not be used in any report describing the research study and that Pat Mazoue will do her best to ensure that it is not possible to attribute any particular comment to any particular person

8. I agree to participate in the research study but I understand that if at any point I change my mind, I am entitled to withdraw my agreement to participate.

9. I understand that Pat's supervisor is Ms Ruth Searle at UKZN (searle@ukzn.ac.za) and that I may contact her for more information should I need to do so.

Name: Signature:

Date:

Course of study: Year of study:

The following declaration will be explained to the Deaf students by the Sign Language interpreter before the students sign it.

DECLARATION

I …………………………………………………………………….declare that I understand the content of this document and the nature of this research project and I am willing to participate in this research project. I also understand that I can withdraw from participation at any stage if I so wish.

Signature of participant: Date:

....   ……………………….

In this instance having included it I would add a note that this would be conveyed by the sign language interpreters to each participant - before the individual signed.

ANNEXURE D: Proposed Questions to be asked of the Interpreters

1.   How did you learn sign language?

2.   Have you got a teaching background

3.   Do you think it would help you as an SL interpreter at DUT?

4.   How did you first become involved with interpreting for the deaf students and
        when?

5.   What do you consider the greatest problems facing the deaf students at
        Durban Institute of Technology (DIT)?

6.   What other problems are there – either with the job or the stuents?

7.   Do you feel that there are enough interpreters ?

8.   What do you think about the proposed new Deaf Centre?

9.   Do you think lecturers should have some preparation for lecturing to Deaf
        students?

10.   Is Interpreting to Deaf students at DUIT what you had expected it to be?

11.   If not why?

12.   Do you think that DUT should have a disability office and would this make
        life easier for you and the Deaf students

13.   Do you feel that the deaf students are included in the actvities of DUT?

Note:

 I will be interviewing each of the interpreters separately and will ask each of them the same questions. However, as with the students, I might find that there are other questions which need to be raised as I start interviewing.

ANNEXURE E: Questions to be asked of graduate students

Could you please just say your name before you answer any question so that can identify who said what. This is needed for analysing the data.

I know most of you have already answered some of these questions but I need to know if maybe your answers have changed a little now that you have completed your studies and some of you have been working.

1.   What things made it difficult for you at DUT when you were studying. Eg. Lecturers, venues, language used in lectures tests and exams, other students.

2.   Can you think of any ways that this could be improved?

3.   Do you think it would have helped you if there had been a preparatory year before you started doing your diploma to bridge the gap between the Deaf School at DUT.

4.   Did you have problems with group work while you were studying. Please give examples?

5.   Did the hearing students include you in their social activities?

6.   Did you have any problems with tests and exams eg type of questions language used etc.MCQ

7.   Are you working?

8.   Has it been difficult to find work?

9.   How many interviews did you have to attend before you got a job?

10. Did you feel that DUT prepared you adequately for the workplace – interviews etc?

11. Do you find job interviews difficult? Give examples if possible

12. How did you communicate during the interviews?

13. Was it difficult to adjust to working after your studies?

14. If you are not working yet do you feel confident that you will find work?

15. In the workplace how do you communicate with your colleagues at work?

16. Do you feel accepted by the hearing people at your work?

17. What advice could you give a young Deaf student who was thinking of studying IT at DUT?

18. What degree of deafness do yoi think you have?

ANNEXURE F: ETHICAL CLEARANCE

ANNEXURE G : QUESTIONS TO BE ASKED OF LECTURERS

1. WHEN WAS THE FIRST TIME YOU WERE TOLD THAT YOU WOULD HAVE A DEAF STUDENT IN YOUR CLASS?

2. DID THEY GIVE YOU ANY PREPARATION FOR LECTURING TO DEAF STUDENTS?

3. WERE YOU GIVEN ANY INFORMATION ON DEAF AWARENESS OR EXTRA TRAINING BEFORE YOU STARTED LECTURING THE DEAF?

4. DO YOU FEEL YOU WERE ADEQUATELY PREPARED TO LECTURE TO DEAF STUDENTS?

5. WOULD YOU HAVE LIKED TO HAVE HAD SOME TRAINING IN DEAF AWARENESS   ETC?

6. DO YOU GIVE THE DEAF STUDENTS ANY ADDITIONAL NOTES OR AIDS OTHER THAN WHAT IS OFFERED TO THE OTHER STUDENTS

7. DO THE STUDENTS DO GROUP WORK IN YOUR SUBJECT

8. WHAT HAPPENS WHEN YOU HAVE TO WRITE ON THE BOARD OR USE THE OHP?

9. HOW ARE THE DEAF STUDENTS COPING WITH YOUR SUBJECT?

10. HOW DO THE OTHER STUDENTS REACT TO HAVING DEAF STUDENTS IN THEIR CLASS?

11. WAS ANY KIND OF DEAF AWARENESS PROGRAM OFFERRED TO THE STUDENTS THAT YOU WERE AWARE OF?

12. DO THEY ASK YOU QUESTIONS?

13. WHAT HAPPENS IF AN INTERPRETER IS SICK?

14. WHAT WOULD HAPPEN IF NAN WAS NOT THERE?

15. ANY OTHER PROBLEMS?

16. WOULD A SUPPORT GROUP WITH OTHER LECTURERS OF THE DEAF BE HELPFUL?

17. CAN YOU GIVE ANY ADVICE TO OTHER LECTURERS OF DEAF STUDENTS

18. DO YOU NOTICE ON CAMPUS WHETHER THE DEAF STUDENTS SOCIALISE WITH THE OTHER STUDENTS?

19. DO YOU THINK THE NEW DEAF CENTRE WILL HELP A BIT WITH THIS?

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